EVOLVING EXEMPLARY PLURALISM: STEVE MCQUEEN'S DEADPAN AND EIJA-LIISA AHTILA'S ANNE,AKI AND GOD—TWO CASE STUDIES FOR CONSERVING TECHNOLOGY-BASED INSTALLATION ART

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ABSTRACT—Technology-based installation art, or media art,presents special problems for conservators. These problems were addressed at TechArchaeology: A Symposium on Installation Art Preservation,sponsored by the Bay Area Video Coalition,hosted by the San Francisco Museum of Modern Art, and funded by the Getty Grant Program.This article, a result of symposium, discusses conservation issues presented by the works of two artists in the exhibition *Seeing Time: Selections from the Pamela and Richard Kramlich Collection of Media Art*, which was on display at the museum during the symposium. Of the two artists, Steve McQueen was present at the symposium and was one of the participants; Eija-Liisa Ahtila was contacted and expressed her views after the symposium.A discussion of these works and the conservation issues and concerns surrounding them is presented, followed by discussion of the broader issues presented by media art.

TITRE–Pluralisme d'évolution exemplaire: *Deadpan* de Steve McQueen et *Anne, Aki et Dieu* d'Eija-Liisa Ahtila. Deux études de cas pour la conservation des installations basées sur les nouveaux médias. RÉSUMÉ–Les installations basées sur les nouveaux médias,ou les arts médiatiques,présentent des problèmes spéciaux pour les restaurateurs.Ces problèmes ont été soulevés au cours de "TechArchéologie: un colloque sur la préservation des installations" commandité par le Bay Area Video Coalition (Coalition vidéo de la région de la baie de San Francisco), qui a eu lieu au musée d'art contemporain de San Francisco et a été subventionné par le Getty Grant Program (programme de bourses Getty). L'article suivant résulte de ce colloque. Il traite des problèmes de conservation posés par les oeuvres de deux artistes représentés dans l'exposition intitulée *Seeing Time: Selections from the Pamela and Richard Kramlich Collection of Media Art* (Regardant le temps: oeuvres de la collection d'art médiatique de Pamela et Richard Kramlich), qui fut présentée au musée lors du colloque. Steve McQueen,l'un des deux artistes,prit part au colloque et participa directement aux échanges, tandis qu'Eija-Liisa Ahtila partagea ses opinions seulement après le colloque. Une discussion sur ces oeuvres et les problèmes de conservation qu'elles entraînent sont abordés. L'auteur soulève ensuite les problèmes plus généraux reliés à l'art médiatique.

TITULO—Desarrollo de un pluralismo ejemplar: *Deadpan* (Sin expresión) del artista Steve McQueen y *Anne, Aki and God* (Anne, Aki y Dios) de la artista Eija-Liisa Ahtila.Dos casos de estudio para la conservación de instalaciones de arte basadas en tecnologías avanzadas. RESÚMEN: Las instalaciones de arte que dependen de tecnologías avanzadas, o arte de los medios de comunicación, presentan un verdadero problema para los conservadores.Este tipo de problemas fue discutido durante el Simposio sobre Preservación de Instalaciones de Arte "TecArchaeology," promovido por la "Bay Area Video Coalition"(Coalición para video del área de la bahía de San Francisco), el cual tuvo lugar en el Museo de Arte Moderno de San Francisco (San Francisco Museum of Modern Art); financiado por el programa de subvenciones del Instituto Getty (Getty Grant Program).

El presente articulo es resultado del simposio. En el se analizan problemas de conservación implícitos en las obras de dos artistas representados en la exhibición "Viendo el Tiempo: selecciones de la colección de arte-en-medios de comunicación de Pamela y Richard Kranlich" (*Seeing Time: Selections from the Pamela and Richard Kranlich Collection of Media Art)*. Esta exhibición se presentaba en el museo durante el tiempo en el que se desarrolló el simposio. De los dos artistas, Steve McQueen estaba presente y participando en el simposio. Eija-Liisa Ahtila fue contactada y expresó sus puntos de vista después del simposio. Aquí se presenta una discusión sobre estas dos obras de arte en particular, y las cuestiones de conservación en torno a ellas, además de un análisis mas general respecto a los retos que supone el arte de los medios de comunicación (Media Art).

