



madeeha w. lamoreaux

art as ritual technology
symbolism, energy, and intimacy

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MFA in Media, Art, Technology, and Design
Frank Mohr Institute
Groningen, NL

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coexistence of things in a space to which we add consciousness of our own existence, is a very concrete thing . Every object invested with intimate space becomes the center of all space. - *The Poetics of Space*, Gaston Bachelard

0 | introduction

I am on a journey to understand and create intimate space; I have migrated from literary studies, through creative writing, to art-making. In my interactions with others, I seek intuitive, poetic communication. To understand and be understood fully by another is, so far, phenomenologically impossible and yet I continue to seek extranaturality ¹ through others. I use and create technologies to do this; and, I research the enmeshed history and future of technology and ritual practice. My affinity for technology results from a desire to push the limits of the mind and body, to augment, in order to achieve implausible things but also because it is magical. My interest in rituality stems from a belief in alternate modes of existence. I'm far from unique in craving true connection to nature and others: it is a basic human need. While I'm still heavily influenced by literary theory, I've moved away from limiting my practice to creative writing because I find it too constraining. Now, I want to write tangible poems. ■ Art is a ritual technology, a transducer of energy, cultivated to communicate intangibility. We have developed technology to extend the body and enhance our ability to reach, grasp, craft, and ascertain. While often considered cold and irreconcilable to bodily experience, technology's cryptic, magical aura has persisted. I have developed a cyclic hypothesis (see fig.1) to illustrate my artistic framework. There are many realms within

¹ I have appropriated this term from William H. Walker's essay "Ritual Technology in an Extranatural World." With it, Walker refers to "human

which I find compelling methods of expressing this claim (the field inside the cube): cyborgism, cybernetics, artificial intelligence, science fiction, proprioceptive (awareness of one's own body in physical space) experimentation, and bio-art. However, for the past two years I have focused on communication, energy, and narrativity. My intent is to ritualize technology, through art-making, in order to exaggerate the symbology of the "black box." Incidentally, I find that this process of ritualization often exposes or narrates hidden mechanisms. Undertaking the research of my claim as a writer and artist, my first attempts to define the concept have resulted in the development of my own symbology and ritual technologies. This symbology is derived from daily interaction with technologies that I feel have transcended dry use-value and achieved allegorical status (i.e. smartphones, tablets, batteries, and computer programs).

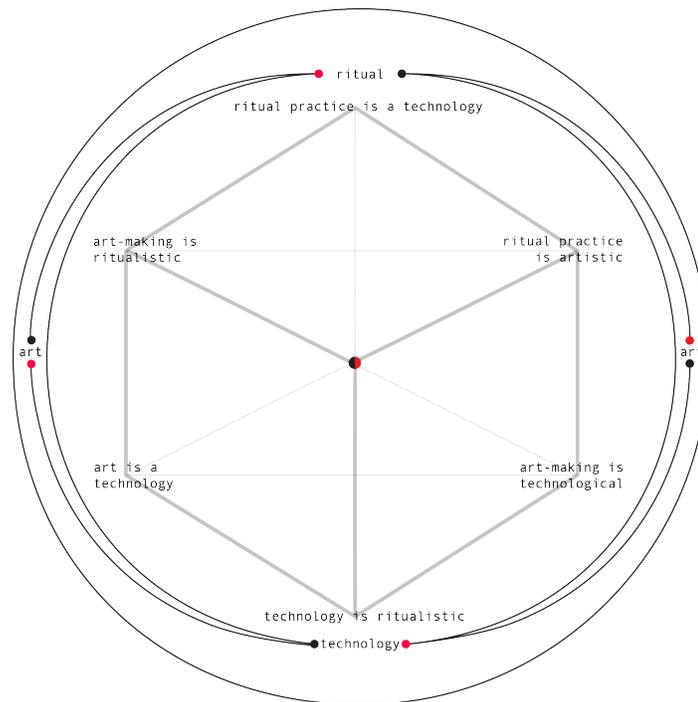


Fig. 1 | field of ritual technology

1 | technology extends a hand

Technology enhances our ability to reach, grasp, craft, and ascertain. It enables us to reach what we envision, allowing the dreams and devices of science fiction to enter physical reality and games of politics and possibility to play out. Once the threshold of the impossible is reached, we grasp what is intangible. Given the capacity to reach, through augmented experience, the power to comprehend increases. The evolution of modern, human consciousness arose through the invention of cooking, as the vestigial energy required to break down raw food was made available to develop the brain.³ Once reached and grasped, technology allows humans to use knowledge and innovation to craft what is nonexistent and conjure the “impossible.” In “Field, Coherence, and Connectedness: Models, Methodologies and Actions for Flowing Moistmedia Art,” Núcleo de Arte e Novos Organismos (NANO) write (emphasis mine): “[i]nvention is a taking into account of the system of actuality by a system of virtualities; it is the creation of a new system from these two” (Nóbrega 155). In other words, an addiction to unreality and continued experimentation inevitably produce new technologies. My definition of technology directs this logic to a conclusion that implicates the ultimate sociological and psychological function of technology as an approach to what is numinous, metaphysical, and unproven.

If technology exists to supplement our physical bodies it follows that technology is inherently bodily. The duality of body | **not-body** is what makes technology so interesting—it exists as a clear manifestation of the binary modality of being human: my body vs. my mind. Nóbrega et al. write that the “unity of the associated milieu of a technical object has an analogue in the unity of a living thing.” (Nóbrega 155). Technology and the body are symbiotically related. The psychic experience of living as a

³ This is almost considered common knowledge. For more information, see Jerry Adler’s 2013 article written for *Smithsonian Magazine*, entitled “Why Fire Makes us Human.”

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technologically mediated body is crucial to the formation of human identity. In “The drizzly identity: A dissolution of the body as a solution of life,” Polona Tratnik describes the body as “a sphere of juncture” (Tratnik 106) of which “delimitation [the creation of boundaries] is constructed and therefore arbitrary” (107). Both authors recognize that the experience of being human depends on this liminal relationship. NANO see this as a trend in recent culture that seeks to “link body and technology synaesthetically,” thereby enacting the “decline of old dichotomies such as subject/object, body/mind, observer/observed and space/time” (159). I am inspired by the theory and methodologies of Tratnik and NANO. Both articles I have referenced here have been published in *Technoetic Arts*, a journal edited by Roy Ascott. Ascott states that “Technoetics is a convergent field of practice that seeks to explore consciousness and connectivity through digital, telematic, chemical or spiritual means, embracing both interactive and psychoactive technologies, and the creative use of moistmedia” (Ascott 2015, 17). Ascott’s approach to the aforementioned duality of body | mind is an influential example of a system in which ritual technology is seen as a bridge between the two. Through *Technoetic Arts* and the Planetary Collegium, Ascott and his proponents employ ritual technology to “promote experiences [of] poetically sensorial and intuitive integration between species, beings, and organisms” (Nóbrega 162). By plotting technology as conceived through reaching the limits of the body and subsequently fabricated from (psychic) need to push beyond those limits, technology is an evolution of the body itself—an adaptation that reconciles physicality and metaphysicality. As a bridge, technology reflexively affects the body and mind identities: through it we begin to experience new ways of being. ■

