

ENTANGLED MATTERS

Support Materials

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GLOSSARY

 → AUDIO

 → IMAGE

 → CITATION

 → TEXT ENTRY, DOCUMENT

 → CONCEPT

 → FILM, VIDEO, TV BROADCAST

A → ABU GHRAIB, ARCHIVE, ATOMIC

B → BIKINI ATOLL, BUNKER

C → CARTER, CLAIRVOYANCE, CUBAN MISSILE CRISIS

D → DECEPTION, DEEP THROAT

E → ELLIPSIS, EMBALM, ENTANGLEMENT

F → FECHNER, FOSSIL, FUTURE

G → GLOBAL NETWORKS, GORBACHEV

H → HALDEMAN, HEISENBERG

I → INTERVAL

J → JAAR

K → KASHIWAZAKI, KON TIKI

L → LEICA, LITVINENKO

M → MACHINIC, MICROFICHE, MIGRANT MOTHER, MUIRHEAD

N → NARA, NIXON, NUCLEAR

O → OUTER SPACE, OUT-TAKES

P → PHÚC, POISON, PRAVDA, PREEMPTION

Q → QUANTUM

R → RADIOACTIVE

S → SECRETARY, SILENCE, SPHERES, SUBLIME

T → TAPE, TOMB

U → UHER 5000

V → VAULT, VIETNAM, VODOO

W → WARNING, WIENER

X → XENAKIS, X-RAY

Y → YEARN

Z → ZOMBIFICATION, ABU ZUBAYDAH

A → ABU GHRAIB, ARCHIVE, ATOMIC

ABU GHRAIB



"The symbol of America is not the statue of liberty, it's the prisoner standing on a box wearing a dark cape and a dark hood on his head afraid he's going to be electrocuted."

—Senator Edward Kennedy, 2004

A101

→ **FILM A102: Clip from *Standard Operating Procedure*, dir. Errol Morris, 2008.**

ARCHIVES



A201
Interior of the National Archives, Washington, DC.



A202
Battling humidity in the National Archives.



A203
Audio tape archive, Gatineau, Quebec, Canada.



A204
Bunny Lee tape archive. Photo Credit: Tom Oldham.

DESTROYED ARCHIVES



A205 Workers sift through the collapsed Cologne civic archive, March 3 2009. Photo Credit: Sean Gallup.

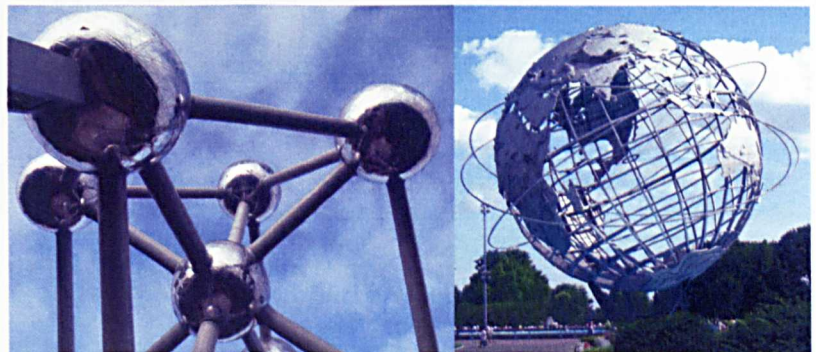


A206 Forty-five million shredded pages of Stasi documents (5% of the total destroyed in 1989). An archivist painstakingly pieces together destroyed Stasi documents by hand. Photo Credit: Andrew Curry.

ATOMIC ARCHITECTURE



A301 The World Time Clock (Weltzeituhr), Alexanderplatz, Berlin, Germany.



A302 The Atomium in Brussels, 1958 and the Unisphere in Flushing Meadows Queens, 1964-65.

B → BIKINI ATOLL, BUNKER

BIKINI ATOLL



B101 Joseph R. Cermak of Wright Field installing camera in gun turret of a plane, which will record atom bomb tests over Bikini Atoll during Operation Crossroads. Photo Credit: Frank Scherschel.

B102 Cameramen watching from one of the 73 planes, which observed the atomic explosion in July 1946. Photo Credit: Frank Scherschel.

On July 1 1946 more than one third of the world's entire film and photographic stock was used to document the spectacular violence of this first atomic blast.

FOURTH BUNKER

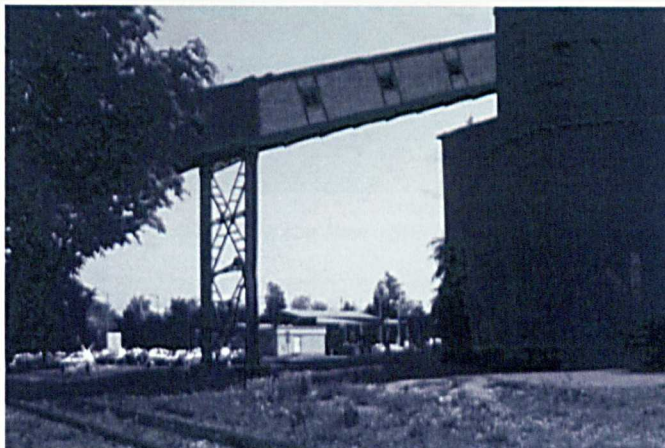
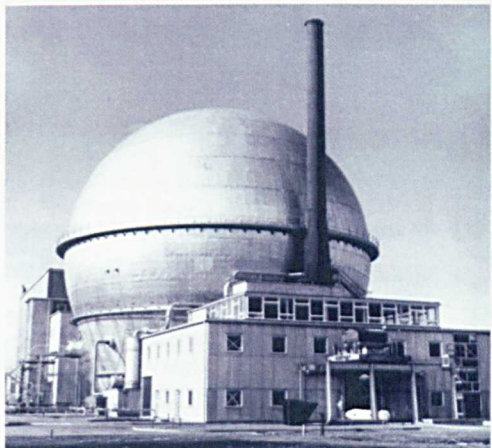
B201: A mysterious breakdown at the fourth bunker is invoked as the cause for the irradiated landscape of the Zone in Andrei Tarkovsky's 1980 film *Stalker*. This bleak aesthetic vocabulary gestures both towards that of Chernobyl yet-to-come as well as the rumoured 1957 explosion at the Mayak nuclear waste site near Chelyabinsk.

It was due to a major geological accident—an earthquake—that Tarkovsky had to relocate his film shoot from Tajikistan to Estonia. Not only is *Stalker* retrospectively and prospectively entangled with the nuclear disasters of Mayak and Chernobyl but it is also strangely linked to a 2007 earthquake that took place near Niigata, Japan which damaged the Kashiwazaki nuclear power plant. This earthquake trembled in the midst of a media conference while I was reading an excerpt from my thesis chapter on the nuclear accident and the radiological event.

(See also Glossary entry Kashiwazaki.)