1.INTRODUCTION

When initially encountering issues related to the preservation of media art, conservation professionals often become alarmed and despondent and indulge in group hand-wringing.The problems presented are often well outside the expertise of the conservators charged with the care of this material and are not discussed or covered in the curricula of conservation programs. In fact, sometimes the issues involved test the limits of groups of experts convened to discuss problems in this difficult area.It is my contention that alarm quickly passes and a more realistic attitude sets in. Better communication, a clearer definition of roles, and greater precision in documentation and registration can aid this process,although they are no panacea. These improvements will not happen overnight, however, and we need to look to other models of working that may be initially unfamiliar or uncomfortable.While the model of fine art conservation is of limited use with this type of artwork,other models in the conservation profession are far more useful. The worlds of film and video preservation, architectural and archaeological conservation,natural history collections,industrial and technical museums, archival conservation, and finally digital preservation can all provide models and guidelines in this area. Pioneering work has been done by many individuals and institutions regarding the preservation of modern art and contemporary art.Several important international conferences addressing the general problems in the area of contemporary art,video art,and media art have taken place, such as *Playback '96* (Fifer et al. 1998), *Modern Art:Who Cares?* (Hummelen and Sillé 1999),and *Mortality/Immortality* (Corzo 1999).

A great advantage for conservators interested in technology-based installation art is the active interest and participation of the artists themselves, many of whom are articulate, thoughtful,and interested in the issues that confront conservation professionals. However, the conservation of media art is a new and evolving area and definitely not a one-size-fits-all environment. Complexity and ambiguity play a greater role than they do in more conventional conservation settings, but even the most exotic dilemmas often feel oddly familiar. Collaboration with other professions, teamwork, and a consensus-seeking process take on an even greater role than they ordinarily do in conservation. However, this trend is true for conservation as a whole, which is becoming more complex and ambiguous in response to the social context in which it takes place. Similarly, documentation plays an even more vital role.The purpose of this article is to discuss these issues and trends in the context of two works by Steve McQueen (b. 1969) and Eija-Liisa Ahtila (b. 1959). Both present fairly typical examples of the issues involved.

2. EXAMPLES OF TECHNOLOGY-BASED INSTALLATION ART

Under discussion are Steve McQueen's *Deadpan* (fig. 1) and Eija-Liisa Ahtila's *Anne,Aki and God* (figs.2–3), both on display in *Seeing Time: Selections from the Pamela and Richard Kramlich Collection of Media Art* at the San Francisco Museum of Modern Art (SFMOMA) in 1999–2000 (for more on the artists, see References and Further Reading). Steve McQueen was present for the discussion of his work during the TechArchaeology Symposium.Also present were Colin Griffiths, a media arts specialist who oversees the installation of James Coleman's (b. 1941) works and works of other artists; Robert Riley, the curator of media arts at SFMOMA when the show was mounted; and Michelle Barger, conservator of objects at SFMOMA. Neither McQueen nor Ahtila was satisfied with installations in *Seeing Time*. The reasons for their dissatisfaction will be explained, but the causes will be explored only briefly and not definitively. SFMOMA has done a great deal to try to create dialogues and procedures to prevent problems (Sterrett and Christopherson 1998), but with the best of intentions,things can go wrong,and we can only learn from the problems.

2.1 STEVE MCQUEEN'S *DEADPAN*

Deadpan is described in the catalog for the exhibition as follows:

> McQueen restages the "selfconcious exhibitionism"of early silent cinema in *Deadpan* by isolating and repeating in a continuous loop, a

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Fig. 1. Steve McQueen, *Deadpan*, 1997, 16 mm black-and-white film/video without sound,transfer red to glass laser disc; running time 4 minutes, 35 seconds edition. Courtesy of the artist

> moment from an American silent film of the 1920s.Playing the central character, he reenacts a shot in a Buster Keaton comedy, *Steamboat Bill Jr.*, in which Keaton stands immobile as four walls of a house come crashing down around him, then emerges unscathed. McQueen reverses this process. The loop, replaying the same moment, shot from different angles, repeatedly for four minutes, refuses the forward movement of narrative continuity and exposes the discontinuous fragmentation of reality. The speed at which the frame house collapses around McQueen increases toward the end of the film, suggesting a dramatic climax that is never realized (Riley et al.1999,134).

When viewing the piece, viewers find it difficult not to wince, anticipating a rush of air or sound that would accompany the collapsing wall. One tends to share an almost visceral sympathy with the artist after viewing the piece for any length of time.

