Preserving digital art in the current era is notoriously difficult due to issues of technological obsolescence, the intangibility of dynamic media, and the interactive nature of digital art. This is of marked interest to libraries, museums, and cultural heritage institutions given the limitations of traditional forms of preservation that rely heavily on storage of physical forms. The Re-Gift, a work of new media art by Buffalo-based artist Liz Rywelski, exemplifies many of the complexities of these emerging formats. This report examines one of the potential approaches to preserving this type of work, The Variable Media Questionnaire (VMQ), with an eye toward methods that could be extrapolated to rescuing other works of new media.

Keywords: new media art; variable media art; interactive art; preservation; conservation; Variable Media Questionnaire

Introduction
Preserving digital art in the current era is proving to be a race against time. Numerous threats to digital media range from the rapid turnover of support for proprietary formats (Rinehart and Ippolito 2014), to software vulnerabilities, like the deterioration of components used to store digital files (Buskirk 2014; Sydell 2014), to the anticipated obsolescence of technologies upon which society relies to store and access its cultural capital (LaFrance 2014; Library of Congress N.D.; Mickens 2009). This is of marked interest to libraries, museums, and cultural heritage institutions given the limitations of traditional forms of preservation. Acutely aware of the ephemeral nature of digital media, artists, cultural institutions, and the archival community are working to find ways to preserve new media art for future curatorial, research, and teaching needs (e.g., Archive-It 2013; Cornell University Library 2012; Indianapolis Museum of Art 2015; Lazorchak 2014; Manus 2014; Nadasky 2014; The Tate 2015).

One approach to the preservation of new media art lies in The Variable Media Questionnaire (VMQ), an interactive online questionnaire that allows artists working in new or variable media – often considered ephemeral due to issues of technological obsolescence or the reproducibility of performance – to guide the future restaging of their work. Whereas traditional works of art rely on the storage of objects or component parts for preservation or future installation, the VMQ is based on a conservation philosophy that aims to characterize a work of art by the way it acts or behaves, not simply as an assembly of tangibles. The Re-Gift, an art project by Buffalo-based artist Liz Rywelski, exemplifies many of the complexities of preserving dynamic media, particularly given the inclusion of elements such as interactive displays and network connectivity. This report explores the use of the VMQ in documenting Rywelski’s intentions for the future of The Re-Gift.

Genesis of The Re-Gift
In 2010, new media artist Liz Rywelski presented attendees at a show in Pittsburgh with hand-wrapped gift boxes. The boxes were covered with images of text messages and were neatly tied with a bright red bow. Inside each box were sundry items: a Nokia keypad cell phone from 2006, accessories for the phone (charger, clip-on leather case), and a card with a hand-written contract on it. Rywelski struck up conversations with attendees who expressed interest in the boxes, offering them an opportunity to correspond via text message for approximately one month using the prepaid cellphones in the boxes. What these participants did not know was that they would receive messages from Rywelski’s cell phone number that were, remarkably, not composed by her. Rather, Rywelski would be sending them replicas of the original romantic messages that a former boyfriend sent her throughout their two-year relationship (Figure 1).

During these two years, Rywelski learned that this partner was unfaithful, a realization and experience that inspired her to seek answers to the question, ‘If I were a different person, if I had responded to these original...
texts differently during our relationship, would we still be together? (Shaw 2011). This point of departure led to the art installation that would become *The Re-Gift*.

Conceived in 2009, *The Re-Gift* has been exhibited twice to date, in Pittsburgh and Miami, with a prototype, titled *TEXT MESSAGES*, that was exhibited in Washington, DC in 2007. By ‘exhibited,’ Rywelski refers to full participation by willing attendees for the duration of the exhibition, rather than simply a display of documentation or archives of past work without the opportunity for viewer participation. In her shows, attendees observe compilations of the original outgoing texts written by the ex-boyfriend and sent to previous participants by Rywelski, as well as responses she received throughout the project. Each show presents a chance for current attendees to participate in a new round of text messaging (Figure 2).