"Tarkovsky filmed *Stalker* in Estonia because the original locations, near Isfara and Kanibadam in Tajikistan, became impossible as the result of a powerful earthquake with many victims. People lost their homes and were quartered in hotels, schools and sports-halls. We searched for new locations for almost three months in Uzbekistan, Turkmenistan, Azerbaijan, Georgia, Ukraine, the Crimea and around Moscow. But the location was found when Tarkovsky flew to Tallinn, where he had connections with Estonian students from the Advanced Scriptwriting and Directing courses which he had taught there, and because of his script Hoffmanniana, which had been written for the

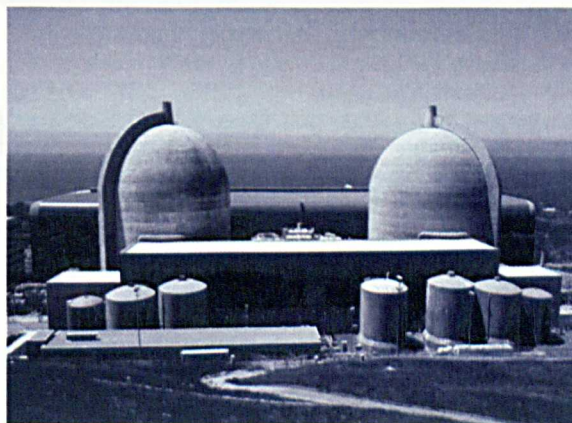
Tallinnfilm studio. The main location was found unexpectedly near the Jägala river, 25km from Tallinn. They went to see the Jägala waterfall, which they didn't like, but nearby they found an abandoned electrical generating station, which had been blown up in 1941 by the Red Army retreating through Estonia. The building belonged to no-one and was the ideal place for the shoot. We later found a second electrical station downstream, an overflow weir. These two ruined constructions became the main locations, providing the style and texture of the whole film, and helped to create the atmosphere of the strange and mystical events of the film. We also shot near the railway bridge over the Pirita river, near the road to Leningrad, at a ship repair yard, an abandoned oil processing plant, at an empty mill, and also near an electrical station in the centre of Tallinn. The closing episodes of the film were shot in Moscow."¹



B202 Mayak nuclear waste site, Chelyabinsk. **B203** *Stalker* film location, Estonia. Photo Credit: J. Norton.

FALLOUT SHELTERS / BUNKER ARCHITECTURE

B204: "Fallout shelters entered the American consciousness and vocabulary in 1949 when President Harry Truman made it publicly known that the Soviet Union had detonated their first atomic bomb, ushering in an era when the United States faced the fact that it had lost its nuclear autonomy. By the late 1950s, officials of the Eisenhower administration believed that they had a realistic idea of how difficult it would be to survive a nuclear bomb blast, and was actively promoting the construction of fallout shelters as part of the civil defense program. Plans were drawn up. From 1958 onward, the Office of Civil Defense not only promoted home shelters but also published a collection of manuals that showed Americans how to build home shelters."²



B205 Domestic bunker, ca. 1957.

B206 The Diablo Canyon nuclear power plant in San Luis Obispo County, California.

¹ Evgeny Tsybmal, assistant director, discusses location scouting. James Norton, *Stalking the Stalker*, Available: <http://www.acs.ucalgary.ca/~tstronds/nostalgia.com/TheTopics/Norton.html>, June 27 2009.

² Source: u-s-history.com/pages/h3706.html & Office of Civil and Defense Mobilization (OCDM).

C → CARTER, CLAIRVOYANCE, CUBAN MISSILE CRISIS

PULITZER REPRISALS / KEVIN CARTER



C101 Photo Credit: Nick Ut
Published in the *New York Times*, June 9 1972.



C102 Photo Credit: Kevin Carter.
Published in the *New York Times*, March 26 1993.

"It is a shocking photograph. The tremor it set off on the first viewing remains palpable, a blunt-edged blow to conscience and the humanitarian conceit. Kevin Carter's photograph of an emaciated, exhausted, naked child crouched on the ground-his/her head bowed down like a supplicant-in the dusty, rutted landscape of Sudan is as iconic as it is disturbing."³

—Okwui Enwezor

(See also Glossary entry *Jaar*.)

📺 → **FILM C103: Clip from *The Death of Kevin Carter*, dir. Dan Krauss, 2004.**

CLAIRVOYANCE

C201: The clairvoyant communication that underwrites quantum entanglement seems to contradict the universal speed limits imposed by the special law of relativity, in that instantaneous informatic transfer between particles is not restricted to the speed-of-light. It was precisely the voodoo-like property of entanglement and its apparent contravention of one of Einstein's fundamental laws that disturbed him so intensely. "No reasonable definition of reality could be expected to permit this," wrote Einstein in the EPR paper. "On this I absolutely stand firm. The world is not like this."⁴

The theoretical shift from classical to quantum physics involved not only a shift in scale from the observable phenomenon of macrosystems governed by the laws of Newtonian physics to those describing the imperceptibly strange behaviour of subatomic particles operating within the energetic milieus of the microcosm. But it also inaugurated a conceptual or philosophic realignment from the continuity and determinism of the actual to the uncertainties and discontinuities of the virtual. Quantum mechanics can never account for the facticity of the world, nor is it able to forecast the outcomes of a given set of relations. It is only ever able to describe the "evolution" of a series of facts that are affected by their encounter with an observer whether that device is a particle accelerator or the closed-system of the universe itself. As such it is productive of probabilities or novel facts rather than predictive of unique actualities.

³ Okwui Enwezor, *Snap Judgments: New Positions in Contemporary African Photography* (New York: Steidl Publishing, 2006). P. 15.

⁴ "Most physicists are not content with Bohr's injunction not to ask what is "really" going on before the collapse of quantum indeterminacy; they can't accept that total, deterministic knowledge is an impossibility, so they have recourse to all sorts of strange hypotheses, from multiple worlds to "hidden variables." But following Nancy Cartwright among others, Stengers suggests that the whole problem of indeterminacy and measurement in quantum mechanics is a false one. Physicists don't like the fact that quantum mechanics forbids us in principle from having exact knowledge of every particle, as it were independently of our interaction with the particles. . . . But Stengers points out that the limits of our knowledge in quantum mechanics are not really any greater than, say, the limits of my knowledge as to what somebody else is really feeling and thinking. It's only the physicists' idealizing assumption of the world's total knowability and total determinability in accordance with "laws" that leads them to be frustrated and dissatisfied by the limits imposed by quantum mechanics." Steven Shaviro, *Cosmopolitics*, 2005, Blog Archive, May 31 2007. P. 3.

Heisenberg's "uncertainty principle" formulated in 1927 forwarded a concept of probability as constitutive of a new kind of objective physical reality. Heisenberg developed his theory of quantum indeterminacy while working as a researcher for Bohr whom he viewed as "primarily a philosopher, not a physicist." Although Bohr immediately understood the radical implications of Heisenberg's discovery for their emergent field, it was largely through the latter's influence that quantum weirdness was transformed into a broader philosophical challenge.⁵ Contrary to the deterministic ontologies of classical physics which posited that if one knew the initial state of a system with infinite precision one could predict the behaviour of the system infinitely far into the future. Quantum mechanics argued that our limited knowledge of the system imposes an equal limit on our ability to make any such predictions. One can account for either the position or the momentum of a particle but not both simultaneously and therein lies its "uncertainty" said Heisenberg. His theory of the "potential fact" surely must have given pause and even rise to dread for someone insistent that the world is not like this, that is to say, uncertain and strange.

(See also Glossary entry Heisenberg.)