When we discuss the notion of being, affected by adaptation, reality begins to lose primacy. The bridge offers us a path to other realities. Comparative literary theorist, Mark B. N. Hansen quotes artist researchers Monika Fleischman and Wolfgang Strauss

in *Bodies in Code* : “interactive media support the multisensory mechanisms of the body and are thus extending man’s space for play and action” (Hansen 3) and states that “the body, sensor of change, is a transducer of the virtual” (6). Like NANO and Tratnik, Fleischman and Strauss invent ritual technologies—*Liquid Views* (1991), *Responsive Workbench* (1994), *Mobile Unit—A Mobile Streaming Labor* (2001)—to participate in this dichotomous reality. In almost all discussions regarding the nature of our relationship with technology, duality and liminality figure prominently. It is not hard to imagine a total annihilation of bodily supremacy, replaced with various integrated and dissolved systems. However, with this malleability comes control and necessarily attitudes towards technology are often negative. ■

2 | liminality + the inter-face

Over time, technology becomes invested with emotional power and mystery through the ritualistic way it is used and treated. Technology—designed to extend the body—enables the pursuit of extranaturality by providing alternate modes of bodily existence. Throughout history, technology experiences cycles of novelty, mystery, and rituality. New technology has a magical aura of possibility and progress⁴. The prevalent technologies of yesterday hold less mystique than those of today but often function more insidiously and more ritualistically in our daily lives, i.e. modern campfires: radio and television. And finally, defunct, fictional, or forgotten technologies are considered mysterious and ritualistic relics: we can only assume their function and often associate them as ritual objects. This dual perception of technology, magical | mechanical, is my core fascination. Why is there a distinction between technology and ritual object? William H. Walker writes that “when behavior is a property of organisms in motion that effects and are affected by

⁴ Also, awe, fear, and mistrust.

artifacts, technology inheres in either the artifact or the social forces (e.g., culture, ideology) behind them” (Walker 92). The attitude of clear taxonomic distinctions between technology and ritual object, is obsolete. Moreover, just as McLuhan⁵ recognizes that technology is an extension of ourselves in order to reach through time and space, recognizing technology as ritualistic and ritual practice as technological provides much more relevant insight into human culture and experience. ██████████ To sum up so far, technology is a symbolic, political, and liminal bridge between mind and body. Cultural anthropologist, Victor Turner writes in depth of liminality as a key aspect of ritual practice. Turner demarcates liminal periods as times of transition where the identities of liminal beings are characterized by unstructured dualities. The space which they occupy exists as a field of undefined social governance within which deep social bonds are easily formed (96). Nóbrega et al. observe a trend in

our increasing attention to the invisible and immaterial dimension of our relations [...] Analogous to the effect that old technologies exerted on modern perception, the new hybrid space has shaped a new imaginary. (159)

These artist-researchers see opportunity, as outlined by Turner, in this liminal relational space created by technology. This affect on mass-cultural identity suggests we are witnessing a return to ritual interaction with technology. Indeed, the choice to exhibit in my home⁶ suggests an attempt to avoid publishing through commercial, consumer-driven spaces but also serves to

⁵ See McLuhan.

⁶ Formally the site of semi-relational dinner performances, Liquid Soup (2014-16). See <http://liquidsoup.com/index.html> for more information).

emphasize the act of art-making as an intimate ritual activity. Because I believe art-making is a ritual, technological practice, I do not want to rely on the conventions and limitations of prescribed resolutions, corporations, or rooms. In doing this I am attempting to create what Pascal Gielen outlined, in his open lectures (October 2015) at NP3 MØBi, as common space. Gielen proposes “the common” to remedy a tragic combinatory decline of collective signification in culture, trust in economics, and support in politics. Like many other cultural theorists I draw upon in this essay, Gielen recognizes the advent of a paradigm of increased, insidious violence and control: he refers to this model as the “creative repressive city.” The remedial “common city” is characterized as a liminal space that is “created while people are doing things--casting and recasting identities” (Gielen). The common celebrates the syncretic (see Ascott 2015) reality in which institutions can no longer protect the borders between spheres (civil, domestic, market, peer). By positioning my home as a project space, named Liquid Soup, I harness intimate space in order to balance the tension of an imaginary ideal (the white cube) with the repressive model of reality (gallery space). The result is a liminal place of tinkering, intimate production, and ritual behavior. Within this space, everything is both art and non-art: Liquid Soup becomes lukewarm. I see the space as a symbol for home, thus the basic material of my work is symbolic space. Every action lived in the space becomes a part of the final presentation of works within it, through artifact and energy. The walls, painted matte black, highlight the womblike warmth of home—a place equal parts comfortable and constraining. Because, for me, home is also related to notions of constraint. Having grown up in a culture that didn’t encourage activity outside home, I have a complicated relationship with this symbol. The space is also symbolic of a black box, perhaps even the ultimate black box—the Islamic pilgrimage site, the Kaaba. The black box recurs often within my work, precisely because it is a

perfect example of where technological and religious symbolism intersect. Onwards.

Like NANO, N. Katherine Hayles also recognizes an increase in cultural liminality; however, she specifies the resultant affect on the body as largely political. Hayles employs William Gibson's *Neuromancer* as an alternate universe in which the posthuman is fully integrated into society. Fiction, as a technology, acts as a sandbox⁷ that allows various possible and alternate universes to play out. *Neuromancer* allows Hayles to postulate the posthuman as a politically liberal entity and to apply various scenarios to it. She writes : "I see the de-construction of the liberal humanist subject as an opportunity to put back into the picture the flesh that continues to be erased" (Hayles 5). Hayles identifies the liminal, "critical juncture" where the politics of disembodiment and a fluid, malleable identity can be disrupted and reclaimed, respectively. The current era involves the dissolution of symbol into multiple unfocused signs. Technology remains political through its symbolic, ideological values but also as a communicative tool of control and ideation. To celebrate our humanity while remaining mediated beings it is necessary to "promote experiences which may propitiate poetically sensorial and intuitive integration between species, beings, and organisms" (Nóbrega 162). In other words, heightening the ritual aspect of technology facilitates intuitive thinking and a move away from limiting cybernetic power structures.



