

Hello, im jonCates and the subject of this talk is "openness".

I am an experimental New Media Artist and I most often make work collaboratively. I am also as a critical Media Art Historian. These are the 2 fields i primarily operate in, experimental New Media Art and Media Art Histories.

In this presentation i will use the term New Media Art, as it is used in the field by authors such Michael Rush in his New Media in Late 20th-Century Art from 1999 or Mark Tribe and Reena Jana in their collaborative book simply entitled New Media Art. i am also using the phrase "New Media Art" as we use it in the Film, Video & New Media Department, the department in which I teach and in which I have developed the New Media path of study. When we use the phrase New Media we refer to time, screen and code based Digital Art that is connected to the histories and theorypractices of Film Art and Video Art. We are primarily concerned with experimental Media Art and we see New Media Art in relation to all other forms of experimental Media Art such as Film, Video, Animation, Installation, Art Games, Machinima, Realtime Audio Video, Web Art, Software Art and Free and Open Source Software.

I also take this perspective from two of my own professors, Lev Manovich and Sean Cubitt. Manovich, wrote in The Language of New Media in 2003 that the languages of New Media Art are "always hybrids, incorporating memories, expertise, and techniques of already well established cultural forms such as cinema, theatre, printed books, and so on, as well as new more recent techniques which come from the new engine of global information society – digital networked computer." Ten years prior to this, Sean Cubitt, who was my graduate advisor, wrote in his book Videography: Video Media as Art and Culture that Video and thereby Video Art are "at the heart of increasingly interlinked webs of previously separate media... video is neither an autonomous medium, free of all links with other forms of communication, nor entirely dependent on any one of them." For Cubitt and Manovich Video Art and New Media Art are (respectively) both hybrid categories of creative cultural work, meshworks of interconnections that are socially situated technological forms. Furthermore, the similarity of Cubitt's and Manovich's claims establishes the interconnectedness of the Media Art Histories of Video Art and New Media. Current New Media Art theorypractices have developed from recent Media Art Histories over the last 50 years. What we refer to now as the early Video Art of the 1970's anticipated many specific New Media Art theorypractices. I often trace these histories through the lens of experimental Media Art projects made in Chicago during the decade of the 1970's by a group of artists and academics whose deeply collaborative artistic research and development led to the establishment of new academic programs, technologies, approaches, organizations and Media Art projects.

In these Media Art Histories, i find the keys to locating myself in the meshworks of meanings and spacetimes of Film, Video & New Media.

I will now begin traversing these timespaces to render the details of my theorypractices, traveling across the topical landscapes, the terrain that shapes my concerns... We will begin in the present moment, then go back to earlier rebeginnings before we return at the end of this talk to the present.

The first place we will begin will be in the present with my work as an artist who creates realtime audio-video and Noise musics. Noise is a type of music which comes from musical traditions such as Musique concrète and Art Historically originates from Futurist, Dadaist, Surrealist and FLUXUS. The term 'realtime' refers to receiving and processing a continuous signal at the same rate as the signal is produced. Contemporary computers

are able to produce and process audio and video streams in realtime. These systems allow for feedback (which is itself a feature of Noise musics) and live performance interactions with these audio-video systems. For these reasons I am interested in a performative process-orientation and this is why I often position myself and my projects at the intersections of experimental musics and New Media Art.

I often collaborate with other artists with whom I share mutual respect and trust. I believe, as Eddo Stern writes of New Media Art, that such "collaborative work in this medium is essential." Diane Kirkpatrick wrote in the exhibition catalogue for "Chicago: The City and Its Artists 1945-1978", Media Artists often develop "an interactive performance mode of working together" in both pre-planned and improvised forms. Together we create what William S. Burroughs and Brion Gysin referred to as the Third Mind, an artistic entity that is greater than the sum of it's constituent parts

Jake Elliott and I perform under the name OUR080R05. Ouroboros, the serpent god swallowing its own tail to form a circle, functions as a metaphor for our OUR080R05 performances which display and digest audio and video streams recursively from one performance to the next. We have performed our OUR080R05 project at venues such as the Chicago Underground Film Festival, OPENPORT Festival at Links Hall, ENEMY Sound in Chicago, on an East Coast Noise tour at Goodbye Blue Monday in Brooklyn, Axiom Gallery in Boston and during the r4WB1t5 macro.Festival in Mexico City. We have lectured on OUR080R05 for Chicago Artists Month at the Art Institute of Chicago in a series organized by Lisa Dorin and exhibited an installation version in the Ahh. . . Decadence! Exhibition at the Sullivan Galleries curated by Lisa Wainwright and Fast Forward at the Rockford Art Museum curated by Lisa Wainwright and Jim Yood. Our next presentation of this project will be in 3 days at the SLSA 2009 Annual Conference on Decodings in Atlanta, Georgia.