CVR CLAIRVOYANTS

C202: "In [September 26] 1997, a Garuda Airlines Airbus 300-B4 [flight 152] crashed into a highland jungle slope near Medan, North Sumatra, killing 224 people. As Indonesian police and military teams, aided by aviation investigators from other countries, combed through the dense Sumatran canopy for the missing flight data recorder, it was reported that clairvoyants from a neighbouring village had been called in to assist on the search."⁶



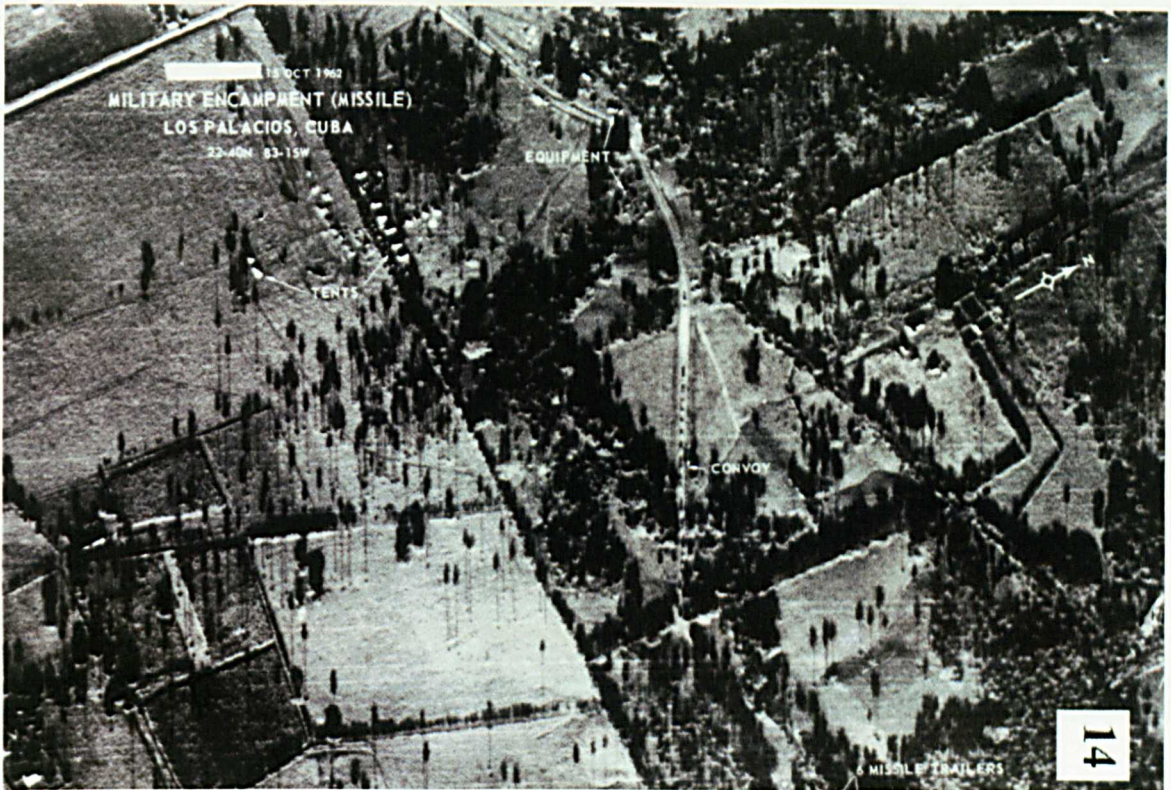
C202: The black box cockpit voice recorder or CVR is a machine not unlike the camera and tape recorder discussed by the thesis in which the death-of-life is one of its primary inscriptive modalities. As an apparatus for mediating between the worlds of the living and the dead, the CVR only fully comes-to-life in the event of a deadly accident. Probing its now digital encodings, airline crash investigators seek the truth of the past in order to make sense of the present and modify aircraft technology and its operational procedures in the hopes of preempting the arrival of future events. The black box, in archiving the informatic traces of the technological dead is, in effect, a forensic mechanism for conducting an autopsy of the accident. Through its post-mortem analysis the cataclysmic narrative of fatal events are reconstructed. Conceptualised as such the CVR can be coaxed into speaking the irrevocable "truth" of what transpired, even if its witness statements contradict the 'live' testimonials of airline personnel and safety regulators. Likewise Tape 342 is also understood as containing the truth of the event within its scrambled micro-magnetic particles in spite of Nixon's steadfast denials of any wrongdoing. As it waits out the years in the vaults of the archive in the hopes of its technical revivification it, like the post-crash survival of the CVR, reaffirms our faith in technology even if its findings will ultimately undermine it.

↔ AUDIO C203: History of the black box (David Warren) by Janice P. Witham, 2005.

⁵ Timothy Ferris, "Quantum Weirdness," *Stanford: History & Philosophy of Science & Technology Writing Science* (1997), May 4 2007 <<http://www.stanford.edu/dept/HPS/WritingScience/Ferris.htm>>. P. 6.

⁶ Tom Vanderbilt, "Black Box," *Cabinet Failure.7* (2002). P. 1.

CUBAN MISSILE CRISIS



C301 Military Encampment (Missile) Los Palacios, Cuba, October 15 1962.

D → DECEPTION, DEEP THROAT

EVIDENCE OF DECEPTION



D101 Watergate Exhibit 133: Chapsticks with hidden microphones.



"I have earned every cent. And in all of my years in public life I have never obstructed justice. People have got to know whether or not their president is a crook. Well, I'm not a crook."⁷

🔊 → **AUDIO D102: Nixon's "I'm not a crook speech, November 17 1973.**

🗨️ **D201: 'Deep Throat' Appears In Nixon Papers**

WASHINGTON (CBS News) — Deep in Richard Nixon's White House files sit letters from a long-forgotten lobbying campaign to make Mark Felt head of the FBI. Instead, Felt became Deep Throat. The National Archives released more than 10,000 pages of documents from the Nixon presidency on Wednesday and among them are the urgings of past and present FBI agents and other interested citizens to appoint Felt, then the No. 2 FBI official, as director. Associates described his "outstanding loyalty." Nixon did not take the advice.

Ultimately, Felt's devastating leaks as The Washington Post's secret Watergate source helped undermine Nixon's presidency. Felt confessed to being Watergate informant "Deep Throat" in 2005. AP



D202 William Mark Felt (aka *Deep Throat*) former FBI deputy associate director appears on CBS' "Face The Nation" on Aug. 30, 1976. Felt died December 18 2008.

⁷ Carroll Kilpatrick, "Nixon Tells Editors, 'I'm Not a Crook'" [Washington Post](#) November 18 1973. P. 1.

E → ELLIPSIS, EMBALM, ENTANGLEMENT

L'ELLIPSE



Pierre Huyghe, *L'Ellipse*, 1998, three-part video projection, 13 minutes, installation dimensions variable.



→ **VIDEO E101: L'ELLIPSE:** "Pierre Huyghe's video installation consists of an extended panoramic screen bearing three projections shown in sequence. The left and right ends of the screen are clips from Wim Wenders's 1977 film, *The American Friend*. The center screen displays an episode using the film's original actor, Bruno Ganz, but created by Huyghe years later. This insertion is an ellipsis, a "fill" in a cinematic time gap that connects the two original scenes to form one continuous real-time sequence. Huyghe's intervention forms a juncture where art and life, fiction and reality, and past and present intersect."⁸

FILM = TIME EMBALMED

🗨️ **E201:** "If the plastic arts were put under psychoanalysis, the practice of embalming the dead might turn out to be a fundamental factor in their creation. The process might reveal that at the origin of painting and sculpture there lies a mummy complex. The religion of ancient Egypt, aimed against death, saw survival as depending on the continued existence of the corporeal body. Thus, by providing a defense against the passage of time it satisfied a basic psychological need in man, for death is but the victory of time. To preserve, artificially, his bodily appearance is to snatch it from the flow of time, to stow it away neatly, so to speak, in the hold of life. It was natural, therefore, to keep up appearances in the face of the reality of death by preserving flesh and bone."⁹—André Bazin

ARCHITECTURAL EMBALMMENT

🗨️ **E202: May 31 2005 "Ukraine to Build New Sarcophagus Over Chernobyl Reactor"**
KIEV, Ukraine -- The construction of a new sarcophagus over the reactor of Ukraine's Chernobyl nuclear power plant will be begin in one and a half years, Ukrainian Emergency Situations Minister David Zhvania said.