Fig. 2 | Divination Mirror, Mayan, Charité Museum of Medical History,

Possibly the most liminal technological development is the screen. Incidentally, the iPhone shape and ratio has become a

⁷ In computer terminology this refers to an experimental mode of running untested code or software.

key symbolic element in my practice. The work *Oracle / Modem* (2013) was heavily influenced by research of obsidian divination mirrors (see fig. 2). The discovery of this ancient Mayan object, also at the Art Institute of Chicago, was the initial spark leading to my research of ritual technology. In examining the use and culture of divination mirrors, I draw many parallels with contemporary use and culture of smartphones, phablets, and tablets. According to archaeologists, the primary intended use of these mirrors was to predict, communicate with, and understand the communal natural world, rather than attempting to reach the supernatural. With *Codex 6+ [kala]*, 2016 (fig. 4), I began my own process of symbol-making and cosmology development. The coded drawings developed from meditatively responding to reading, web-surfing, and daily moments of inspiration. The drawings utilize an irregular logic that I categorize as ritually technological. Three predominant levels of coded language exist on each panel: obfuscated grid-guided sentences, appropriated literary text

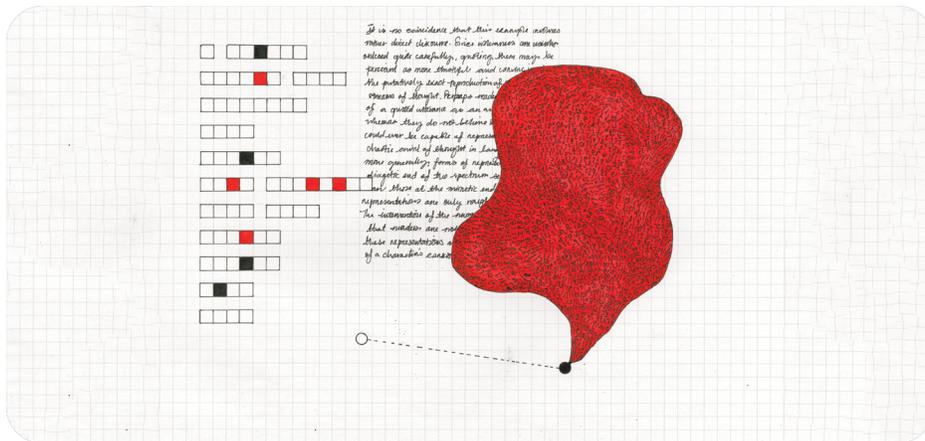


Fig. 3 | *blob [written]* from the series *Coded Drawings*, 2016

(often taken from the theoretical research I am using for this essay), and an illustration. The grid-guided sentences utilize color, black and red in the original drawing, and an invented numerological schema to encode meaning. In some panels there is evidence of text written in an alphabet I developed to

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communicate with alternate reality (see fig. 3). I utilize the internet in a ritualistic manner—scrying for information and inspiration—then draw intuitive illustrations from the results with pen and paper. With these drawings, I am illuminating my research process with pertinent emotional symbolism and imagery. However, in doing so I am also writing. The system that I created with these drawings is intended to be a generative ritual activity, to be performed daily. The drawings are then scanned and edited with Adobe Photoshop and Illustrator CS5; in preparation for laser engraving, the compression and manipulation of the image alters it. The software lends its own idiosyncratic stylistic choices to the final image, i.e. through the use of “content-aware” fill and converting the scanned images to vector outlines. The “canvas” chosen for the panels is black, high gloss, laser-cut acrylic. The complete set (at the time of the first engraved run), is intended as a codex to relate poetic moments of daily life. The shape of the canvas is cut to the exact specifications of the iPhone 6+—the largest iPhone to date—marking the era, just as certain types of parchment or wood-bound books might be dated through relevant popularity of use and technological standards. My relationship to this symbol is indicative of the aforementioned desire to understand and be understood fully, essentially to communicate. The iPhone, my phone, symbolizes this paradox perfectly to me. I hold this object close but I never really get any closer to anything relevant, through it. The object seduces me with its magical illusion of postmodern futuristic telematic teleportation. I cannot live without it: in truth, I am fully mediated with this beautiful thing, but I hate it for that very reason. ████████████████████

In particular, the obsidian interface of Apple's iPhone and its iconic status among smartphones stands out as a reincarnation of this technology. Mark Poster's essay "Postmodern Virtualities," available online, describes the interface as "the face between the faces: the face that insists that we remember that we have



Fig. 4 | *Codex 6+ [kala]*, 2016

'faces,' that we remember that we have sides that are present at the moment of utterance, that we are not present in any simple or immediate way." We are the illegitimate interfaces, tumbling through media, enacting and playing with different space-time. We extend our bodies beyond the reach of the interface in order to find it back—our own selves. The liminal aspect of the screen itself is intriguing to me as a symbolic object. The screen is ever present, yet we constantly look beyond it. Even now, as I am typing, I am heavily interfaced with my computer screen. I am interested in the symbolic potential of an inactive screen. In my work I attempt to examine whether the narcissistic quality—redolent of *Liquid Views* (1991)—of the "black mirror" can be manipulated to be both interface and information: an inter-face. ■

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Technology is as irrevocable to human experience as rituality. Perhaps, it is only the lingering ideological auras of modern technologies' inventing eras—Enlightenment, Industrial Revolution, and Capitalist—that have suppressed the desire to extend the limits and understanding of one's own body through self-reflexive activity. In a post-Fordist era, technology and new, liminal modes of being a body enact a complex revival of ritual thought and experience. In an essay entitled "Our Split Screens," MIT media-theorist, Sherry Turkle marks a paradigm shift in reconciling irony. In 2004, she echoes Poster in observing that

Such movement does not correspond to the unitary visions [we] were brought up to expect. But children have learned a different lesson from their cyborg objects. Donna Haraway characterizes irony as 'contradictions that do not resolve into larger wholes ... about the tension of holding incompatible things together because both or all are necessary and true.' In this sense, today's cyborg children are becoming adept at holding incompatible things together. Even the operating systems they work with encourage them to accept and use what they are shown at any given time—to take things at interface value. (111)

Identity becomes unavoidably fluid. Additionally, developing technology trends towards less transparency, in terms of how it functions, and more transparency in relation to its user experience. Turkle recounts an interaction with thirteen year-old

“Tim,” as he plays the computer game SimLife, in which the child tells her to accept or ignore illogical aspects of the game: “You don’t need to know that kind of stuff to play [...] Don’t let it bother you if you don’t understand” (112). I find striking similarities in attitude, and ultimately worldview, with that of religious thought. There is no need to understand the rules, only to know and play by them. And yet, there is more irony at work here: while “blind faith” in the magic of technology is a ritualistic attitude, self-amputation begins to creep into the foreground. With technology, especially emerging technology, there is a prevailing blindness often referred to as the black box⁸. Black box culture supports ritual technological use through willful neglect or obfuscation of the inner mechanical workings of the technology at hand. I think, it is necessary to open this box and flip the process. As, Hayles writes

my dream is a version of the posthuman that embraces the possibilities of information technologies without being seduced by fantasies of unlimited power and disembodied immortality, that recognizes and celebrates finitude as a condition of human being, and that understands human life is embedded in a material world of great complexity, one on which we depend for our continued survival. (5)

So then, if technology is interfaced with an aspect of ritual understanding, while remaining transparent (in the sense of an open black-box), then perhaps self-augmentation would replace amputation. I believe, art-making, as ritual technology, is one of the most relevant ways in which to achieve this. 