A disturbing discovery by the artist proved to be extremely useful for purposes of discussion during the symposium and for this article, as it highlights the difficulties associated with technology-based installation art. *Deadpan* was squeezed during installation so that it was 5 in.narrower and 15 in.higher, creating an overall effect of elongation.The reasons for this problem were discussed at length, and in the end, it seemed that perhaps due to conflicting instructions or the exigencies of fitting a complex show into the galleries, the work was squeezed during the installation process.A conflict appears between the instructions provided by McQueen's gallery and SFMOMA's registration records. Instructions provided by Steve McQueen's gallery were as follows:

> General installation instructions: Image size: Minimum of 4 meters wide by 3 meters high.A room must be built approximately 6 m long by 4 m wide to accommodate the work.The image must fit the walls exactly, floor to ceiling, wall to wall.The ceiling and the walls are black; only the projection wall remains white. The white wall should be painted with a luminescent paint designed for projections. The floor must be waxed and polished so it is reflective. There should be an overlapping entrance to prevent ambient light.

However, the notes field in SFMOMA's database entry for the piece (PK1998.05) state the following; "At MOMA: SONY 1271 three-gun video projector, not included with work of art.Room size:13'9" Wide x 23'10" Long; but depends on the projector and lens,image variable but size to fill wall." It is also possible that the usual metric conversion demons that plague Europeans in the United States were at work. A precise conversion of 6 m to feet and inches on World Wide Metric Company's website (www.worldwidemetric.com/metcal.htm) works out to 19.585 ft. (236.220 in.) and 4 m to 13.1234 ft. (157.480 in.),or shall we say 19 x 13 ft.? What seems perfectly clear and simple in one country is not necessarily simple or clear in another, even when two countries appear to speak the same language. The National Aeronautics and Space Administration's $12 million Mars Climate Orbiter was lost in 1999 due to metric conversion errors. Understandably, this fact was no comfort for Steve McQueen when he discovered the problem. The artist would also have preferred a ceiling height just above the screen, as described in the instructions, but SFMOMA was unable to provide this height due to fire codes that mandated a clear spray area for fire sprinklers.

Unlike some of the artists with pieces in the show, Steve McQueen was not present to monitor the installation and was unable to have a representative present to do so. McQueen felt that this problem

detracted from the installation to such a degree that he would have preferred it not be shown as it was installed at SFMOMA.

The following questions guided discussion during the symposium.

1.What types of procedures are most effective when examining the work?

With *Deadpan*, examination procedures required that those responsible for the work ensure that the aesthetic experience specified by the artist is in place at installation and maintained.The equipment specified for the piece is either a Barco 808 or a Sony VP 5040 three-lens video projector mounted on the ceiling and a laser disc playback deck, which in this installation was housed in a small space adjacent to the room.A default setting in the equipment caused a blank blue screen to be projected very briefly. McQueen did not find this flaw acceptable, as he wanted the piece to be black-and-white only, and tonal qualities were important to him.He requested that the setting be changed to white. Accordingly, periodic examination should involve inspection to ensure that settings such as this one are not altered, that the video projector is performing consistently and uniformly, and that there are no problems with the laser disc playback deck. Other, simpler issues involve examining the wall on which the video is projected for smudging or dirt and ensuring that there is no light leakage into the room. *Deadpan* is a silent piece, but the artist was not bothered by sounds infiltrating the room from other installations provided they were not overly loud or distracting.An acceptable ambient sound threshold could have been identified and monitored so it was not exceeded. Other artists in the show specified the construction of sound baffles as a measure to exclude or reduce ambient noise.

2.What is essential to determining origins and authenticity of the work?

The authenticity of *Deadpan* depends on fidelity to the artist's aesthetic intent for the installation. Fidelity to intent requires careful attention to details of the installation and the functioning of the equipment.McQueen had felt that he had "locked down" the specifications for the piece and made it very clear exactly what was to be done. In the course of our discussions, he realized that more could be done. While the specifications for McQueen's installation are really quite simple, it was surprising how much could go wrong given that the artist wanted a high degree of fidelity.Thus more detailed documentation presented in a clear manner and on-site installation oversight are a necessity, especially considering that SFMOMA is a very sophisticated venue for a work of this sort and other potential venues and staff expertise will likely vary.

3.What is the artist's intent for conservation (for those artists present), and how is this determined in the absence of the artist?