For curators of digital art, not to mention artists themselves, artworks such as Rywelski’s are intriguing not only for their conceptual significance, but also for their historical and cultural value. In an art world that is increasingly comprised of nontraditional, ephemeral media, questions abound for museum professionals, archivists, and curators who have an interest in preserving this type of work for posterity. What is the fate of a work of art that centers on the act of texting? How does an artist preserve her work when using components that rely on an earlier era of cellular communication? To what extent does an artist working in new or variable media prepare for the inevitable obsolescence of current technologies? How do curators document, re-stage, or reinterpret artworks with interactive or technologically-driven dimensions? What are potential solutions for preserving works of variable media that risk being lost to history?

Unlike traditional museum practices that rely on storage to preserve works of art or artifacts, a piece like *The Re-Gift* does not lend itself to conventional means of safeguarding. To recreate *The Re-Gift* involves facilitating a shared experience, not simply storing an item in a box, and this experience relies on a range of factors such as interpersonal communication, network connectivity, hardware, and performance. A requirement for this piece is the participation of exhibition attendees, as well as the performance of the sender of the original text messages. Other components include the cell phones themselves and the network involved in cell communication. This range of elements pushes the boundaries of traditional preservation methods and requires insights from both the artist and the curator alike to determine the future viability of restaging the piece.

In the spring of 2014, I interviewed Rywelski about the preservation and performance possibilities of *The Re-Gift*. It became clear that it was neither crucial nor expected that she be the sender of the texts, so a curator, artist, or other interested person could recreate this piece without reservation. Even the gallery would be an unnecessary element since, according to Rywelski, the piece is more conceptual than aesthetic. In fact, she suggested that an intimate connection would be more important than the space, placing value not on the outward appearance of the work, but on the internal data collected on the Sim card. Insights such as these, as well as further instructions on how to maintain the integrity of *The Re-Gift* for
future installations, are captured in the Variable Media Questionnaire.

**The Variable Media Questionnaire**

The Variable Media Questionnaire (VMQ) is a freely available, interactive online form designed to document artists’ opinions on how to preserve works of creative expression when their current medium is superseded by new technologies (or in anticipation of this possibility) (Bell et al. 2015a). Designed in the late 1990s by Jon Ippolito, then Associate Curator of Media Arts at the Guggenheim and currently a professor of New Media at the University of Maine, the VMQ is an attempt to address some of the more pressing questions of where emerging art meets preservation. The VMQ was launched in beta form in 2000 as part of the Guggenheim’s *Variable Media Initiative*, a task force composed of The Solomon R. Guggenheim Museum and the Daniel Langlois Foundation for Art, Science, and Technology.

Although they initially focused on more commonplace media (film, video, photography), the group shared growing concerns about the future of curating and preserving works of art that were increasingly dependent on the use of digital media and/or performance (Guggenheim 2002; Guggenheim 2015). This led to a departure from categories that relied on media-specific descriptions, given the likely obsolescence of these formats and the rapidly evolving nature of media being used in contemporary art, to ‘medium-independent, mutually-compatible descriptions of each artwork’ which they called ‘behaviors’ (Ippolito 2003: 48).

These behaviors informed the conceptual framework of the VMQ, which draws on four preservation strategies: storage, migration, emulation, and reinterpretation (Bell et al. 2015c). Storage is defined as preservation of the tangible or material, rather than the interaction or the experience. Migration indicates an updating of the work by transferring it to contemporary hardware or software. Emulation refers to the effort to reconstruct the experience as closely as possible to the original but with current technologies or affordances. Reinterpretation is ‘the most powerful, but also takes the most artistic license... the spirit is recreated in a completely different medium, perhaps according to a score or other interpretive notation or instructions’ (Bell et al. 2015d). According to Ippolito, these strategies emerged not from a theoretical lens but a practical one, from ‘work we had been doing in the trenches... They seemed at the time to cover all the possibilities, and still do to me today’ (email to the author, 29 July 2015).^6^