I am deeply inspired in this work by William S. Burroughs and Brion Gysin and their collaborative concepttechnic of the Third Mind. I will now show you sample output of our OUR080R05 project, this documentation of the system that we use to perform realtime audio-video is an example of what our experimental performances look and sound like.

// PLAY VIDEO
// AFTER 1 OR 2 MINUTES TURN DOWN AUDIO

You can hear the voices of both Burroughs and Gysin in this work, as well as Jake & myself. Similarly, you can see previous instantiations, instances of the performance that have been recorded and recursively reprocessed in realtime. While this sample continues I will explain in more detail how I have been inspired by the concepttechnic of the Third Mind, as well as the cut-up and fold-in methods that were developed and forwarded by Burroughs and Gysin in the early 1960's.

"The cut-up, that mechanical method of shredding texts in a ruthless machine ("Take a page of text and trace a median line vertically and horizontally./ You now have four blocks of text: 1, 2, 3, and 4./ Now cut along the lines and put block 4 alongside block 1, block 3 alongside block 2. Read the rearranged page"), a machine that could upset semantic order—that method has a history that goes back to Dada. In his Manifestos Tristan Tzara set down the principle of cutting up the pages of a newspaper, throwing the words into a hat, and pulling them out at random. Shortly thereafter, Marcel Duchamp... placed four apparently un-related texts in four divisions of a square. Such are the ancestors of this technique, of an operation of decoding...

The Burroughs machine, systematic and repetitive, simultaneously disconnecting and

reconnecting—it disconnects the concept of reality that has been imposed on us and then plugs normally dissociated zones into the same sector—eventually escapes from the control of its manipulator...

the complete fusion in a praxis of two subjectivities, two subjectivities that metamorphose into a third; it is from this collusion that a new author emerges, an absent third person, invisible and beyond grasp, decoding the silence.

The Third Mind is perpetually rebeginning, in perpetual contestation. It is never ending—not that it remains forever unfinished but that it is open to all optics, to all possibilities..."

The preceding quotes were taken from Gérard-Georges Lemaire in his Preface to *The Third Mind* from 1977.

In these quotes I find the concept of openness, framed as a position, an approach, a process of perpetual rebeginnings, of never endings that are not forever unfinished but rather that are open to "all optics", "all possibilities".

Issues of openness in the Arts certainly predate the digital media that we work with today. Pamela O. Long writes in her book *Openness, Secrecy, Authorship: Technical Arts and the Culture of Knowledge from Antiquity to the Renaissance* on open forms of authorship versus closed or secret forms of knowledge. She states during the late medieval period in Europe, those who wrote "on the mechanical arts for the most part wrote openly" rather than in secret or encrypted forms. As Long explains, these open forms expanded in the early fifteenth century during the time when Alchemy and Majik traditions were also developing. As you will see Majik traditions are also very important to me as an artist.

The time period of Long's research is during the transition from manuscript writing to the mechanical reproduction of the printing press. Long makes an important observation that the printing press as a technology "permitted the wide distribution of texts, yet it cannot be unequivocally claimed as an instrument of greater openness." I believe the same to be currently the case with New Media. The internet and the web allow more open forms of distribution for example but increased openness is not required. Increased openness in terms of Open Source collaborative approaches for instance is not inherently granted through the use of New Media, but certainly can be created if one is committed to principles of openness and collaboration. And perhaps as Christiane Paul writes, *New Media Art* as a genre is especially process oriented, contextual and collaborative, with collaborative exchange being a "fundamental part of artistic new media practice".