"There is no danger that the facility Shelter that we have at present can destroy and a catastrophe can happen. There can be no such thing, this is excluded," he told reporters on Tuesday. The new facility that is to bury the reactor that exploded on April 26, 1986, for 100 years will be 257 meters long, 150 meters broad and 108 meters high. In late April, Ukraine called on the work community to come with more substantial technical and financial assistance for overcoming the

⁸ See Pierre Huyghe, Madeleine Grynsztejn, "Artist Section," *Carnegie International 1999-2000*, vol. 1 (Pittsburgh: Carnegie Museum of Art, 1999-2000).

⁹ André Bazin, "The Ontology of the Photographic Image," *Film Quarterly* 13.4 (1960). Pp. 4-5.

consequences of the Chernobyl nuclear accident, in particular increasing donations to the Shelter Foundation, as donor countries had promised.

Ukrainian Fuel and Energy Minister Ivan Plachkov said Ukraine needs increasing the bankrolling of the Shelter Foundation from 758 million dollars to 1.1 billion dollars. The plan of action at the Shelter facility includes 93 contracts worth 326 million dollars, 241 million of which have been spent since the beginning of the shelter construction, Plachkov said. The US promised to issue 45 million dollars and G-7 countries 160 million dollars to the Shelter Foundation. Russia will contribute five million dollars in 2005 and five million in 2006. Source: *ITAR-TASS*¹⁰

E203: JANUARY 10 2008 "New Phase for Chernobyl Sarcophagus Stabilization"

The administration of the Chernobyl Nuclear Power Plant signed a new contract on January 10, 2008 to continue stabilization efforts on the existing Sarcophagus. Contract SIP 07-1-00 covers repairs to the Sarcophagus roof, installation of physical protection systems, and the reinforcement of supporting beams.

The project's contractor is the Stabilization Consortium, led by Russia's Atomstroyexport [Атомстройэкспорт is the Russian Federation's nuclear power equipment and service export monopoly], and includes Ukraine's YUTEM-Engineering and Atomenergostroyproekt Institute. The project moderator is the International Chernobyl Shelter Fund, and project funding will come from the G8 and European Union countries. Over \$1 billion for the project has already been collected by the European Bank for Reconstruction and Development.

The Sarcophagus' 20 year expected lifespan has already been extended due to previous stabilization efforts. Over the past three years, builders have used 750 tons of metal, 245 tons of reinforced steel and falsework, and 4,500 tons of reinforced concrete for the foundation to strengthen the structure.

The Sarcophagus, **built hastily** after the accident in 1986, was the quicker to construct and less costly of two considered options. Remote-control methods used during construction prevented installation of the concrete panels at the required tightness, leaving behind **unfilled gaps**. Currently, the total area of these **cracks** has reach almost 1,000 square meters, allowing up to 2,000 cubic meters of rain and melted snow inside the structure each year. This moisture can spread radioactive material, and in a **worst-case scenario**, could produce a **runaway nuclear reaction**. These cracks also allow small amounts of radiation to **continue escaping into the atmosphere**. This new project will provide additional time for the construction of the New Safe confinement, an arch-shaped structure with an expected lifespan of 100 years that will ultimately cover the radioactive remains of Reactor 4.¹¹



E204 CGI sketches for embalming Chernobyl Reactor Unit 4 in new Sarcophagus.

E205: JANUARY 24 2008 Ukraine's Ministry of Emergency Measures announced on January 24, 2008 that construction of the New Safe Confinement structure at the Chernobyl Atomic Energy Station will begin in earnest this spring. Minister Volodymyr Shandra said, "I believe that in spring we'll start work to build a safe shelter and the construction of this facility will be completed in 2012." Ukraine signed a contract with France's Novarka in September 2007 to build a new structure to cover the remains of Reactor 4. Another deal was also signed with US company Holtec International for the construction of a "dry storage" facility at the Chernobyl plant for spent nuclear fuel.¹²

¹⁰ Nicholas, *Kiev Ukraine News Blog*, 2005, blog, June 27 2008.

¹¹ Mark Resnicoff, *Chernobyl and Eastern Europe*, 2008, blog, Available: <http://www.chernobylee.com/blog/2008/01/>, June 27 2008.

¹² Resnicoff, *Chernobyl and Eastern Europe*.

E301: While machinic entanglements can take place at various scales of interaction from that of the microphysics of matter to the macroscales of the socio-political, entanglement as theorised by quantum physics refers specifically to a form of non-local or telepathic communication between subatomic particles whereby two separate particles in a state of superposition are able to modify and mirror their individual states simultaneously across the vast distances of the cosmos. The fates of such particles are said to be “intertwined for ever” regardless of how far apart each travels, that is, until one of them interacts with a measuring device—effectively snapping them out of their voodoo-like trance. In a quantum system a particular state has no value until it is actually detected or observed.¹³ But when a measurement interaction occurs we find that the properties of particles that were in a prior state of entanglement are always mysteriously identical.

“Spukhafte Fernwirkung” or “spooky action at a distance” is how Albert Einstein famously referred to the quantum phenomena of non-local communication in a 1935 paper co-authored by fellow scientists Boris Podolsky and Nathan Rosen.¹⁴ Their paper asked the question via its title “Can Quantum-Mechanical Description of Physical Reality Be Considered Complete”? More commonly referred to as the EPR Paradox, this quantum thought experiment raised a specific challenge to the 1930 Copenhagen Interpretation developed by Niels Bohr and his colleagues in which they contended that quantum mechanics, despite its inherent uncertainty, was indeed a comprehensive theory. Although the EPR paper initially set out to critique Bohr’s probabilistic description of matter and events, their inquiry produced an equally perturbing narrative of non-localism in which quantum particles can affect and modify each other without the need for proximity.

The weird or spooky behaviour of atoms within a quantum system forwarded by this concept is now known as “entanglement” and has since become the theory’s most provocative and important cornerstone.

While Bohr’s Copenhagen Interpretation did prevail, setting the course for the development of a standardised quantum mechanical paradigm, Einstein was deeply troubled by the strangeness of the quantum world and never reconciled himself with its counterintuitive accounts of micro-perceptual phenomenon. Nor could he accept quantum mechanics as a “complete theory” because its calculations only ever produced statistical or partial accounts of the behaviour of atoms. “Quantum mechanics is certainly imposing. But an inner voice tells me that it is not yet the real thing. The theory says a lot, but does not really bring us closer to the secret of the ‘Old One.’ I, at any rate, am convinced that He is not playing at dice.”¹⁵


Despite his convictions that a theory reliant upon chance and uncertainty was insufficient for explaining the material complexity of the universe and thus inadequate to the more profound task of revealing its deeper metaphysical dimensions, Einstein recognised that something significant had taken place. He conceded that was Bohr was an exceptionally creative thinker and even called his insights “the highest form of musicality in the sphere of thought.”¹⁶

¹³ Physicist David Bohm has argued that for theorists such as Niels Bohr and Werner Heisenberg “quantum phenomena are *known* only through experimental frameworks and are thus inseparable from the apparatuses of measure (or representation). The phenomena are only endowed with real existence through the measuring apparatuses that represent them; they have no ontological status apart from these representations, which can only describe them “analogically by probability.” See Murphy’s discussion of Bohm, Bohr, and Heisenberg in T. S. Murphy, “Quantum Ontology: A Virtual Mechanics of Becoming,” *Deleuze and Guattari: New Mappings in Politics, Philosophy and Culture* eds. Eleanor Kaufmann and Kevin Jon Heller (Minneapolis: University of Minnesota Press, 1998). Pp. 13-26 and Patricia Ticineto Clough, Greg Goldberg, Rachel Schiff, Aaron Weeks and Craig Willse, “Notes Towards a Theory of Affect-Itself,” *Ephemera: Theory & Politics in Organization* 7-1, Immaterial and Affective Labour: Explored (2007). Pp. 7-8.