References to the VMQ, as both a concept and a practice, reflect an increased appreciation of the issues the tool attempts to address, as well as awareness of its potential. Hope and Ryan (2014: 179) called the VMQ an ‘exemplary initiative’ in the realm of crowdsourcing the preservation of digital art. Christiane Paul, Adjunct Curator of New Media Arts at the Whitney Museum of American Art, when discussing the significance of knowledge sharing between institutions, lauded the usefulness of the VMQ in making interviews accessible to the public and facilitating cooperation between museums with duplicate holdings (Sanchez and Eckert 2013). Jones and Muller (2008: 419) interviewed an artist using questions from the VMQ that they combined with principles of human-centered design. The result was ‘a valuable dialogue between ‘real and ideal’ which they claim enabled them ‘to create a more, not less, ‘complete’ account of the work’.

At the writing of this article, the VMQ is in its third round of development and comprises approximately twenty-six completed entries, with fifty additional submissions in progress (email to the author, 29 July 2015). These include video (Annie Abrahams, *Angry Women*, 2011), animation (Scott Snibbe, *Bubble Harp*, 2010), and the website of a fictional artist (David Vincent, *a propos de Nancy Crater*, 1996). A typical entry provides introductory information about the artist and the work of art, and most importantly, includes an accompanying interview. The interview captures the artist’s intentions for the work, outlines the component parts in detail, describes the expectations for viewers’ experiences with the piece, and lays a foundation for future iterations of the work in a curatorial setting.

As Ippolito has remarked, artists and interviewers who choose to contribute to the VMQ are rescuing works of art from extinction (pers. comm.). The process begins with an interviewer researching the artist and her work of art prior to the interview, in order to identify the component parts to be discussed and described. The VMQ lists an extensive selection of parts to incorporate into the interview, ranging from the intangible (e.g., key concepts) to the interactive (e.g., viewers, performers, or participants) to the situational (e.g., the gallery, the network, or the economy). A conversation with the artist then takes place (Figure 3).

Anyone vested in preserving works of creative expression, whether curator, fellow artist, student, or art enthusiast can become an interviewer. A demonstration site is available and a login request comes at no cost (Bell et al. 2015b). To date, independent curators, artists, and institutions ranging from museums like the Whitney Museum of American Art to architecture studios like Diller Scofidio + Renfro have contributed entries to the VMQ (email to the author, 22 June 2015).^7^

![Figure 3: Selection of parts from *The Re-Gift.*](image-url)
**The Re-Gift Revisited**

As an example of the VMQ at work, ‘network’ is a component of *The Re-Gift*, representing the architecture that facilitates communication between phones. When the interviewer selects ‘network’ as a piece of the artwork to be preserved, s/he is automatically prompted by the VMQ to ask the artist the following questions for potential future staging of the piece:

- How do you accommodate changes in network protocols (such as HTML or HTTP)?
- How do you accommodate differences in network accessibility (e.g., due to limited bandwidth)?
- Should software or hardware be modified to restrict a user’s access to information and services that aren’t part of the work (e.g., to prevent them accessing email from an Internet connection)?

The VMQ then prompts the interviewer to ask the artist about a range of potential responses to these questions that draw on the four preservation strategies mentioned earlier: storage, migration, emulation, and reinterpretation. For the first bulleted question above, regarding network protocols, sample options that the artist is offered are:

- Don’t change the work, even if the original protocols cannot be maintained on the current network. (*storage*)
- Run the project on a simulated version of the original network, such as a pool of Web sites from the same period, or vintage Web sites drawn from the Internet Archive. (*emulation*)
- Re-program the work to function with contemporary network protocols (as in updating from IP v4 to IP v6). (*migration*)
- Modify the work in accordance with the creator’s instructions or in a way that best suits its original spirit. (*reinterpretation*)

While these responses serve as talking points for the interviewer to get a sense of the artist’s intention for this particular part of the piece, notes fields are present for each option to clarify responses, as is the choice for ‘Other.’