Long continues her study into the sixteenth century, stating that during this period, the fields of painting, sculpture and architecture (which were then becoming constructed as the 'liberal arts') enjoyed open forms of authorship that increased their abilities to be studied and taught while also increasing communication and collaboration. She writes that:

"Numerous interactions developed in the form of conversations and in the actual planning and execution of projects... As important as the actual collaboration are the representations of collaboration within dialogues and other kinds of writing... Communication across social boundaries... became commonplace in mid-sixteenth century circles of painters, architects and humanists and could blur (although not extinguish) hierarchical social distinctions."

Collaboration, education and even the existence of these historical records all became possible because of openness in the Arts.

In the 20th Century, FLUXUS artists such as Nam June Paik, Yoko Ono and Mieko Shiomi worked at the intersection of experimental musics and Media Art creating open scores and instruction sets with which to perform. Paik in particular has been recognized for his relationship to the beginnings of Video Art and New Media Art. His works Random Access from 1963 and Magnet TV from 1965 both opened possibilities for realtime interactions (in the case of Random Access) and reprocessing media (in the case of Magnet TV). Recently, the New Media Artist Golan Levin, who I brought to present his work at Conversations At the Edge cited these two examples of Paik's work as the 2 starting places for all New Media Art.

My projects are directly informed and inspired by my Media Art Histories research into the prehistories of New Media Art from the 1960's to the present. I am also concerned with the counter-cultural influences on computing and the experimental Media Art of the late 1960's and the decade of the 1970's. My Media Art Histories work asks a series of questions through the methods of comparison, interviews and by conducting primary research. I use original materials from The Phil Morton Memorial Research Archive, as Media Archaeological evidence in my research and writing. I initiated this Archive in 2007 after I received a generous donation of Phil Morton's personal video databank from Morton's surviving partner Barb Abramo.

Phil Morton arrived in Chicago in 1969. He joined the Faculty here at The School of the Art Institute of Chicago and one year later he had founded the Video Area. During the early 1970's, the work of Phil Morton in specific and Media Artists in Chicago in general anticipated and developed Open Source approaches to Free Culture, foregrounding collaborative experimentation. During this time Morton developed a concept for copyright resistance called COPY-IT-RIGHT. Morton COPY-IT-RIGHT ethic motivated the early Video Art communities in Chicago and beyond to share resources, distribute their work and create decentralized open systems.

In 1971 Dan Sandin developed The Sandin Image Processor, a patch-programmable analog computer optimized for video processing and synthesis. Morton, who was a friend and studio neighbor to Sandin, asked Sandin if he could build the first copy of Sandin's original Sandin Image Processor. Sandin and Morton then began to work together creating the schematic plans for the Sandin Image Processor from 1971 to 1973. They named this document, that contained the schematic plans for copying Image Processors, The Distribution Religion. The Distribution Religion was the first example of a document being released under Morton's COPY-IT-RIGHT license. The Distribution Religion was given away freely to anyone who was interested in building their own copy of the Image Processor.

In 1973, Phil Morton wrote in his introduction to the Distribution Religion:

"First, it's okay to copy! Believe in the process of copying as much as you can; with all your heart is a good place to start – get into it as straight and honestly as possible. Copying is as good (I think better from this vector-view) as any other way of getting ,there.' "

This position as articulated by Morton in The Distribution Religion constitutes an important aspect of his COPY-IT-RIGHT ethic, namely, that copying is right, morally correct and good. In fact, for Sandin and Morton, copying is not only good it is necessary for their process, for their project, because it was conceived of (conceptually and technically) as

expandable. The Sandin Image Processor itself is a modular system for realtime audio-video, an analog computer that is extensible because it is proto-Open Source.

COPY-IT-RIGHT encouraged people to make faithful copies, caring for and distributing Media Artworks as widely as possible. A close-knit community of collaborators worked together in Chicago on the New Media of their time, incorporating digital and analog computing with realtime audio and video synthesis, processing, computer programming and experimental improvised performance.

Diane Kirkpatrick is one of the few people prior to myself to have written on the collaborative work of Phil Morton. Kirkpatrick emphasized collaboration in her exhibition catalogue for the exhibition Chicago: The City and Its Artists 1945-1978 which she curated at the University of Michigan in 1978. She details the social aspects of the Media Art Histories of the collaborative realtime audio video performances created using the Sandin Image Processor by artists such as Phil Morton, Dan Sandin, Tom DeFanti and Bob Snyder. Her discussion of these origins documents the roles played by each artist in the development of their collaborative projects. As Kirkpatrick recounts, individual artists from the Chicago community presented projects that were both carefully pre-planned as well as improvised. Their improvisation inspired them to continue to work together in this improvisational manner, jamming together on what Morton referred to as their 'adventures' in realtime audio video.