¹⁴ Albert Einstein, Boris Podolsky and Nathan Rosen, “Can Quantum-Mechanical Description of Physical Reality Be Considered Complete,” *Physical Review* 47 (1935).


¹⁵ Quotation from a letter written to Max Born. Max Born and Albert Einstein, *The Born-Einstein Letters* (New York: Macmillan, 1971). P. 91.

¹⁶ Paul Arthur Schilpp, ed., *Albert Einstein: Philosopher-Scientist*, vol. 2 (New York: Harpers, 1959). P. 45.

 **F101:** While he was studying the effects of the afterimage by staring directly into the sun for prolonged periods without any ultra-violent protection, physicist Gustav Theodor Fechner (1808-1887) suffered a nervous collapse and severely damaged his vision. Temporarily blinded, he resigned his post at the University in Leipzig and embarked on a program of self-reflection that was guided by his growing interests in metaphysics. His subsequent theory of psychophysics (linking mind and body) emerged out of this period of imposed seclusion to become an important precursor to the modern field of experimental psychology.

RADIOACTIVE FOSSIL

"It is as if the past surfaces in itself but in the shape of personalities which are independent, alienated, off-balance, in some sense embryonic, strangely active fossils, radioactive, inexplicable in the present where they surface, and all the more harmful and autonomous. Not recollections but hallucinations. Madness, the split personality, now shows the past."¹⁷—Gilles Deleuze

 **F201:** A strange alchemical process is at work in the thesis transforming dead historical materials into articulated radioactive matter. These supplemental encodings convert archival materials into matter becoming archive, into a radioactive fossil-deposit capable of extending its contaminating discharges into the present and far distant future.

Picking up on Deleuze's invocation of the radioactive fossil in his analytical work on the time-image as well as Benjamin's laborious work in the arcades, film theorist Laura U. Marks discusses the ways in which film [or for my purposes any inscriptive surface] functions as a kind of recollection-object or fossil that has the capacity to reactivate the present because it carries the indexical traces of its prior contact with an originary event.

These past events are chemically imprinted on the film stock and are thus a fundamental precondition for reworking meanings within the present. But such reconsiderations do not occur in a benign interplay between spatio-temporalities, they are not exempt from their ethical obligations to either the past, present or even the future yet-to-come. Rather than preserving the fossil as an inert object fixed in time and space, radioactivity releases it from its petrified and paternal obligations to author particular versions of history.

"Fetishes and fossils are nodes, or knots, in which historical, cultural, and spiritual forces gather with a particular intensity. They translate experience through time and space in a material medium, encoding the histories produced in intercultural traffic. . . . The intercultural space in which fetishes and fossils are produced is always charged with power; it is not a neutral ground where meanings can be remade with impunity."¹⁸

The artefact thus conceived is a mnemonic device for conjuring the remembrance of past events and the archive a machine for the zombification of its objects and documents. "Not change mummified but stasis zombified."¹⁹ Out of the heterochronic depths of the archive the artefact slowly surfaces, it clings to the past by barely a thread as it journeys towards us. Radical archival research cuts the umbilical cord that has tethered the artefact to the "cold monster that is a dead father or the State" and spews it into the spurious froth of the present where it will undergo certain transformation.²⁰ Gelatinous in its newly "embryonic state" the artefact is reanimated as alien—strangely other—a chimera whose pastness now appears warped—no longer assured—distorted by the deep time that has flooded the archive.

Entangling the artefact within different pre and post-histories by extending its conceptual "containment zone" can alter prevailing conceptions of an event and in doing so transforms its related artefacts from petrified fossils into ones that are "dangerously alive"—radioactive.

¹⁷ Gilles Deleuze, *Cinema 2: The Time Image*, trans. Hugh Tomlinson and Barbara Habberjam (London: Continuum, 1989). Pp. 112-113.

¹⁸ Laura U. Marks, *The Skin of Film: Intercultural Cinema, Embodiment and the Senses* (London: Duke University Press, 2000). P. 89.

¹⁹ Steve Reinke, *Folk & Still* (2005). P. 2.

²⁰ Jacques Derrida, *Ear of the Other: Otobiography, Transference, Translation* (Lincoln: University of Nebraska Press, 1988). P. 36.

However the specific analysis that I can bring to bear upon my research objects as they teleport through space-time, will be less than intoxicating if the contaminating affects of these artefacts remains entirely arbitrary, subject to the atmospheric vagaries of a given day. As Marks already made clear relations cannot be crafted without impunity for the alterations in thinking and meaning that they provoke. The particularity of my research materials will therefore only be pertinent to the extent that their intensive recoding is transformative and able to produce discernible resonances within the thesis.


FUTURE

◀ → AUDIO F301 William Burroughs on the origin and theory of the tape cut-ups.

"Perhaps when you cut into the present the future leaks out."²¹—William Burroughs

G → GLOBAL NETWORKS, GORBACHEV

GLOBAL NETWORKS

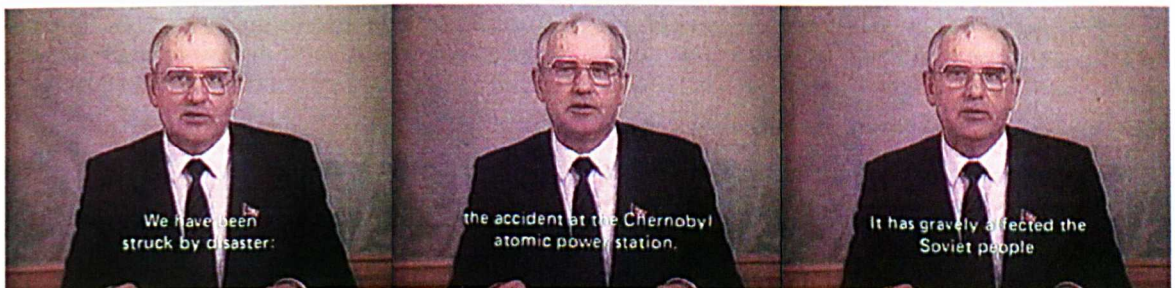
 **G101:** The *Global Networks* drawings produced by artist Mark Lombardi (1951-2000) to map the intertwinings and wilful collusions of global capital with corporate and state interests are exemplary in their performance of an artwork as a rigorous archival practice and research project.

Conceptualised as a diagrammatic set of vectors that forge connections transversally across space-time domains, these drawings never represent power as a closed circuit, but as a series of linked flows which can be always be redirected, reconnected and re-examined as new information comes to light. What Lombardi doesn't make explicit in these mappings are the rates of differential flow that characterise the infinite ways in which capital modulates power and exerts control over time. Dates stand in for time, and facts for space.

Although a critique of equivalence can be levied, in that he reduces everything to a set of undifferentiated marks and lines, isn't this is exactly what official archives have always done; whether organised by old-fashioned card catalogues or now by digital database entries? His project in refusing to freight any incidents with more or less intensity and symbolic heft than others consigns the affective and interpretative aspects of the work almost entirely to the intellectual labours of the viewer. But even in their seeming equivalence Lombardi presents us with a personally edited selection of information (as do all archives) which reminds that subjectivity is always smuggled in under the guise of objectivity.

NB: As an undergraduate, artist Mark Lombardi had a job as chief researcher for an 1973 art exhibit *Teapot Dome to Watergate*, a multimedia collage whose elements focused on various US governmental scandals; it was motivated by the then ongoing Watergate scandal.