⁸ For more on this, watch Pawel Pokutycki’s talk, at TEDxHanzeUniversity, “Exploring the Black Box” (<http://tedxtalks.ted.com/video/Exploring-the-Black-Box-Pawel-P>)

3 | lukewarm syncretism

Technology has countless definitions. Through my practice, I focus on technology as derivative and referential of the body. In my work, I have a tendency to implicate symbols by categorizing technology as warm or cold⁹. In researching the concept of rituality, I have discovered that anthropologists and theorists generally agree that the ritual process requires categories. Nick Couldry, in *Media Rituals*, provides an overview of Victor Turner's framing of the ritual process in three steps:

1. The actions comprising rituals are structured around certain categories and/or boundaries.
2. Those categories suggest, or stand in for, an underlying value.
3. This 'value' captures our sense that the social is at stake in the ritual. (26)

I find, categorization facilitates a richer narrative system with which to communicate the concept of ritual technology. Metaphorically and linguistically, the development of categories and systems allows me to signify with intent. The following diagram outlines an example of my categorization scheme, implemented to further define technology as ritualistic:

⁹ In *Understanding Media: The Extensions of Man* (1964), McLuhan distinguishes between hot and cold media; but, I use these terms differently

warm animate wet	dry inanimate cold
drawing • clay • metalsmithing	cutting • engraving
writing • singing	processing • programming
bio-tech	machines • software
communications • telematics	copying • broadcasting
indigenous • early technology	western • recent technology

In practice, I designate warmth to technologies that are directly manipulated via physical touch and of which the maker's imprint is distinct and impossible to replicate. I also categorize technologies that use or are comprised of biological, wet, matter as warm. When referring to cold, dry technology I indicate those that are mechanical, automatic, intermediated, interfaced, constrained, and assembled. I also include a distinction between animate and inanimate technology, obtained from investigation of indigenous and early technologies. During a colloquium held by the Native Science Academy (NSA) in Chaco Canyon and Sante Fe in 2007, the NSA proposed the topic: "Is it possible to have Information Technology that reflects Indigenous Consciousness?" The following statement alludes to an applicable question regarding the duality of technology itself:

the pukea allows communication with energies of the implicate order using breath and sound. It lives in the same material world with a laptop, a cell phone, a GPS system, or a dark field microscope. We immediately recognize the pukea as animate. However, we then had to ask ourselves why is the same status and treatment not accorded to more modern

forms of technology?
(Thater-Braan 7).

The NSA question the intuitive knowledge of what constitutes animate vs. inanimate but, as an artist, I find this easily acceptable. Animate technology catalyzes energy and inspiration while inanimate technology functions as an armature for experience. Within my practice, I attempt to invest inanimate technologies with warmth, by framing or integrating binary opposites.

Last year, I began to develop ritual face-tracking software that responded to the viewer's facial expressions. This piece was a first attempt at combining poetic symbolism and cold, technical analysis of emotive expression. The process involved modeling and rigging a face in 3D software, then recording motion capture data of my face imitating various facial expressions which I attributed as emotive responses (see fig. 5). The motion capture data and 3D model were then combined to form 12 distinct expressions. Then, with the help of

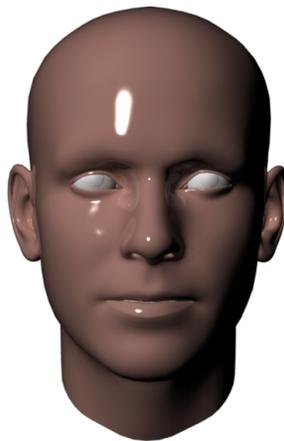


Fig. 5 | screenshot taken from *Oracle / Mirror*

Jan Klug and code written by Kyle McDonald, I developed software in Open Frameworks that recognized the facial expressions. Using Cycling 74's MaxMSP, I connected the various elements together to produce an animation that responded to facial expression input.

When run, the software uses the computer webcam to capture the facial expression of the user and returns a mirrored, animated response. My intended presentation of this was to position two “oracle mirrors” opposite each other so that the two instantiations would respond to each other’s facial expressions, causing an infinite cybernetic loop of fake emoting. This piece failed mainly as a result of poor presentation but the intent and process remains conceptually relevant. I mark this piece as the beginning of a development in creating customized and self-reflexive ritual technologies that involve a layering of warm and cold elements. In this piece, the intent was to “charge” the animation with an expression (warm) so that the computer (cold) could analyze and attempt to reproduce it. The result was intended to be a lukewarm blend of glitchy self-replication. The closed-loop system of the *Oracle / Mirror* necessitated an initial (and occasional) human intervention. When left alone, the *Oracle / Mirror* would either glitch spastically, caught between two or three expressions, or disappear off-screen. 

I suggest implementation of a balance of warm and cold technologies to counter digital/technological fatigue. Interactive, reactive, and new media art can offer space and commentary for neglected ritual behaviors and needs. As Turner illustrates in *Ritual Process : Structure and Anti-Structure*, “rituals reveal values at their deepest level” (Turner 6). We cannot use technology, fully dry and cold, without losing connection to that which drives us, whatever that may be. And, to be fully immersed in warm, wetness would be to remove the enabling structure and possibility of dry inanimate technology. Roy Ascott is a staunch proponent of integrated art and technology practices and research. One of his ambitions, and that of the Planetary Collegium he founded, is to achieve extranatural kinship through augmented communication. Ascott proposes “telematic art [as a way to] challenge the traditional relationship between active viewing subjects and passive art objects by creating interactive, behavioral contexts for remote

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Fig. 6 | Roy Ascott, *Transaction Set*, 1971