Phil Morton also regularly collaborated with Jane Veeder. I am especially compelled by Morton and Veeder's collaborations as I find in these project parallel and are antecedents to the contemporary New Media Art concerns that motivate myself and my collaborators. This is an example of Veeder and Morton's work together called Program #7 from 1978. Program #7 is from a series of open projects produced by Veeder and Morton. This series of numbered Programs is a highly personal, playful and self-reflexive series of cyberpsychedelic roadtrips across the American imagination in which Veeder works with early digital computers including the Zgrass system, the Bally BASIC system and The Bally Arcade Video Game System, while Morton works with the Sandin Image Processor, an analog computer.

// PLAY Program #7

I am the archivist of this work, distributing it widely and openly online. This work, previously unseen for decades is now receiving critical attention because of my efforts in both the contexts of Media Art Histories and New Media Art. Morton's individual and collaborative work has been featured on the front page and archives of Rhizome.org as well as other well-respected New Media Art platforms such as Furtherfield.org. As Jane Veeder explained to me (in a criticalartware interview that we did in 2003), Morton's COPY-IT-RIGHT ethic came from an "early counterculture... sense that information should be free." Veeder links Morton's position to current Digital Art and New Media as well as Free & Open Source Software development. As Veeder details COPY-IT-RIGHT meant making faithful copies, caring for and sharing work. As such, COPY-IT-RIGHT is an ethic, an ethical position. As Media Art Historian Michael Century describes it, this community in Chicago was "a distinctly counter-cultural unit exploring the "phenomenology" of interactive imagery for use in experimental art and scientific visualization." It is from this same ethical position and commitment to free distribution and open sharing of resources that I both archive and release Morton's individual and collaborative projects.

My use of the term 'projects' is motivated by the fact that these works should themselves be understood as open and ongoing, rather than self-contained and singular. These works

were created and intended to be engaged with and exchanged as Media Art processes, artistic dialogues that continue and extend their ability to be used, reused and received as processes of constant becoming. Or again, to reference the Third Mind, they are in constant states of rebeginning.

I present and publish my research on these Media Art Histories in the leading international contexts for Media Art Histories, the International Symposium on Electronic Art in Helsinki, DOCAM, The Daniel Langois Foundation and McGill University Media In Motion Symposium in Montreal. At the end of the month I will present in the premiere context for my field, the Third International RE:LIVE Media Art Histories Conference in Melbourne, Australia. My research will be published as chapters in 2 upcoming publications, Media In Motion from DOCAM, The Daniel Langois Foundation and McGill University as well as Tools, Analogs and Intersections: Video and Media Art Histories edited by Mona Jimenez (NYU) Kathy High (RPI) and Sherry Miller Hocking (Experimental Television Center). Furthermore, I will be releasing my complete research as a fully Free and Open Source book in 2010. The full length Free and Open Source book will also include in it's appendix previously unpublished and unreleased research by Gene Youngblood, which Youngblood has given me permission to release.

In a 1980 Youngblood interview with Veeder and Morton that I include in my book, they reflect on the transformational aspects of their technological approaches. Morton states that their project could be understood as “an imaginary model of us electronically visualizing ourselves so much more powerfully, a more powerful spell.” Morton's reference to spellcasting in the context of computing and electronic media points towards the transformational understanding of technology and magic that was so critical to Morton and his collaborators. At a certain point in the interview Youngblood refers to their collaborative video projects as 'pieces' and Morton corrects his use of the term 'piece' saying: ‘We don't make pieces... We make communiques and responses...’ Through this clarification, the conversational basis of their projects become recurring metaphors for Morton. Their projects are engaged in and resulting from ongoing conversational cyberpsychedelic processes with transformational technologies. Imagining and imaging of future worlds and subjectivities can cast powerful spells in these digital-analog programs... I will return to this theme of casting spells with and onto computers, or computer witchcraft in a moment, but first a few more words about my inspirations as an artist, openness and the conversational qualities of experimental New Media Art.