Like many artists, McQueen had assumed that many preservation issues were self-evident, and he had not anticipated the issues or difficulties that arose. Artists are rarely involved in this sort of discussion about their work and are often taken by surprise. Bill Viola (b. 1951) had to deal with these issues on the occasion of a survey of his work (Viola 1999), but his experience is not typical.In the absence of the artist, documentation must be relied on to explain the artist's intent for conservation (Roosa 1998),and it is not always readily comprehensible.

We asked Steve McQueen whether there were any inherent qualities to the video projector that he found aesthetic. I posed this question:If it were possible to substitute a high-density and very high-quality image and a very small piece of equipment in the future for the existing technical configuration, would this somehow compromise the aesthetic of the work? McQueen had no objection to such a substitution and was not attached to the characteristics of the video projector. He felt that the limitation was the quality of the video or the film it was copied from and that the closer the fidelity to the original film,the better.

4.Where is the "heart" of the work? (i.e., what are the essential aesthetic and technological elements that absolutely need to be preserved if the piece is to retain any integrity into the future?)

The "heart" of *Deadpan* is a sequence of visual images that should proceed at a certain pace in a space carefully designed for them to take place in. Clearly, there is a "story"or narrative, but it must take place within an exact three-dimensional space that

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can be characterized in detail.It can also be characterized in terms of its visual qualities—i.e.,it must be in black-and-white and not have any elements of color entering into it (such as the blue flash briefly introduced when the settings on the video projector were set incorrectly, mentioned earlier). A certain degree of brightness must be maintained that could be compromised by dirty walls or poorly performing equipment. In the case of *Deadpan*, there are no sound levels to maintain, but sound entering from outside should be kept to levels that constitute nonintrusive background noise.

5. How does the conservator determine what components will need preventive conservation?

In the case of *Deadpan*, the equipment, such as the video projector, simply facilitates the work and is not a part of it. The laser discs contain the actual content but are derived from masters,which in turn are copied from the original films.Maintenance and preservation of this material have been addressed elsewhere (Roosa 1998). Unlike traditional art forms, works like *Deadpan* are plugged in and experience a kind of acceleration of the law of thermodynamics compared to traditional art forms. Accordingly, Roosa (1998) has suggested that preventive conservation should be emphasized through regular maintenance of equipment, the use of surge protectors, and so on. In short, when economically feasible, anywhere a preventive approach can be applied it should be applied.

6.When does intervention change the work of art? (i.e., remastering of a videotape to laser disc or replacing a tube television with a chip model)

McQueen is not attached to the format and is open to migration to better technology that would be more faithful to the original film. McQueen has no aesthetic attachment to the video projector.

2.2 EIJA-LIISA AHTILA'S *ANNE,AKI AND GOD*

Anne, Aki and God involves an installation described as follows in the exhibition catalog:

> The installation emerged out of research into a true story, from which Ahtila planned to make a film. In the story, a young Finnish telecommunications engineer named Aki suddenly becomes reclusive and is eventually unable to leave his apartment. He begins to display the classic symptoms of schizophrenia,experiencing hallucinations and voices and seeing God in a vision above his bed.The central character in a series of imaginary people, places,and events he experiences daily is a fictitious girlfriend named Anne. In the blurring of reality and illusion,Aki imagines that Anne is real, and the relationship becomes the center of his life. The voices in Aki's head explain that all these events have already been filmed in his brain and that he is now watching them and should act according to the events he sees taking place. The disjunction between hallucination and reality in Aki's expe-

Fig. 2. Eija-Liisa Ahtila, *Anne, Aki and God*, 1998, video installation, color, audio, 7 tapes, each 30 minutes looped. Courtesy of the artist

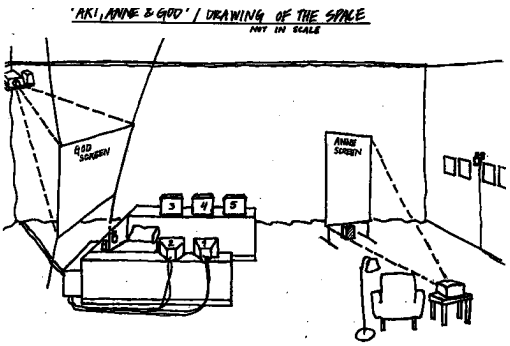

Fig. 3. Installation drawing for Eija-Liisa Ahtila, *Anne, Aki and God*. Courtesy of the artist