According to Ippolito, participation in an interview for the VMQ is often the first time many artists have thought about preserving their work, particularly when it comes to the more challenging aspects of variable media art (email to the author, May 7 2014). True to form, several questions triggered Rywelski to think about her work in new ways, specifically prompting reflection on how parts of *The Re-Gift* might be reimagined in a future without Nokia cell phones or numeric keypads. At first, Rywelski expressed a strong interest in the continued use of the original cell phones to allow participants to experience the mechanics that contributed to the act of communicating via text at this particular technological point in time (~2006). She underscores that the manual nature of this type of texting (i.e., without the ease of current touchscreens or image sharing capabilities) is key to the experience of the work, as is participants’ reliance on their own ‘voices’ to write descriptive text. She also sees the phones themselves as ‘a site of excavation’ for the artist/curator, a space to witness the communication that took place from the recipient’s point of view (Figure 4).

However, over the course of the interview, Rywelski and I discussed the precariousness of relying on technology that will become obsolete and/or inaccessible (Associated Press 2009; Tofel 2012). Given that cellular phones (and their chargers) have a finite lifespan, this will have implications for *The Re-Gift*, particularly as the phone industry moves away from featureless phones and their component parts. Rywelski had mixed feelings about her preservation options. At first blush, she suggested that the project end when Nokia multi-tap numeric keypad phones are no longer available. Through further conversation, however, the artist began to consider the potential for using updated technology to facilitate the look and feel of the original phone. Thus, some of our discussion revolved...
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Rywelski has a multi-pronged approach to this question that showcases the complexities of preserving interactive art. In order to maintain the anonymity of previous participants, she saves their text messages in various formats, including transcriptions, photos of the texts, and the phones themselves which she uses as storage devices. She then buys new prepaid phones and invites another round of participants to join the project. This suggests that she prefers the ‘freeze’ and ‘reset’ options (storage and emulation). However, given that viewers of The Re-Gift, as exhibited, are presented with images of previous conversations with past participants (stripped of any identifying information), and invited to make their own contribution to the project, the ‘migration’ option also applies. The VMQ allows for multiple, weighted answers to questions, rather than limiting artists or curators to a single, technology-driven solution. Thus, the value of the VMQ itself emerges, as a means for capturing the manifold nature of variable media preservation.

At the end of the month-long interaction between Rywelski and The Re-Gift participants, she sends a final message that contains a FedEx account number and a mailing address. Participants are asked to bring the gift box and its contents to a FedEx location where they can mail the materials back to her, free of charge. Rywelksi acknowledges that she is inspired by meeting people at her shows and the dialogue that emerges during their exchange. One of the participants even confessed that he had never been involved in a romantic relationship and that this project allowed him to practice what that might look like.

**Conclusion**

One of the VMQ’s many successes is that it helps steward cultural memories and experiences so that future generations of artists, archivists, museum professionals, and art lovers can breathe new life into a previously conceived work, in order to restore, reimagine, or reinterpret it. Dietrich and Bell (2010: 218) note that it is ‘not effective as a traditional collections management program that tracks the physical property of a museum’; rather, it is a forum for bigger picture preservation questions that consider the technical and performative attributes of a work of art and how people and parts interact. This approach is gaining momentum as a complement to traditional modes of preservation, as evidenced by the number of collecting institutions that now incorporate preservation interviews with artists into their acquisition process (Rinehart and Ippolito 2014). Such considerations have the potential to influence how artists conceptualize and prepare their works and exhibitions, as well as how they collaborate with curators and conservators to sustain their vision.