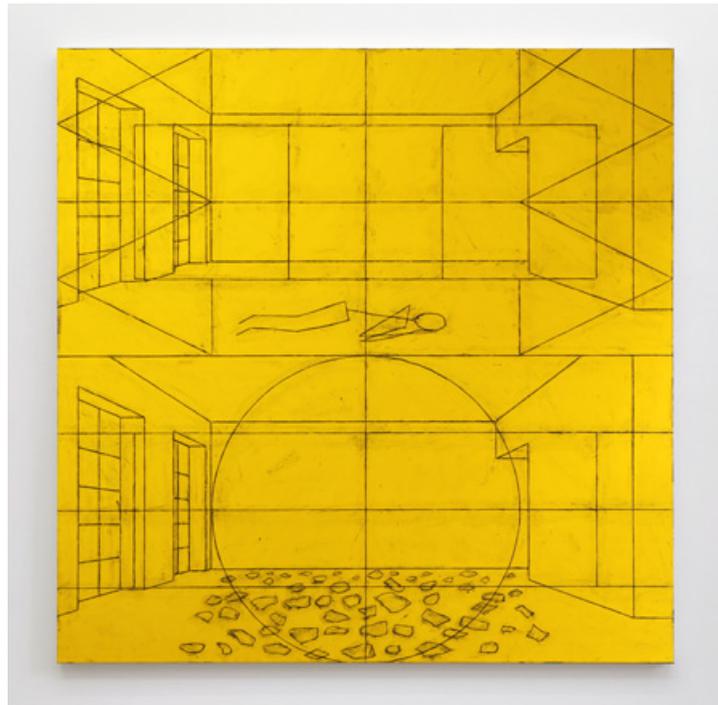


Fig. 7 | Matt Mullican, *Untitled (World Interior with Figure / Elemental Interior with Pieces)*, 2014

aesthetic encounters” (Ascott 2003, 1). In a separate article, Ascott confesses: “logging in to the network, sharing an exchange of ideas, propositions, visions and sheer gossip is exhilarating—in fact it becomes totally compelling and addictive” (1984, 26). In his own artwork, Ascott attempts to blend animate and inanimate technologies creating ritual space and interaction intended to force intuitive communication. In theory, Ascott refers to this as “syncretism.” With *Transaction Set*, 1971 (fig. 6), Ascott distills the notion of interaction to a single point of communication, staged through seemingly meaningless objects. The *Transaction Set* becomes a ritual technology as it utilizes symbolism as material to create an interactive work. The work is a paradox, as the only true meaning exists between those participating and, once they leave, the ritual resets. For me, this early work exemplifies, in the most simple terms, the potential of ritual technology to provide redemption from technofatigue. The “addiction” Ascott mentions above, can be mitigated by intuitive communication. To choose a silly but indicative example, in contemporary telematic culture, the rise of the emoji illustrates an opportunity to communicate intuitively. Emojis provide a networked library of symbols with which users can enact something similar to the “table-top strategies” (Ascott 2003, 33) of the *Transaction Set*. There are levels of meaning involved here: the level at which the emoji holds meaning in the sense of a “grand narrative,” the local level at which the emoji holds meaning for an individual, a relational level at which the emoji holds meaning between people, and a meta-grand level at which the emoji becomes a cultural meme through this journey. Ultimately, this and other examples demonstrate that to be human is to rely on technology; but, to remain human we must be willing to splice wet and dry : to maintain our “drizzly,” animate, lukewarm identities.

I invoke N. Katherine Hayles: “here, at the inaugural moment of the computer age, the erasure of embodiment is performed so that ‘intelligence’ becomes a property of the formal manipulation of

symbols rather than enaction in the human lifeworld” (Hayles xi). The dissolution of embodiment, facilitated by cybernetics, is a politically motivated backslide into mass-dependency. Marshall McLuhan’s “self-amputation” (11) through biological numbing is apparent in the mass neurological stagnation the cybernetic age has generated. I attempt to integrate art and technology systems as a way to conserve humanity in the face of a systematic dissolution of intuition. Only art can allow true intervention of reality. Technological artworks and artworks as ritual technologies transcend political cybernetic schema and function within an alternate realm of ritual communication. Narrativity, a liminal and lukewarm technology, manages, through intricacy of symbols, to approach syncretism as a ritual technology. Artists Matt Mullican, Lygia Pape, Hayal Pozanti, and Matthew Barney all produce works that involve levels of alter or hyper-real narrativity, through elaborate ritualistic symbols. Mullican’s extensive, performative symbol creation arises from an in-depth character study—the birth, life, death, and afterlife of a stick figure (see fig. 7). The ritual process (hypnotism) by which Mullican enters the alternate reality of his creation is often performed for an audience. Mullican’s work is clearly technological: through layers of media and technique, his signs and symbols are presented as a cosmological code by which to decode his understanding of man, city, and structure. Nikolas Bischoff’s text regarding Mullican’s work refers to the artist’s interest in “how we charge symbols and systems of symbols with meaning” (Galerie Micheline Szwajcer online). Lygia Pape’s *Book of Creation* (1959-60) and *Book of Time* (1961-63) involve a similar, although much less exhaustive, expression of symbol as language (fig. 8). Pape’s 365 paintings of the *Book of Time* present moments and thoughts reduced to their most intuitive elements, packaged neatly in order. The heightened order in Pape’s work is what distinguishes it as semaphore. Mullican and Pape’s methodologies are highly suggestive of art as ritual technology. They invoke symbol, like alchemists, producing energy

that communicates fully-formed ideas, intuitively. Hayal Pozanti's use of technology as a process to make paintings



Fig. 8 | Lygia Pape, Livro do Tempo (Book of Time) (1961)

seems to reverse this methodology; however, the result is similar. Pozanti's process involves the development of an alphabet and utilization of a variety of media to perfect the painted image. She moves between computer screen, camera, and paintbrush to develop coded and charged signs (see fig. 9). In an interview given in 2014, Pozanti stated that "as a Turkish immigrant who has moved from place to place, who speaks several languages, I'm intrigued by the possibility of creating a universal language to unite my cross-cultural experiences" (Akel, 2014). I find this statement relevant to my own practice but irony exists in my attempt to mask meaning with symbol to create layered and coded imagery. My intent is to purposefully disrupt the notion that codes can always be decoded—they cannot—but with that realization, I hope to inspire a new method of coding and decoding, one that relies on intuitive, telepathic play. Matthew Barney does this exceedingly well, I think. All of Barney's work has evolved from an attempt to ritualize the technology of

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drawing. His series Drawing Restraint spans decades of processual trial and error. What sets Barney apart from other artists is his dedication and manic energy in pursuing a gesture. striving,