rience is clearly demonstrated in the space of the installation, which is divided in two parts, one active, the other passive. In the passive space, an empty bed,a reading lamp, and five monitors inside a large wooden structure that symbolize the boundaries of a domestic space. A large projection screen towers overhead, projecting two actors—one female, the other male—playing the role of God.The space, an abstraction of Aki's one-room apartment, becomes the symbolic site of his delusionary experiences, of which the large screen becomes the focus.The dual gender of God and the theatricality of the staged monologue emphasize God's metaphorical status. Aki's God has delusional thoughts, encourages Aki to see Anne, describes Aki's fate and reflects on his/her existence. The large projected image looks down on the monitors around the bed, on which different actors deliver Aki's confessional dialog with an unseen therapist,as he describes in lucid detail his hallucinatory relationship with Anne. Aki's presence is brought into the room at one theatrical remove, as a group of multiple personalities.The simultaneous delivery of the same lines by different voices, preventing the viewer from attaching identity to any single young man, underlines his schizophrenic state. In the second, "active" space of the installation, a domestic chair, reading lamp, and side table are placed opposite a large freestanding projection screen, showing segments of real interviews with young Finnish women applying to play the role of Aki's imaginary girlfriend, Anne. The documentary nature of these interviews, in which the women outline their reasons for wanting to play the role and give their interpretations of Anne's personality, ground this space in everyday reality, in stark contrast to the fictional hallucinatory space of the adjacent area (Riley et al.1999,136–39).

It should also be pointed out that the actress chosen to play "Anne Nyberg" was present in the Kiasma, Helsinki, exhibition and at the Grasser and Grunert installation in New York (Reinola 2000). The actress sat in the chair and answered audience questions.It was not possible to have the actress present in all the installations.

Eija-Liisa Ahtila was not present at the TechArchaeology Symposium, but the curator of *Seeing Time*, Robert Riley, was available to discuss the work. One of the monitors was removed from the show because of technical problems.Apparently one of the seven DV discs did not work and could not be repaired before the opening. It seems the problem could not be resolved, and the monitor was pulled from the show (Reinola 2000).When informed of the problem, Ahtila expressed concern and was disturbed to learn it was not resolved and the monitor not replaced.

Once again, we will examine the discussion questions in regard to the piece.

1. What types of procedures are most effective when examining the work?

This is a fairly complex installation that involves the fabrication and assemblage of virtually all the components of the installation. Seven submasters were provided by the artist to serve as collection archive masters.The issues described for McQueen's piece (see sec. 2.1) also hold true, with the added complication of caring for the props (see appendix 1) as if they were museum objects, at least during the installation. During the exhibition the installation appears to be a kind of decorative arts gallery.

Once again, highly detailed documentation could be used to record and monitor the room's physical characteristics,light levels,and sound levels. These could all be examined and monitored on a regular basis.In works such as *Anne, Aki and God*, for which props are fabricated or bought in stores, the museum faces a dilemma. If the items are treated as disposables, an unclear message is sent to museum visitors, who may not be able to readily understand why the props are not art but exhibit pieces,while in other areas of the museum pieces that may look the same to them are art and cannot be touched,handled, or sat upon. However, treating props made for the show or furniture bought for the show as art objects—accessioning them as part of the installation and maintaining them in accordance with that status—presents other problems. Gathering and construction of props are laborious, and there is a

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strong temptation to keep this material or ship it for other installations when possible.

Similarly, the electronic equipment is specified but not provided. As mentioned before, even though these pieces are not classified as actual art, they should be examined regularly, cleaned, and adjusted, and the state of the hardware should be assessed for degradation (Roosa 1998, 43).

2. What is essential to determining origins and authenticity of the work?

For *Anne, Aki and God*, the artist has a very definite spatial arrangement in mind and specific ideas about the relationship of narrative to space. In fact, the artist is doing a doctoral dissertation on this subject. An excerpt from the abstract for the dissertation follows: "The intention is to study the traditions and changes in narration through works in two different formats: a 35 mm film and a video installation. The context of the works will be both the visual arts and film. Through the two different versions of the same work I will be able to observe the production process from the screenplay to the finished work, the distribution process and the differences of various contexts as well as the relationship of the public to the work in the different situations of representation and distribution" (provided by Reinola 2000). Ahtila wants the installations to be as close to the instructions as possible given the space available. Viewers have a sensory and spatial relationship with an installation that affects their overall perception of the artwork. Ahtila is very attuned to this relationship and wishes to exert optimal control over this space and interaction. Usually Ahtila has two versions of her works, a 35 mm film and an installation version. The films evoke and depict a space, and the installations create actual space that the viewer can enter, as well as having film elements. In the case of *Anne, Aki and God*, there is only an installation version, so the artist is even more concerned about characteristics of the installation. Accordingly, the authenticity of the work bears a direct relationship to the fidelity to Ahtila's intention for the piece.