This does not mean that all artists will invest in long-term conservation solutions, or even consider them advantageous, necessary, or appealing. Whereas a strength of the VMQ is that it encourages reflection on the continuing care of variable media – which many artists have not considered prior to their participation in an interview – ‘emulation’ and ‘reinterpretation’ are considered the most compelling features of this approach. Essentially, these options ask artists to relinquish some conceptual control with the recognition that with time-based art (i.e., works that rely on technology or performance), it may not be possible to adequately replicate a work in its original manifestation. As Stringari (2003: 57) states, ‘defining acceptable loss when we are dealing with highly intellectualized works and sophisticated technological parameters is key to safeguarding these cultural artifacts’. Thus, the VMQ’s flexible approach to preservation may be perceived as either a strength or weakness, depending on artists’ interests in and expectations for the future of their work.

Lastly, unresolved curatorial issues persist. These include the extent to which future curators of works described in

around a migration/emulation combination, by creating an analogous version of the Nokia phone that would work with contemporary hardware and software. Another option for Rywelski to consider is whether it would be permissible to facilitate other forms of communication in a restaging of The Re-Gift that would retain the spirit of the interpersonal relationship without the cellphone itself (i.e., reinterpretation). The VMQ allows revisions to interviews, or the addition of new interviews altogether. One possibility is to reconnect with Rywelski at a future date to see if she has an interest in a follow-up interview regarding the potential for the reinterpretation of her work.

The concept of the ‘re-gift’ that is embedded in Rywelski’s project is most explicit as she recycles old text messages to start new conversations. However, for those less interested in participating in the project itself but intrigued by the idea, Rywelski underscores that viewers should be able to refrain from participation in the text messaging component and merely observe relics of the work. In other words, there are both active and passive participants involved in this piece (identified as Participant and Viewer, respectively, in the VMQ). ‘Viewer’ status allows exhibit-goers to simply peruse previous manifestations of The Re-Gift on a digital screen, rather than engage in the month-long project. For both types of attendees, the VMQ prompts the interviewer to ask, ‘What do we do with traces or contributions left by the people involved in the artwork?’

Responses for artists to consider include:

- ‘Freeze’ the work in the state left by its last contributor/s, preventing further traces of interaction. (storage)
- ‘Reset’ the work to erase any trace of past contributions, and allow new visitors/performers to leave their traces. (emulation)
- Exhibit the work with traces of previous contributions, and allow new visitors/performers to leave their traces. (migration)
- Enable future visitors/performers to manipulate the work in a way previous contributors could not, but which is consistent with the spirit of the work. (reinterpretation)
- Limit access to traces only to certain people identified by the artist (such as conservators or performers). (reinterpretation)

**The Re-Gift**

The Re-Gift is an interactive project that invites participants to leave messages on a Nokia phone. The messages are then compiled into a book, and the phone is used as a tool for reflection on the nature of variable media preservation.

**Conclusion**

One of the VMQ’s many successes is that it helps steward cultural memories and experiences so that future generations of artists, archivists, museum professionals, and art lovers can breathe new life into a previously conceived work, in order to restore, reimagine, or reinterpret it. Dietrich and Bell (2010: 218) note that it is ‘not effective as a traditional collections management program that tracks the physical property of a museum’; rather, it is a forum for bigger picture preservation questions that consider the technical and performative attributes of a work of art and how people and parts interact. This approach is gaining momentum as a complement to traditional modes of preservation, as evidenced by the number of collecting institutions that now incorporate preservation interviews with artists into their acquisition process (Rinehart and Ippolito 2014). Such considerations have the potential to influence how artists conceptualize and prepare their works and exhibitions, as well as how they collaborate with curators and conservators to sustain their vision.