MIKHAIL GORBACHEV

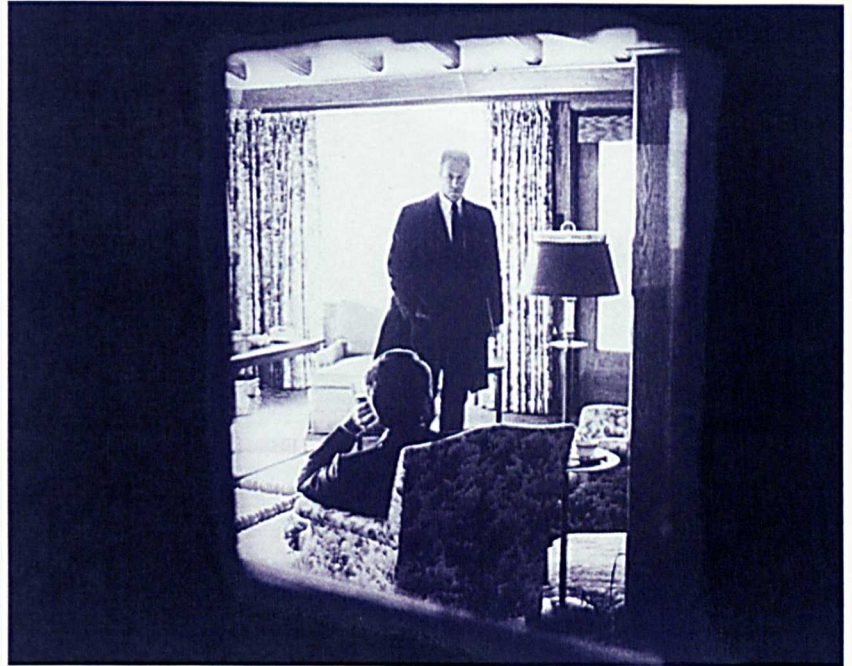


→ TV G202: May 14 television broadcast of Gorbachev's official announcement that a major nuclear accident had taken place at Chernobyl on April 26 1986.

²¹ Lecture by William Burroughs, "Origin and Theory of the Tape Cut-Ups," Conference Jack Kerouac School of Disembodied Poetics (Naropa Institute: 1976).

H → HALDEMAN, HEISENBERG, HYSTERESIS

HR HALDEMAN



H101: A conversation between Nixon and HR Haldeman (White House Chief of Staff) three days after the break-in at Democratic National Committee Headquarters in the Watergate Hotel.

WERNER HEISENBERG

🔊 → **AUDIO H201:** Heisenberg & Baron von Weissäcker discuss the issues Germany faced in considering the making of an atomic bomb and how he [Heisenberg] sought Bohr's advice on the matter. (BBC March 2 1956)

HYSTERESIS

🗨️ **H301:** hysteresis / hst'ri:ss/

→ *n.* (*Physics*) the phenomenon in which the value of a physical property lags behind changes in the effect causing it, especially that involving magnetic induction and a magnetizing force.
- ORIGIN C19: from Gk *hustersis* 'shortcoming'. (Concise OED)

→ *n* [NL, fr. Gk *hysteresis* shortcoming, fr. *hysterein* to be late, fall short, fr. *hysteros* later] a retardation of the effect when the forces acting upon a body are changed (as if from viscosity or internal friction); *esp:* a lagging in the values of resulting magnetization in a magnetic material (as iron) due to a changing magnetizing force. -hys-ter-et-ic *adj*

Hysteresis represents the *history* dependence of physical systems. If you push on something, it will yield: when you release, does it spring back completely? If it doesn't, it is exhibiting hysteresis, in some broad sense. (Webster)

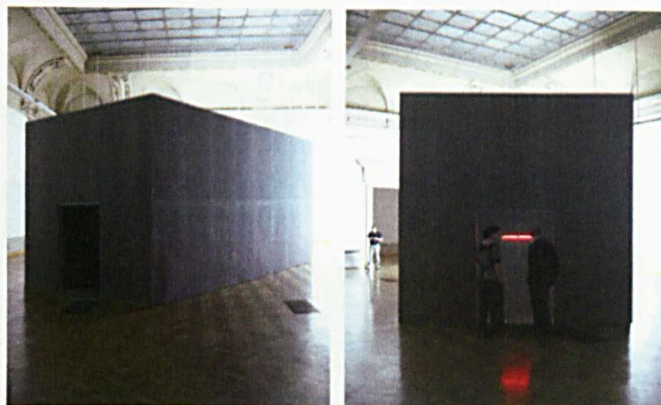
I → INTERVAL

TIME LAG / INTERVAL

📺 → **VIDEO I101:** *Time Lag [Documenting Chernobyl]*, produced by Schuppli, 2007.

J → JAAR

THE SOUND OF SILENCE / ALFREDO JAAR



J101 *The Sound of Silence*, Alfredo Jaar, South London Gallery 2008.

"The 8-minute silent film in *The Sound of Silence* exposes the social history around a single image of a young victim of the 1990s Sudanese famine. Jaar's work highlights the problematic issues surrounding the image – from personal history to copyright law – to unearth some of the broader socio-political concerns related to the West's responsibility to Africa and the developing world."

(See also *Glossary* entry *Carter*.)

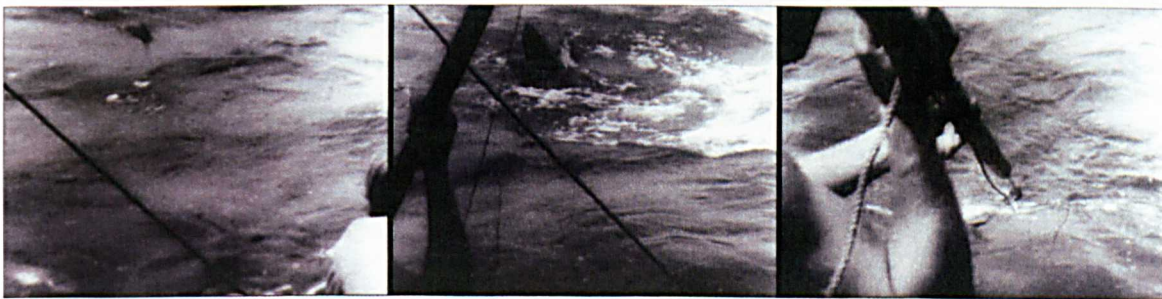
K → KASHIWAZAKI, KON TIKI

KASHIWAZAKI



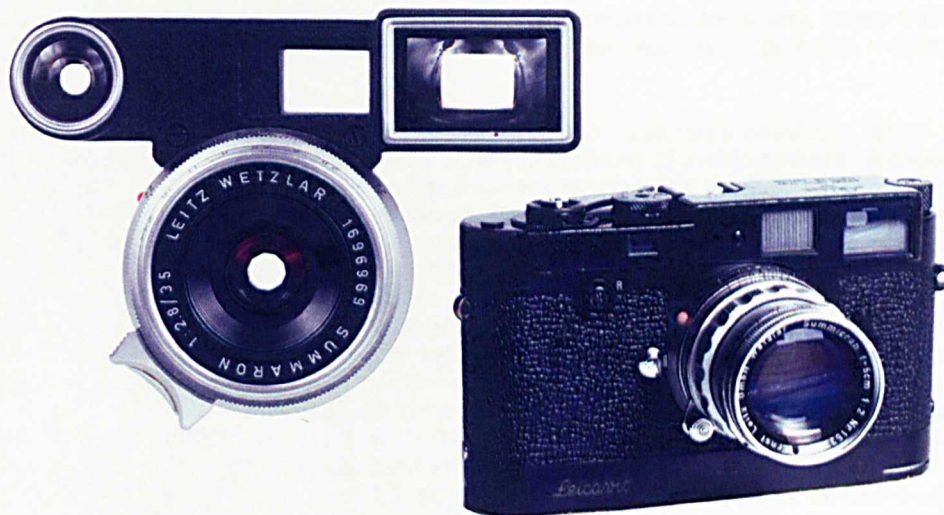
K101 Accident at the Kashiwazaki nuclear power plant near Niigata, Japan on July 17 2007.