3. What is the artist's intent for conservation (for those artists present), and how is this determined in the absence of the artist?

Viola's approach is to require a careful and very thorough documentation of the installation and of maintenance procedures, with explicit statements regarding the artist's desires in regard to these issues (Viola 1999). Ahtila recommends the same approach, and she is in fact striving for more careful documentation and a greater degree of involvement with each installation and is working with a technician on her installations (Reinola 2000). However, a concern for the artist was a loss of control after the installation was completed, when the museum must take over maintenance. In the absence of the artist, the museum or collector has to make the best choices when dealing with conservation concerns, such as equipment failure, as they arise during the exhibition. The choices are, of course, based on their understanding of the artist's wishes, and the museum's or collector's ability to carry out these instructions.

4. Where is the "heart" of the work? (i.e., What are the essential aesthetic and technological elements that absolutely need to be preserved if the piece is to retain any integrity into the future?)

As with *Deadpan*, *Anne, Aki and God* is a narrative, or in this case seven, or possibly more, visual and audio narratives taking place in a carefully defined environment. This abstract, ideal, or Platonic conception of the piece is the heart of the work, and a faithful physical manifestation is the form it should take. A computer model could be constructed that would include textures and lighting and stream the video through virtual monitors, but it would still not enable the viewer to actually experience the space. The computer model might be useful as documentation of the work but would in itself present problems of preservation, conservation, migrating media formats, and technological platforms.

Works such as *Anne, Aki and God* or *Deadpan* challenge the conservation profession because they are not simply material objects but also involve the energy source to power the machines that makes the narrative unwind in a repeating one-hour loop, so they also have a temporal aspect as well as a physical one. It is quite possible that in the future, re-creating this installation may involve emulation of the power source as well as the technology. It has become impossible to anticipate technical evolution over even relatively short periods of time. Accordingly, I think

we have to think of the "heart" of the work as a portfolio of intellectual descriptions in various forms—text, graphic, and audio documentation—and hope that these will be migrated into viable formats that will enable people to re-create the installation in the future in a form the artist would recognize and accept.

5. How does the conservator determine what components will need preventive conservation?

For Ahtila's piece, the only things provided by the artist other than information are the seven submasters used to serve as archive masters. These need to be cared for in accordance with current standards (Sterrett and Christopherson 1998), and museum staff responsible for media art collections should take an active role in the definition of these standards. As mentioned before, preventive conservation for the props in the show will have to be arrived at in the museum in response to the individual situation. We may in future find ourselves embarrassed if we do not care for these props as museum artifacts, in spite of the instructions of the artists. Every institution will have to weigh this risk and arrive at its own decision. Museums cannot keep everything, and it is quite likely that the artist would object if a museum did accession these props and exhibit them in the future as having been part of *Anne, Aki and God*.

3. REGISTRATION AND THE AFTER-DEATH EXPERIENCE

Bill Viola has stated, "As tools of artistic craft, the individual components of media technology are more like musical instruments than implements" (Viola 1999, 89). This perception certainly seems to be a useful model for viewing all the technical components of media art. Registrars have to grapple with the issue of what actual physical pieces of an installation are the art (Gantzert-Castrillo 1999; Michalski 1999; Laurenson 1999). What do they accession? What do they insure? Do they regard the equipment as a disposable, used, expended, and finally discarded? Where does the registrar's responsibility for documentation begin and end in relation to the artist and the conservator? More to the point for this article, what exactly needs to be conserved, and when does the registrar call in the conservator? Viola (1999) also discusses the fact that in most instances the artist does not make the tools used to create and display his or her art. Clearly, there are exceptions to this expectation but we need not worry about these since this type of technology (i.e., manufacturing of equipment by the artist or a fabricator) more closely conforms to traditional models of curation and conservation. In much the same way that musical instruments must be maintained and cared for and kept in tune, video players, monitors, and acoustic devices and computers used in media art must be attended to. One can push the analogy and speculate that someday some of these devices will be treasured artifacts like violins by Stradivarius and Guarneri, and it is possible to imagine special events in museums housing technology where their individual characteristics are preserved, re-created, and cherished. However, it seems more likely that most such devices will be discarded and forgotten, and future speculation will be similar to the way we speculate today about what ancient Egyptian music actually sounded like. Given the current massive numbers of technological devices, it seems likely that few will be preserved by museums. But perhaps the efforts of registrars and technicians will prevent this outcome from happening.