Fig. 9 | Hayal Pozanti, *ONE HUNDRED AND TWENTY TWO (dreams that a human being has each month)*, 2015

constraint-based works of Drawing Restraint have resulted in full-length films, replete with custom-made technologies in every possible flavor of media. Barney's artistic manufacturing stems from an framework that regards the body as a site of "hypertrophy, situation, condition, and production" (Barney, drawingrestraint.net). The body features as a significant aspect of technological relation to art, but it is also a entity of liminality and control. Matthew Barney often performs as a ritual cyborg. The way in which the artist augments himself, through layers of media and symbolism, is entirely relevant given contemporary liminality; however, in this way, Barney seems to transcend cybernetics and approach syncretism. ████████████████████

4 | attitudes : idealism + control

In order to define ritual technology it is important to understand technology as an instrument of political control. My approach to technology is positive; however, I'm not unaware of the danger it poses to autonomy. While I find Roy Ascott's

romanticism inspiring, I don't want to turn away from the truth that modern technology has served to exert dominance—over those who lack it or over those who become dependent on it. It is irrelevant to reject technology because it is innate to human nature but it is imperative to remain critical of it. However, the appeal of information as unbound and free-roaming (via the internet, cybernetics, cyborgism) should be tempered with a recognition that the body remains incomparably rhizomatic. In N. Katherine Hayles' formative text *How we Became Posthuman*, she outlines the development of cybernetic technology as stemming from systematic control strategies. The invention of reflexive technologies encouraged a brash attitude of abstraction and simplification applied to the multitude of living processes. For example, if constructed intelligence could approximate multiplicity—i.e., “dream of electric sheep”—then it was necessarily thought to represent the next evolutionary step of conscious life (interacting fields of information) and the possibility of immortality. The resulting notion of “information as a kind of bodiless fluid that could flow between different substrates without loss of meaning or form” (xi) is disturbing to Hayles because of the implication that respect for technology overtakes that of the body. Hayles reminds us that “for information to exist, it must always be instantiated in a medium” (13) but she maintains a proposal for a careful ecology to arise, wherein technology supports the posthuman rhizome. My claim, digressing Hayles, is that technology must remain ritually active to achieve this ecology.

I use studies of past and alternate (non-western and indigenous) social systems as indication of a rich history of “technological relationships [with rituality] long before science distinguished natural from supernatural” (Walker 102). For example, western alchemy predates cybernetics by some 1300 years; but, it can be seen as a similar attempt to technologically manipulate information and matter in order to gain control and immortality. The application of alchemy, now relegated firmly to the realm of

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ritual practice, involved the projection of psychic energy onto matter in order to enact transformation¹⁰. I am inspired by the activity and philosophy of alchemy as it offers a methodology for manipulating symbols as if they were matter. This is important because I believe that investing technology (and artwork) with symbolic and transcendent (that is, stepping outside of reflexivity) significance—creating “true” ritual technologies, in the sense of Nick Couldry’s *Media Rituals*—offers the possibility of redemption from auto-amputation and fatigue.

The process of technological ritualization also occurs through social value attribution; in other words, ritual technology is political. It shapes human value systems, dreams, and power struggles, all while functioning within the realm of ritual behavior. McLuhan indicates a process that occurs through interaction: according to McLuhan, technology “cools” through interactivity—becoming more accessible and less likely to support user passivity. My personal and artistic distinction of warm and cold refers to the individual technology’s relational sensuality, symbolism, and irreplicability. In “Robots and the Sacred in Science and Science Fiction : Theological Implications of Artificial Intelligence,” Robert M. Geraci provides many cultural references to technologies that have achieved ritual value through symbolism; for example, “American pioneers believed that specific technologies (transportation, the axe, the mill, land surveying) would establish a divinely ordained paradise in the United States¹¹” (Geraci 966). As I mentioned earlier, according to Turner, ritual results from action involving transcendent values and a sense that “the social is at stake” (Couldry 26). By investing the axe and mill with social and political value, the American pioneers

¹⁰ See Lane and, subsequently, Jung.

¹¹ Geraci summarizes David E. Nye’s major premise here, from *America as Second Creation* (MIT : 2003)

inadvertently invested these technologies with symbolic, transcendent, and consequently ritual value. In support of this,



Fig. 10 | Tom Sachs, *Akujo*, 2013

Walker writes that “a ceremonial room becomes sacred not simply by sentiment, or by its intrinsic properties, but through communal ritual use by a unified moral community” (Walker 89). These technologies are ritualized through the social power they become invested with. I mentioned earlier, in relation to embodiment, that the adverse affects of cybernetics as a political schema, might be diminished by artwork that functions as a ritual technology. Art also works here to syncretically recover autonomy. I am reminded of Tom Sachs’ ritual

recasting of NASA’s logo and technology (see fig. 10) as an act that simultaneously undermines and elevates the symbolism of what he considers the “ultimate brand.” Tom Sachs, like artists Matt Mullican and Matthew Barney (*Drawing Restraint* (1987-present), *The Cremaster Cycle* (1994-2002), and *River of Fundament* (2006-2014)), exaggerates categorization and social value structures and embeds the resulting ritual technologies he develops in a personally crafted realm of hyper-narrativity. The artist states on his website:

when you look at iPhones, there's no evidence of them being constructed by a human being. There are no seams. They appear to be completely robot made. As an artist, I find it difficult to produce

something of this quality by hand with the same intent and appeal. Yet the advantage the artist has over industry is his ability to proudly leave his fingerprints for eternity. (Sachs)

With this statement, Sachs articulates the essence of my argument. In a creative-repressive society, it is particularly important to conserve the freedom to produce irreplicable technology invested with autonomous emotional truth. Tangentially, the mention of the iPhone is also noteworthy but for a different reason. 

The iPhone is the icon of the cybernetic era. In 2007, Steve Jobs announced that Apple had “reinvented the phone.” Jobs stated in his keynote that the most revolutionary feature of this product was multi-touch, “it works like magic”¹². While reading the transcript of the keynote, I recognize that Apple’s success in selling revolutionary technology was through emphasis of the interface and objecthood of the product. Throughout his 2007 address, Jobs frames the iPhone as a technology that facilitates extranatural/synesthetic abilities: “You can touch your music. You can just touch your music, it’s so cool.” The emphasis on an animate relationship with this technology is what has propelled the iPhone’s popularity into the next decade. Multi-touch technology, introduced nine years ago, has entered global culture as a standard interface option while the iPhone screen ratio—9:16—is an infinitely repeated, cultural resolution (standard for all modern television screens). While I’m fully immersed in the culture of Apple products, I see the iPhone as a metaphor of prescribed, cybernetic control. 