KON TIKI



K201 Film stills from Thor Heyerdal's *Kon Tiki*, 1947, 77 mins.

📺 → **FILM K202:** Film clip depicting whale-shark in *Kon Tiki*, dir. Thor Heyerdal, 1947.



L101 Camera used by Huynh Cong (Nick Ut, Press Corps Photographer).
Leica M-2 body (1965 serial number 1923019) fitted with a Leitz wide-angle f/2 35 mm Summicron lens
(Serial number 1923019). Collection of the Science Museum, London, UK.

ALEXANDER SASHA LITVINENKO



L201 Film still from *The Spy Who Came in From the Cold* (adapted from a 1963 John le Carré novel).
Directed by Martin Ritt, cinematography by Oswald Morris, 1965.

L202: Litvinenko had been a outspoken critique of Vladimir Putin's government and as a former lieutenant colonial in the Russian Federal Security Service or FSB (the successor agency to the KGB responsible for surveillance operations, counter-intelligence, border security, and counter-terrorism) had access to information which he claimed implicated the Kremlin in a wide-range of criminal activities, from the murder of friend and journalist Anna Politkovskaya in 2006 (another Kremlin critic) to the deliberate bombings of five Moscow apartment buildings by the FSB in 1999, which were blamed upon Chechen insurgents and led to the Russian invasion of Chechnya and the Second Chechen War. As an FSB agent Litvinenko had previously been ordered to assassinate Russian oligarch and media tycoon Boris Berezovsky (another Putin detractor). In refusing to comply with this illegal order he began a campaign directed at exposing the dirty secrets and illicit activities of the FSB. Fearing for the safety of his family he fled to London in 2000 where he joined several other exiled Russian dissents (including Berezovsky) living in political asylum. On May 22 2007 British authorities laid charges and filed extradition papers against Andrei Lugovoi an ex-KGB operative, accused of poisoning Litvinenko in London three weeks prior to his death. To-date these extradition orders remain unfulfilled and Litvinenko's murder investigation suspended.

(See also Glossary entry *Poison*.)

■ **M101:** "Our machines are disturbingly lively, and we ourselves frighteningly inert."²²

"Taking machines seriously requires that the autonomy of the machine is de-reified, along with a linear-evolutionary model of machine development, in favour of an analysis of complex machinic becomings."²³

According to contemporary philosopher Keith Ansell Pearson, Félix Guattari's ontology, which he conceptualised as "machinic heterogenesis", requires a reconfiguration of ontology itself. Although each of my media artefacts emerges out of a singular moment of machinic intensity it is gathered into the extensive temporal embrace of the machinic phylum that brings the events of the "here" and the "there" together in continuous modulation and reverberation. Consequently each machine becomes a witness to the various inscriptions that have transited through its mechanical organs and every artefact a potential defendant answerable to the demands imposed upon the past by coming events. While such technical matter may be suffused with the electronic currents that run through it and animate it internally—that bring it into life for itself—it is also a situated object within a constellation of determinate relations to other machinic vitalities that are extraneous to it. In Guattari's view, these external modulating conditions are inseparable from the expressive and enunciatory capacities that brought the machine into being in the first place, both for itself and other machines, as well as for its end-users (likely humans). "One is not 'oppressed' by a technical machine but by a social machine which determines at any given moment what is the usage, extension, and comprehension of technical elements."²⁴

Guattari stresses that we need to overturn the thinking that has posited the problematic of technology as conditional upon the question of the machine. On the contrary, the machine must be regarded as the "prerequisite for technology" rather than merely a consequence of its expression. Instead of allocating the machine to a subset of technics, Guattari makes the radical suggestion that the question of technology is itself "dependent on the questions posed by machines."²⁵

While early histories and critiques of technology focused their attention upon the impact of the machine's material forces upon socio-economic phenomena (i.e. Marx's critique of mechanisation in *Capital*), the evidence of technology's contemporary effects, which includes its immaterial electronic forces, shouldn't be exclusively mapped onto the macro-domain of the cultural. To some degree this has been an inevitable consequence of the fact that comparative literature and philosophy of science have become the critical arenas where much of the groundbreaking theoretical work in media studies is being pursued. As media theorist Mark Hansen contends in his critique of technesis (the putting into discourse of technology), this prevents us from actually dealing with the machine's micro-physical impacts and the ways in which it's perceptual affects can register experiences beyond the thresholds of human understanding and representation. In tackling media machines from inside disciplines such as literature and philosophy, they are too often reduced to their character as a metaphor thus disavowing the machine's dynamic and robust materiality. (See also "*Necessary Betrayals*" in the *Introduction*.) Alfred North Whitehead called the mistaken recognition of an abstraction for a concrete reality a "fallacy of misplaced concreteness". However Hansen's contention that the machine's textual alliance has effectively cancelled its radical potential to critically intervene into current technological regimes must itself be questioned.²⁶ That is to say, the question must be raised of the machine's perceived impotency, its inability to provide a strategic space of critical agency and action vis à vis techné. But this alleged state of affairs is not a consequence of the machine's textual reduction as Hansen suggests, but rather a fallacy of misplaced emphasis, one that requires a rethinking of the problematic in the manner advocated by Guattari so that "the question concerning technology" is reformulated as a problem that relies first upon the "questions posed by machines".

²² Donna Jeanne Haraway, *Simians, Cyborgs, and Women: The Re-Invention of Nature* (London: Free Association, 1991). P. 153.

²³ Keith Ansell Pearson, *Virroid Life: Perspectives on Nietzsche and the Transhuman Condition* (London: Routledge, 1997). P. 134.

²⁴ Ansell Pearson, *Virroid Life: Perspectives on Nietzsche and the Transhuman Condition*. P. 145.

²⁵ See Félix Guattari, *Chaosmosis: An Ethico-Aesthetic Paradigm*, trans. Paul Bains and Julian Prefanis (Sydney: Power Publications, 1995). P. 33.

²⁶ See Mark Hansen, *Embodying Technesis: Technology Beyond Writing*, Studies in Literature and Science, ed. N. Katherine Hayles (Ann Arbor: University of Michigan Press, 2000).

M102: The term autopoiesis—a process-based system that translates from the Greek as auto-production—first appeared in an article published by scientists Humberto Maturana, Francisco Varela, and Humberto Uribe in 1974. Varela classified systems as either “allopoietic machines, which produce something other than themselves, or autopoietic machines that engender and specify their organisation and limits.”²⁷ While allopoiesis could account for technical systems (an automated production assembly-line offers a concise example of an allopoietic machine) autopoiesis was reserved exclusively for the self-replicating dynamics of biological systems. According to Maturana and Varela only living systems are self-producing machines, no other kind of machine is able to do this. An autopoietic system, defined as such, operates as a closed informational loop in which its own genesis [self-reproduction] is arrived at by the movement of its own internal attributes. Flora and fauna are autopoietic systems because they give rise to other like-matter, whereas robotic machines are allopoietic because they can manufacture a variety of objects [cars, light bulbs, chewing gum] based upon different data-inputs in their programmed activities.

“An autopoietic machine is a machine organized (defined as a unity) as a network of processes of production (transformation and destruction) of components that produces the components which: (i) through their interactions and transformations continuously regenerate and realize the network of processes (relations) that produced them; and (ii) constitute it (the machine) as a concrete unity in the space in which they (the components) exist by specifying the topological domain of its realisation as such a network.”²⁸

Accordingly systems are “open” with respect to their structure given that they can physically expand and change their material form but remain “closed” with respect to their organisation in the sense that their operational features can only be activated within the recursive bounds of that system.²⁹ While living systems must yield to their structural parameters this does not mean that their future state is necessarily given or predetermined.