These images are from an exhibition by the collaborative New Media Art group JODI from 2003 called “10 Programs written in BASIC ©1984”. The subtitle of the exhibition was: “Instruction sets in BASIC for vintage ZX Spectrum computer and for the user to edit”. This lengthy, but crystal clear subtitle, provides a direct explanation of a specific kind of openness that I share a commitment to with JODI. When I brought JODI to SAIC in 2006 to present their work at Conversations At The Edge, I asked them about this exhibition in particular. Joan Heemskerk (who with her partner Dirk Paesmans is JODI) explained to me that she had become interested in learning to program in the now obsolete language of BASIC. BASIC is also the programming language that Jane Veeder first learned to program in and which is featured in Program # 7. Joan began to teach herself BASIC and JODI began to work with BASIC and the ZX Spectrum computers as a result. The exhibition “10 Programs written in BASIC ©1984” in Malmö Sweden, provided a context to both literally open the ZX Spectrum computers to computer programming by those who attended the exhibition but also to conceptually open and engage in conversations as a part of the project because as you can see from these images, those that attended the exhibition were encouraged to reprogram the computers and exchange information and experiences.

JODI's work with BASIC and the ZX Spectrum computer also appears in their "All Wrongs Reversed ©1982" from 2004. We are now watching an excerpt of this videotape. My work, JODI's and Morton and Veeder's work all share commonalities in that we make the source codes, the program codes underlying the digital systems that we are working with, visible within the video outputs that are themselves rendered or reprocessed by these source codes in realtime.

The term 'source code' refers to the preferred human-readable and human-modifiable form of a software program, as opposed to object code, the derived, compiled binary executable form of a program. I take this definition from the Jargon File, a collaborative comprehensive compendium of computer-cultural terms and histories which itself exists freely online in the public domain and is hosted by Eric S. Raymond. Software and therefore source codes themselves come in 2 basic forms: open or closed. Closed source software such as Adobe Photoshop are proprietary and commercial products which cannot be altered or changed at their core. Open source software such as the Linux operating system is fundamentally always open to revision, modification and change.

Making source codes available on the surfaces of the video output as can be found in Morton and Veeder's, JODI's and my work with Jake Elliott, does not necessarily constitute an Open Source approach but rather simply indicates (on the surface of the media) that lower levels of activity are occurring in realtime. This does however, make an aspect of these New Media Art projects visible, in terms of rendering transparent, or open, the basic mechanics of the work.

Still, showing source codes on the surface of these projects is not a deep enough relationship to constitute these works as Free and Open Source Software Art or Artware. Eric S. Raymond, the host of the afore mentioned Jargon File, founded the Open Source Initiative in 1998 and began using the term Open Source. Prior to this, the concept of Free Software was developed and put forward by Richard Stallman in 1983. Free Software licenses such as the GPL or General Public License, as Nicolas Malevé writes, "unambiguously guarantees the right to use a computer program free from any restriction (the program may be used for any purpose), the right to study (we can learn how the programme works), the right to copy, modify and distribute copies free of charge or commercially." The phrase Free and Open Source combines these approaches and insures that the software's source code stay freely available for modification and open to collaboration.

In order to make fully Free and Open Source Software Art or Artware I initiated the H3X3N collaborative project with Nina Wenhart. Together we formed an international Computer Witchcraft Club which crosses the borders of Mexico City, Chicago and Linz with Computer Witches such as ourselves, Mark Beasley, Sandra Rosas Ridolfi, Jake Elliott, Tamas Kemenczy and Alex Inglizian. Our computer witchcraft projects have been shown in exhibitions in Madrid, Chicago and Montreal; featured on the front page of Rhizome.org and included in the Rhizome.org Artbase.

The video documentation that you see here is of our IX project. IX is a vicious and powerful magical device for bewitching computers. IX contains spellwares, Software Art set free by shaking a glowing and enchanted cube that sings in it's own magical language. IX casts spells on Windows, Macintosh and Linux computers, hacking and hexing these operating systems. IX combines traditional stage magic tricks and elements of hacker culture to create an Interactive Installation.