5 | art as remedial technology : lumps + batteries

¹² I’m referring to the NextWeb Genius annotated keynote, located here : <http://thenextweb.com/apple/2015/09/09/genius-annotated-with-genius/>

When Louwrien Weijers visited the Frank Mohr Institute in 2015 she encouraged us young artists to accept our position in society as diviners saying “what you are doing here is holy.” To make art is to chase freedom and, in doing so, reminding the rest of the world of it. By my definitions outlined so far, art is perhaps the most successfully intuitive ritual technology. The practice of art-making - through symbol-creation, self-referentiality, and political activity - encourages self-authorization and persona fluidity while the art object serves as a poetic and political



Fig. 11 | *hijama* kit, ordered online

technology of communication. Sharing and collaboration strategies and the “flow of informative sensitive experiences” (Nóbrega 162), parallels telematic and information technology flow but, in the context of art-making, this act takes on ritual significance. The Native Science Academy clearly locates ritual practice within the “context of a conscious technology [whereby] the sender must understand the audience or receiver in order to

create a holistic experience and inform the consciousness of the receiver” (Thater-Braan 22). We learn from indigenous communities that ritual communication relies on intuitive systems involving “symbols, color, line, texture, form, space, audio, narrative, rhythm, and movement” (22). Art, as a ritual technology, is also a process of aesthetic archiving and network development. The receiver navigates the artist’s network of symbols in an intuitive manner, utilizing the sensorial body as a means of “reading” the artwork. In the *Phenomenology of Perception*, Maurice Merleau-Ponty, regards sense experience as “vital communication with the world, [to which] the perceived object and the perceiving subject owe their thickness” (61). Symbolism itself has a definitive technological history in alchemy as the

substitution of symbol for material and process was intended to produce change. Giles Lane writes in “Digital Alchemy,” “the use of symbols and materials in the alchemical process function as archetypes of mythological images that reside within an individuals unconscious, triggering an internal transformation as they pursue the work.” My use of symbolism, as a material, is intended to function in the same way: to produce a field of narrative energy, a virtual reality. As I’ve already discussed earlier, my artistic sources of inspiration include artworks that attempt to perform this also, irrespective of media.



Fig. 12 | Vacutainers®
with my blood

Until now I have referred to my process as rooted in archaeological research and intuitive symbolic production. There is, however another method by which I develop works. My attempts to open the black box of certain technologies, namely the battery, has developed into works that uncover the seemingly simple physical reactions that generate electrical charge. Battery weavings and *Obtained / Retained [blood battery]* resulted from taking apart a AA lithium battery and attempting to understand its basic components. In deconstructing a cheap, factory-produced item I stripped the technology to its minimal form of metal and electrolytes. I then re-cast the technology, using ritual symbolism, through weaving and ritual blood-letting. The battery weavings require saltwater to produce energy, my solution for this is to engage the user in a performative act of ritual hand-washing in order to charge the woven battery. *Obtained / Retained [blood battery]* (fig. 13) requires my body to produce electricity. The title references the extreme difficulties in obtaining blood from my own body—there is some incredible irony at work here regarding body politics and, theoretically, energy related ecology. I used two technologies to obtain enough blood to charge the work: a warm, ritual blood-letting practice known as *hijama* (see fig. 11 & 14) and a cold,

medical removal process using patented Vaccutainer® (see fig. 12) technology.¹³ With these artworks I seek to reclaim the right to develop personal versions of mass-produced technology. At the expense of efficiency, I gain technological animacy.

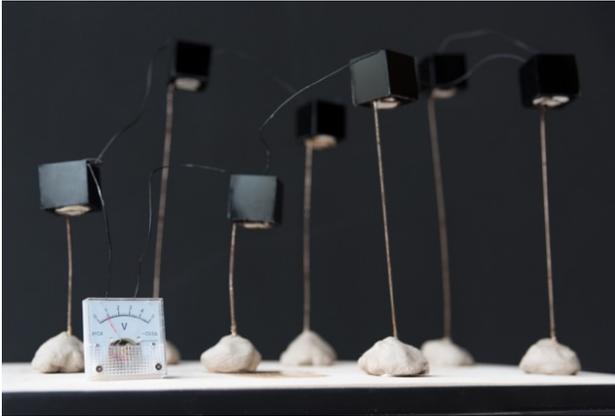


Fig. 13 | *Obtained / Retained [blood battery]*, 2016



Fig. 14 | documentation of *Obtained / Retained [blood battery]*

On a micro level, the objects I create, lumps; batteries; tables; and drawings, are hyperbolic and intertwined elements. They represent actions of identity. For example, forming clay implements by hand describes poems of molding and unearthing. The unfired objects (fig. 15) are charged with words and hidden devices of support (nails, staples, screws, pins, tape, glue etc.): individual lumps combined, comprise sentences. My hands and my voice have charged these objects. The series *lumps + implements* was inspired by the *boli* (fig. 16) of Mali's Bamana tribe. The *boli* is first constructed using an armature of wood and cloth to provide the general form of a buffalo (in the case of *boli*, but other versions of this sculpture exist that take on various animal and anthropomorphic shapes). Then, over time, the *boli* is charged by the community with "ritual packets" of blood, grains, and other sacrificial materials, acquiring an amorphous,

¹³ *Hijama* is an, apparently, Islamic practice involving heated cups to pull blood to the surface of the skin. The Vaccutainer is the most widely (if not the only) used system with which contemporary, western phlebotomies are performed.



Fig. 15 | from the series *lumps + implements*, 2016



Fig. 16 | *Ritual Bamana Sculpture (boli)*, The Art Institute of Chicago

lumpy shape. In this way, the *boli* represents the layering of “secret knowledge, that imbues [it] with nyama (life-force)” (permanent collection label of The Art Institute of Chicago). This object was apparently only viewable by members of the association to which it belonged. This technology prompted me to pursue a material investigation into energy. The ritual technologies I create highlight latent and “hidden” energy in

blood, salt, and clay. This process, in turn, supports the symbolism of the dichotomous materials in my work. The somewhat paradoxical notion of forcing opposites to attract, like fixing opposing ends of magnets to confront each other, seems to generate a large amount of symbolic tension. In physics, friction = energy. This type of equation is what makes electricity possible - by placing metals with different chemical configurations together in an electrolyte solution (a catalyst). ■ Even though, throughout anthropology and archaeology, “behavioral questions commonly asked about the functions of utilitarian tools, such as spear points, cooking pots, and plows, are replaced by questions about the symbolic purposes of non-utilitarian artifacts” (Walker 87-88) there is no real purpose in “opposing technology and religion [because we] fail to address the archaeological implications of ritual activity as a science-like response to nature” (Walker 90). It is only in recent history that ritual and subsistence activities have become ideologically and functionally separated. Earlier, I cited divination mirrors as inspiration. I am also inspired by what I call “operative prayer:” prayer that resembles a type of code intended to initiate specific situations or outcomes. Operative prayer can be found in nearly all religions but the most definitive example I’ve found is the *Egyptian Book of the Dead : The Papyrus of Ani*. The text¹⁴ consists of various functional prayers and incantations, to be spoken or inscribed with particular rules. The intended outcomes are listed in a format that reminds me of code libraries and tutorials. Like symbolism in alchemy, the words (represented by glyphs) of the Book of the Dead are employed as substitutes for physical acts or objects. My work *atenism*, 2015, makes use of operative prayer and the symbol of the sun barque, horizon to create an animate sculpture. The piece consists of a glass globe, lasercut wood, iPod, programmed LED, Arduino, and amplifier. The interaction of warm and cold

¹⁴ Here, I refer to the edition edited by E. A. W. Budge and published by Dover in 1967.