Nonetheless, the only way to determine what needs to be accessioned and conserved is in a discussion the registrar will have to have with the artist, curator, conservators, and technicians. Institutions will have to develop and articulate policies in this regard, hopefully in concert with other similar institutions. Viola states: "Generally speaking, there can only be exhibition copies of my work. If a disaster occurs and all the physical objects are destroyed, new materials can simply be purchased and the piece assembled" (Viola 1999, 67). Not all artists view their work this way, but a fair number do. Determining how the artist and curator define the work of art becomes essential for each individual work. Their determination must be documented in some form by the registrar, and all individuals in the museum who are responsible for the curation and preservation of the work must have access to the documented consensus. Unfortunately, databases, forms, and procedures currently used by registrars and conserva-

tors all over the world are not designed to handle media art and its components. Accommodation for this work must be made at some point (Viola 1999, 90).All too often,the artist is thrust into the position of instructing museum staff in tasks that are entirely new to them and do not fit their existing routines.

Resolution of these problems should not be left to chance. Museum databases are evolving and a conversation about standards in regard to media art needs to begin that involves artists working in this area and registrars, conservators, and curators. It is quite possible that a system of documentation usable by all parties could be developed working from models such as the encoded archival description (EAD) (Encoded archival description 2000) being used by archivists in conjunction with extensible markup language (XML) (Bosak and Bray 1999).This system would allow the documentation of complex one-to-many and many-to-one relationships and the ability to associate these to collections databases or websites relating to the museum collection.It would also allow documentation of expendables and props and their roles and position in the artwork as well as the actual content-bearing media.

4.TECHNICIANS AND TECHNICAL SUPPORT

Technicians for media art are of the first importance. Given the complexity of the technology involved and its ephemeral nature, it is unlikely that professional conservators will be able to fill this role. To date, no training programs offer specialties in the conservation of media art Indeed, employment for conservators with such a specialization is an open question. Technicians may not be interested in becoming professional conservators and, in many cases, are media artists themselves.However, access to skilled technical staff is essential for artists and museum staff. While at this time it may not be possible to define the role of technicians who support media art as a profession in itself, some sort of formalized training geared toward supporting technicians could be organized. For instance, regular refresher courses in relevant technical concerns or workshops for dealing with individual topics could be created. A professional organization or annual conference on the subject, where information could be shared and contacts made, would be invaluable.

5. PATRONAGE AND COLLECTING AND THE ROLE OF THE CURATOR AND GROUP SHOWS

Patrons and collectors find that they can have a great deal of influence on the physical expression of technology-based installation art. Groups of art installations, when placed in a home or a museum exhibition can take on qualities as a whole that can make them more than the sum of their equal parts or less than the sum of their equal parts.Anyone entering the *Seeing Time* exhibition was immediately struck by the overall sound and feel of the exhibition, which was unique and quite striking. Robert Riley, the curator for the exhibition,mentioned that he had "tuned" it to achieve an overall integration or harmony of some kind between all the sounds in the various works in the exhibition. When you reflect that this is a private collection soon to be installed in a private home, it strikes the viewer that in such an environment a collection of technology-based installation art becomes an installation in itself, not unlike a private house museum, a *Wunderkammer*, or a collection of automata.The next logical step is to assume that in future, such groupings will have a scholarly significance of their own. Accordingly, it will be important to document the look and feel of exhibitions such as *Seeing Time*, since they may be regarded as defining moments in the history of media art, perhaps not unlike the Armory Show or other landmark exhibitions.

6.THE ROLE OF DOCUMENTATION

As discussed earlier an inexpensive computer-assisted design (CAD) drawing or very detailed documentation of installations could be done that would eliminate any ambiguity as to how to reinstall the show in each different venue, as Viola (1999) has striven to do in his documentation. Materials could be carefully recorded and documented, sound levels established,

and standards determined for monitoring color, texture, and any other measurable aspect of an installation. The tools currently available to conservators make a previously undreamed of precision in documentation possible. It is, in fact, technically possible to document installation art in a virtual environment that would exactly replicate the installations. I think most artists would feel that this type of documentation would be excessive. Some have found this useful and eagerly embraced virtual venues, but many have serious misgivings.