The source code for the version of IX that you see documented here was written in the programming language Python and is freely and openly available online. The source code itself is and should be considered Free and Open Source Software Art or Artware. This snippet of the source code that runs underneath the installation. I will briefly explain the elements of the code. This small chunk of source code, from a file named "altar.py", begins with functional and standardized instructions, for instance for the program to import and use random number generation and a set of modules for Python game development called pygame. The next section of this source code begins with a forward slash and an asterisk and ends with an asterisk followed by a forward slash. Between those symbols, comments occur. Comments are part of source code that are intended to be read by other humans rather than machines. Comments are not executed by the computer running the program and as such are often not written in a programming language but rather in plain English.

Comments usually include detailed descriptions of the source code's functionality and messages to other programmers or users. The comments that we, the computer witchcraft club H3X3N, has written into the source code expand this standardized use of comments to include critical theoretical and Media Art Historical analysis into the source code itself. This inclusion offers readers of the source code, most often other computer programmers, another perspective on what in fact constitutes the functionality of the program and hopefully also encourages others, who would not normally read source code, to open these files and explore the program on this level. As Joasia Krysa and Grzesiek Sedek state in their contribution to the book *Software Studies: A Lexicon* edited by Matthew Fuller, this position understands source code as an "open model for creative practice; it can be used to encourage collaboration and further development of existing work".

In another collaborative project of mine, a collaboration with Jake Elliott and Tamas Kemenczy, we have created an Art Game called Sidequest which is a cyberpsychedelic Text Adventure in which you play as William Crowther and crawl through a generative, cut-up and recombined twisty little maze of passages through timespace that criss-crosses networks such as Mammoth Cave, ARPANET, SAIL (The Stanford Artificial Intelligence Lab) and The Hollow Earth. This project is Free and Open Source Software Art and has enjoyed exhibition in the Play Up! exhibition with Ben Chang and Eddo Stern at Northern Illinois University School of Art and as I am happy to announce will be shown next in the GOTO10, MAKE ART 2009 an international exhibition of Free and Open Source Art in Poitiers, France. Since 2006, this festival has pioneered the development of an international festival of this unique kind, with an explicit ethical commitment to openness in New Media Art.

When I first began to conceptualize and initiate this project, I determined that the player would play our text adventure as William Crowther. Will Crowther wrote "Colossal Cave Adventure" in 1975 or 1976. Colossal Cave Adventure is recognized as the classic and original text adventure that has established this genre of gaming and Interactive Fiction. Patricia and Will Crowther traversed a tight passage between two networks of caves previously thought to have been unconnected in 1972. They helped to map Mammoth Caves in Kentucky and contributed to the field of spelunking. They were in love, married and had two daughters, Sandy, who was born in 1967, and Laura, who was born in 1970. By the mid-1970's they were divorced. Will Crowther, a computer programmer who at that time worked at firm called BBN developing the original ARPAnet which would become the internet. As a result of the divorce Crowther wrote "Colossal Cave Adventure". Apparently he wrote the game to recreate the experience of crawling through and exploring the cave systems (based on Mammoth Caves) so that he and his

girls could be in this virtual-memory-space together asynchronously after his divorce from Patricia. I am excited and inspired by the conceptual and emotional basis for game development and gameplay.

Don Woods rewrote "Adventure" in 1977 and famously added the more Tolkien aspects of the game as it is known today. Woods' rewriting, recoding or versioning of the game is another inspirational keystone which I value, in that Woods and all others who have remixed or rewritten Adventure (including ourselves) have opened this game to a constant flow of reinterpretative imaginations. This open exchange and development of this game continues now, with our project in the context of Free and Open Source Artware.

Christiane Paul, curator of New Media at the Whitney Museum writes that in my collaborative projects, she finds an approach "of hybridization, a self-reflexive crossbreeding of interfaces and connected threads that becomes a social document in itself... The "re-mediation" unfolding... takes the form of models for mediated exchange that transcend simplistic receiver / transmitter structures. These models explore inherent possibilities of media systems and offer alternatives..." She goes on to say that while New Media Art projects such as mine "may not radically redefine connections between art and media... they certainly have opened the field of artistic engagement and agency."

In conclusion, I believe in an ethic of openness. My approach as an artist and in Media Art Histories views openness as a critical concept. From the fifteenth century, before computing, to the 20th Century, during the 1960's amid the beginnings of FLUXUS into the early Video moment of the 1970's with explorations into realtime audio-video and digital systems and into the current moments of Free & Open Software Art and Art Games during the turn of the 21st Century.