This does not mean that all artists will invest in long-term conservation solutions, or even consider them advantageous, necessary, or appealing. Whereas a strength of the VMQ is that it encourages reflection on the continuing care of variable media – which many artists have not considered prior to their participation in an interview – ‘emulation’ and ‘reinterpretation’ are considered the most compelling features of this approach. Essentially, these options ask artists to relinquish some conceptual control with the recognition that with time-based art (i.e., works that rely on technology or performance), it may not be possible to adequately replicate a work in its original manifestation. As Stringari (2003: 57) states, ‘defining acceptable loss when we are dealing with highly intellectualized works and sophisticated technological parameters is key to safeguarding these cultural artifacts’. Thus, the VMQ’s flexible approach to preservation may be perceived as either a strength or weakness, depending on artists’ interests in and expectations for the future of their work.

Lastly, unresolved curatorial issues persist. These include the extent to which future curators of works described in
the VMQ will need technological expertise, the time to develop sufficient proficiency with current technologies, or financial support to purchase materials or consult with experts on restaging a work of new media art. In Rywelski’s case, this includes the specialized knowledge required to design phones that would work with a future version of this piece, if new devices were built to simulate Nokia key-

designed for interactivity that maintains the look and feel of an outdated technology. Inclusion of relevant consulting services, training opportunities, and/or conservation specialists in new media would be an asset to the VMQ, given its promise for conceptualizing a future for artworks driven by technology. Additionally, greater attention to initiatives like the VMQ in cultural heritage institutions, artists’ forums, and academic programs may not only increase interest and participation, but also critique and improvement of the tool as it continues to evolve.

Competing Interests

The author declares that they have no competing interests.

Notes

1 New media art is considered a component of variable media art. The Guggenheim Museum’s description of variable media applies to Rywelski’s The Re-Gift: “Behaviors commonly, although not exclusively, applied to film, video, and new-media art are interactive, encoded, and networked. Interactivity also describes installations that allow visitors to actively engage, manipulate, or take home components of a physical artwork” (Guggenheim Museum 2015). The Variable Media Questionnaire, the tool discussed throughout this article, resulted from the Museum’s efforts to address the growing need to consider how to preserve works of art that rely on digital media and/or performativity, namely the Variable Media Initiative and the Variable Media Network.

2 Getting Closer: intimacy in the digital age, Fe Arts Gallery, curator Lindsay Howard, Closed March 1, 2011. One gift box with a cell phone inside (an example of what the participant would receive), which contained all of the text messages pre-loaded onto it and a digital screen with images of the original texts playing on a slideshow were on display.

3 LIKENETBASEL, Workshop Collective, curated by Ryder Ripp and Brad Horenstein, December 2–6, 2011.

4 Titled TEXT MESSAGES at the time (evolved into The Re-Gift), Sloganeers, DC Arts Center, curator Liz Lynott, November–December 2007. Black and white printed posters of “M” as wall paper, a flat screen playing a video of TEXT MESSAGES and six small frames with participation requests for viewers were on display. No one chose to participate.

5 This interview, conducted via Google Hangout, was the first of several communications about The Re-Gift, including follow up emails and a second Google Hangout. The Re-Gift, interview, and parts are described in the Variable Media Questionnaire. Available at: http://wwwvariablemediaquestionnaire.net/app (login and password required).

6 Ippolito continues: ‘Most of the categories I’ve seen used in other frameworks—such as refreshing, duplication, or even documentation—seem to me like variations on storage. And I felt like too many preservation schemes rely on storage, whereas to me it is only a stopgap solution for digital media. So I deliberately wanted this to be a small part of the preservation pie.’

7 Unlike most of the contributions to the VMQ, The Re-Gift interview began as a course project in The Digital Curation graduation certificate program at the University of Maine and continued after the course ended.

8 An example of this might be to emulate the Nokia interface on a smartphone. This is reminiscent of Cory Arcangel’s ‘historic video game works running on cheap tablets and Smartphones via a Nintendo emulator.’ Team Gallery, ‘tl;dr,’ Available at: http://www.teamgal.com/exhibitions/296/tldr [Accessed 15 October 2014]

9 This example highlights the very nature of ‘variable media’ wherein the message remains the same but the medium changes from cell phone to photograph to text to a new cell phone.

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