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elements play out as follows: the light globe reacts to ambient sound in the space but mainly to an ancient, operative prayer (warm) that is read to it by a computer (cold). The light remains glowing, only as long as the prayer is still “heard” by the circuit. Here, an interaction through time is suggested. The relic of the hymn is revived by new technology. I discovered the hymn through the internet, recorded my computer reciting it and built a technological system to illustrate it’s purpose (keeping the sun alive). 

I have no real solutions, only more questions. I’m searching and, I’ve heard, that is the best way to make art. My work involves an element of communicative play in order to combat what Yuk Hui refers to as “desymbolization” (73) in his essay for the anthology *Jacques Ellul and the Technological Society in the 21st Century* a concept similar to McLuhan’s self-amputation but, perhaps obviously, related to a supposed destruction of cultural symbol creation as a result of technology. Hui states “symbols that were once mediated between different powers and were included in ritual practices are eliminated in the process of technological development” (75). Through art-making I hope to reritualize technology: this is my response to the impending gloom of cybernetic governance. It is necessary, as an artist, to take the entire situation at face value. Regardless of whether one works with technology, the system by which we are given the freedom and encouragement to make art is crumbling rapidly. 

10 | Conclusion + ...

Saba Mahmood writes, in “Rehearsed Spontaneity and the Conventionality of Ritual : Disciplines of Salat,” that the two prevailing views regarding ritual “are understood to be the space where individual psychic drives are either channeled into conventional patterns of expression or temporarily suspended so that a conventional social script may be enacted” (828). The dialogue I attempt with my work suggests that a return to ritual

technology would remedy the cybernetic, auto-amputation, while ethnographers propose that “ritual activity is where emotional spontaneity comes to be controlled” (828). Obviously, my argument ceases to hold in light of this. However, I believe that if technology is reclaimed within an intimate site and is invested with personal and untranslatable symbols (i.e. through art-making), the current liminal systems of control will no longer maintain the same level of power. As Mahmood continues to illustrate, “the body's conceptual relationship with the self and others, and the ways in which it articulates with structures of authority, varies under different discursive regimes of power and truth precisely because the body's ritual practices endow it with different kinds of capabilities” (837). Within the context of an open-source community, hackerspace, or fablab—by creating personally prescribed and augmented tools—an individual can attempt to reshape the landscape of power and control promoted by cybernetics.

In ritually activating technology, I feel an affinity with the new media artists who have recently visited the FMI : Rosa Menkman, TeZ, Dewi De Vree, and Patricia Ruthensteiner. In my view, these artists all engage in a practice of ritually technological research and development. Rosa Menkman’s extensive work to define resolution and glitch has resulted in her development of a new resolution paradigm. Her intent is to engage individuals to, in fact, redefine the established schema. I find her work ritually relevant because, while established resolution is ritually symbolic, harnessing the liminal moment and engaging in a personal re-forming of revolutionary identity is completely in line with the more ecological, syncretic approach I am suggesting. Additionally, I find her ability to engage in theoretical work (writing and field research) while maintaining the perspective and intimate space of an artist, encouraging. It seems difficult, if not impossible, to position oneself as both an academic and an artist. The artist’s job is to reject delimitation while the academic’s is to enforce it. I find

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conflict with myself in this respect, but seek to reinvest that uneasiness in my art and my writing. My hope is to remain outside of strict institutional spaces. Artists Dewi de Vree and Patrizia Ruthensteiner work together to make hidden technological noise—electromagnetic waves—audible through ritualistic wearable sculptures. Ruthensteiner and de Vree harvest natural elements (branches, moss) and combine them with PCBs, solder, and microchips. The extent of true anthropocenic nature is thus made available to the wearer. I'm inspired by these artists' connection to tradition and futurology. They imitate the future-past ("In a galaxy far, far away...") through the use of traditional, folk technique and contemporary technological capabilities. In fact, I imagine the Magnetoceptia objects as existing more in a very distant past than in the present. The concept of "listening to the airwaves" is far from new, but it is the ever-changing environment around us that writes and continues to rewrite these poems. The artist TeZ approaches this through emotional embodiment. I had the opportunity to experience Ilinx, a work he collaboratively designed (with Chris Salter and Valerie Lamontagne), in Berlin during the 2014 CTM Festival. Ilinx is categorized by a performative environment, wherein the participants, after being ritually dressed in a suit comprised of sensors and an obfuscating visor, lose sense of their bodies and dissolve into a space manipulated by audio and light. When TeZ gave a lecture at the FMI last year, he discussed the reason why he chose audio as his medium: he proposed that there is no other sense that literally touches your core being, your atoms, except sound. TeZ intends to affect emotion, directly, through physical manipulation. The work Ilinx achieves the epitaph "tangible poem." I was skeptical of the claims of "out-of-body" experience and euphoria but in truth I did feel deeply affected, emotionally, by the experience. My hypothesis is that given some faculty of human nature, there are particular performative actions that play on emotional receptors. The experience of being led, blinded, into a glowing pit of light with tiny vibrating

sensors stimulating pressure various points reached something atavistic within me. 

I am grateful to have spent the past two years in a whirlwind of new discoveries, in every sense. I've been incredibly distracted at times but I've achieved my goals in pursuing this intensive two-year research: to define my personal artistic goals, to refine my artistic process and products, and to deepen my ability to undertake personal theoretical and practical research. I'm at the end of this process here but I feel I've just begun on the journey I mentioned earlier. I think, my ultimate goals are to pursue artistic production as a research process, in the sense of Menkman or TeZ. My interests in bio-technology, fashion (crafted ritual technology that affects(ed) the body), cyborgism, telepathy, immersion (regarding narratives and dreams), and in-depth symbolic investigation, are far more solidly relevant to me now. I feel that through the theoretical framework I've outlined in this paper and from what I consider the true beginnings of my artistic production, I can grow to accomplish the task of writing tangible poems. In other words, my attempts to achieve extranaturality through ritual technology are currently *in-vitro* (literally, "*in glass*") but I have all the tools I need to break it open and spill out a lukewarm, drizzly identity. 



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