The logical next step is to view each installation of media art as the equivalent of a performance of an artwork (Viola 1999, 89). However, this approach introduces some disturbing ideas. Imagine a play carefully recorded in a similar fashion. The idea of a Sam Shepard play such as *Fool for Love* being viewed over and over again, not just with the sameness of video or film but in three dimensions, is somehow repugnant. Arguably, this type of documentation would make it possible to record the play with the playwright in the leading role for posterity, but perhaps such precision is a blight to the arts. Imagine the inhibiting effect on future actors. In theory, we accept this repetitive quality in films, but, in fact, films do change with each showing, and viewing them on video is by no means the same as the way they were originally intended to be viewed. The future holds more interesting issues. At the time of writing this article, Tony Oursler's (b. 1957) *The Darkest Color Infinitely Amplified* was on display at the Whitney Museum of American Art. The piece involves high-definition volumetric display technology in which video images seem to float in midair. Undoubtedly, some artists will embrace this technology and use it as a substitute for electronic devices currently being used. The same devices could be used once as props, while the installation is recorded, and then discarded or passed on for other uses.

Millions of people around the world happily listen to exactly the same musical performance over and over again, but musical aficionados tend to prefer actual live performance of pieces of music and find digital exactitude tedious and unnatural unless, of course, it captures a superb performance. Technology-based installation art may have a similar fate. It is an open question as to whether this kind of exact repetition would be sympathetic to media art installations. It would certainly make wider dissemination of the work possible. Currently it is hard to imagine that these works would suffer the overexposure of many musical works, but we cannot anticipate future use of artistic works. It seems likely that a model more akin to live music performance or theater would be desirable. However, after the death of the artist, the curator, collector, and museums are thrust into the role of interpreting the work.

Many artists happily embrace the variations presented in different venues. However, conservators and other museum professionals find it easier to work from very precise instructions whenever possible. It is easier to monitor conservation concerns if a very well documented baseline is established. Every professional seeks to rationalize his or her work so that it can be explained to others and passed along in some objective form. The constant introduction of subjective elements into conservation work corrupts the integrity of the work and makes it very difficult to know how to proceed or what the appropriate role is for the conservator, who, after all, is bound by ethical strictures that are supposed to take priority over institutional directives. The challenges of conserving media art cannot be readily reduced to objective formulas and procedures. Some will find this ambiguity intolerable; others will find it challenging. A balance will have to be achieved that does not do violence to the professional ethics and practices of conservators and to the artist and the work of art. Clearly, this balance will not happen overnight, but the process has already begun and the quality of the dialogue taking place is extremely encouraging.

APPENDIX 1

Video installation instructions for Eija-Liisa Ahtila's *Anne, Aki and God*, 1998, from the San Francisco Museum of Modern Art.

1. SPACE

- rectangular shape, minium size app. 7 m x 10 m

- dark space (with 2–3 narrow spotlights to be directed)
- quiet space with a ceiling (from which to hang the screen)

2. TECHNICAL EQUIPMENT

- 1 rear projection screen (app. 2 m x 1.5 m)
- 1 front projection screen (app. 1.8 m x 1.2 m)
- 2 x video projector (e.g., Sharp Vision XGNV2)
- 5 x monitor (21 in.)
- x U-matic players (or S-VHS players)
- 2 active loudspeakers (JBL or Fostex)
- sync devise

3. INSTALLATION STRUCTURES AND FURNITURE

- wooden app. 1.20 m/1 m height "half-wall" structure (see fig.3)
- curtains to cover 3 walls of the exhibition room (of two colors)
- a used bed with wooden bedsteads
- mattress,bedspread,pillow
- small table for the second projector (e.g., gray Ikea coffee table)
- an armchair
- text on the wall (printed on cardboard)
- box to store the equipment/players
- rails tohang the curtains
- 3 lamps (for Aki,Anne, text on the wall)

4. TAPES

- submasters x 7 on Betacam SP
- installation tapes (S-VHS or) U-matic 7 x 3
- all tapes must run in syncronization (frame sync or near)
- the size of the wooden structure depends on the size of space
- the curtains cover 3 walls from ceiling to floor
- all tapes include sound; the work is about 30 minutes long and runs in loop of app. 1 hour

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