Autopoietic theory, it has been suggested, can offer an innovative way to understand cognitive phenomena in stressing the role of the observer—someone who watches a system interact with its own environment, although this same observer can also be turned into a system scrutinized by others. Likewise quantum theory also stresses the role of the observer in its fundamental thesis concerning particle/wave duality. (See *Glossary entry Entanglement*.) For those interpretations that follow the Copenhagen line, the intercession of a measuring device or observer is required in order to explain the collapse of a particle’s wavefunction. Similarly two entangled particles only fall out of their fatal embrace when one of them undergoes a measurement. Prior to their observation they remain stateless, in so far as their internal states-of-affairs remains a privately shared matter. Only through measurement is a given attribute of a particle revealed and its specific state made public. For quantum theory, the only truly closed and autopoietic system is the universe itself. What quantum theory usefully provides therefore is an account of microsystems in which the observer—human or technical instrument—is fundamentally implicated in generating the specific outcomes of a system thus refuting any notion of an impartial observer. In other words, the “passive someone” who watches a system interact with its environment is reformulated as an “active agent” which effects the ways in which the system emerges and ultimately the ways in which it can connect to other macro-domains.

The place of reflexivity in macrosystems, which Maturana posits as situated beyond the morphological process of autopoiesis, must therefore be called into question. For instance when we think this relationship through the theory of machinic assemblage, as a theory for the heterogeneous articulation of contingent relationality between all objects and events, we are reminded of the adamant rejection of any distinction between inside and outside. Although relations may be radically severed or cut, and the existing assemblage wither and perish away, the flow of ideas, information, and matter tends to find other channels of expression and connectivity within new and different assemblages. Maturana and Varela’s theory of autopoiesis is engaged with the organisation of living systems “casting out and dissipating anything external that would contaminate their inner purity.”³⁰

²⁷ Félix Guattari, “Machinic Heterogenesis,” *Rethinking Technologies*, ed. Verena Andermatt Conley, Miami Theory Collective (Minneapolis: University of Minnesota Press, 1993). Pp. 16-17.

²⁸ H. R. Maturana and F. J. Varela, *Autopoiesis and Cognition* (Dordrecht: D. Reide, 1980). Pp. 78-79.

²⁹ Luciana Parisi, class notes, MA Seminar “Interactive Media,” *Goldsmiths University of London* (Fall 2005).

³⁰ Ansell Pearson, *Viroid Life: Perspectives on Nietzsche and the Transhuman Condition*. P. 144.

However the notion of intensive communication and emergent processes that lies at its [autopoiesis] core can be creatively commandeered to do what they [Maturana and Varela] explicitly disavow: to treat information as a material expression of systems that are themselves self-generating.³¹ This of course requires a reformulation of the transmitting machine as a form of medial entanglement whose operations can activate experiential registers that bring its articulating matter into contact with other machines, whether the silicon-based components of electronic machines or the carbon-based components of organic beings.³²

As Felix Guattari suggests "autopoiesis deserves to be rethought in relation to entities that are evolutive and collective, and that sustain diverse kinds of relations of alterity, rather than being implacably closed in on themselves."³³ While my case studies/machines can only perceive the world and interact with it by virtue of their machinic structures, reconceptualising their structural capacities as open and interactive, not predetermined or fixed allows me to creatively splice them with other structural elements to evolve new machines that might spark new signifying relations. "All systems are structurally coupled with each other, in the same way that all living organisms must be structurally coupled to their environment in order to live. According to Maturana and Varela, a cell within the body is an enclosed system, but it too relies upon its structural coupling to the body as a whole for its continued existence."³⁴

Contrary to both Shannon and Wiener's formulation that information travels independently of its material substrates because it is merely an electronic signal moving through a communication channel, N. Katherine Hayles argues that "information has now sunk so deeply into the system as to become indistinguishable from the organisational properties defining the system as such."³⁵ For example enzymatic transfer (a form of bio-communication that governs the rate at which chemical reactions occur within a single cell) is inextricably interconnected to the multi-cellular system with which it must also communicate in order to adjust processes of catalysis. Although such cytological communication is spatially inscribed within organisational structures that actively maintain their boundary distinctions, it must continually transgress them in order to survive. Paradoxically, to live is to contravene the very structuring principles—the closed circuits of autogenesis that make life possible.

"The microcosmos of the inner world [said Gregory Bateson] is not opposed to the external world but is functional within its larger ecosystem."³⁶ Processes of informatic transfer "couple internal and external worlds" to become the generative force in emerging the event. In spite of the innovative work done by theorists such as Caffentzis (see "Informing Matter" in *Chapter Two: Tele-Transmissions*), matter and data are still primarily viewed as unassimilable entities even though they are subject to interpenetrating processes neither of which is exclusively organic or inorganic in nature. The presumptive physicality of information figured by its capacity to "self-form" and "engage in self-measurement", doesn't easily resolve this distinction because it hinges upon a fairly radical reformulation of the common understandings of data as immaterial streams of zeros and ones. While all material objects are transited by flows of information, the conception of information as simply pattern, code, on/off signal instantiates the division that the luminous world of information runs parallel to the murky and real world of embodied experience. Once again we are returned to Wiener's proclamation that "Information is information, not matter or energy. No materialism which does not admit this can survive at the present-day."³⁷

This extended detour through discussions on how information may be rethought in terms of attributes that align it with a vitalist ecology is useful to my overall project, because it confers a contingent agency to machinic processes. This allows me to rethink the operations of a machine, like the Muirhead Picture Transmitter for example, as not simply a machine for etherealising the photograph into informatic vapour, but as an alchemical process whereby data re-emerges as a new form of matter.

³¹ Ansell Pearson, *Viroid Life: Perspectives on Nietzsche and the Transhuman Condition*. P. 144.

³² In their text *What is Life?* Margulis and Sagan make the vociferous point that "new anthropocentric readings of history lead to the entirely spurious claim that with the coming of the computers and the arrival of robot intelligence the planet is now entering a 'silicon age'. What this ignores is the fact that metallurgy has an ancient prehuman history, with human metalworking following the bacterial use of magnetite for internal compasses by almost three thousand million years." Paraphrased by Ansell Pearson, *Viroid Life: Perspectives on Nietzsche and the Transhuman Condition*. P. 124.

³³ Guattari, "Machinic Heterogenesis." P. 17.

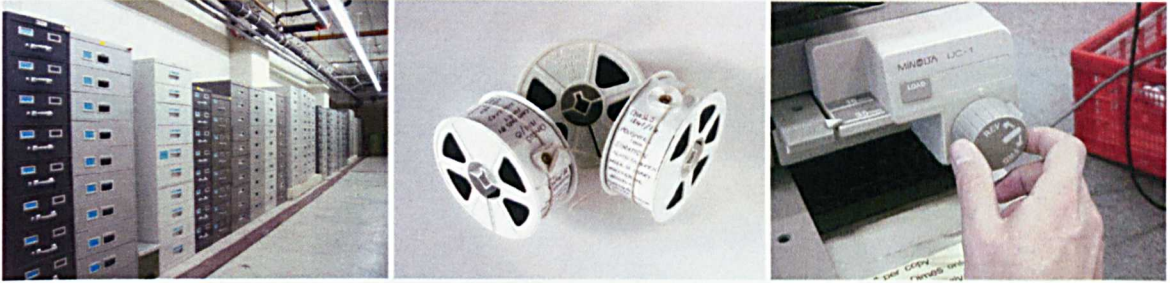
³⁴ Luciana Parisi, *Autopoiesis* (London: Goldsmiths University of London, 2005).

³⁵ N. Katherine Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics* (Chicago: University of Chicago Press, 1999). P. 11.

³⁶ Parisi, *Autopoiesis*.

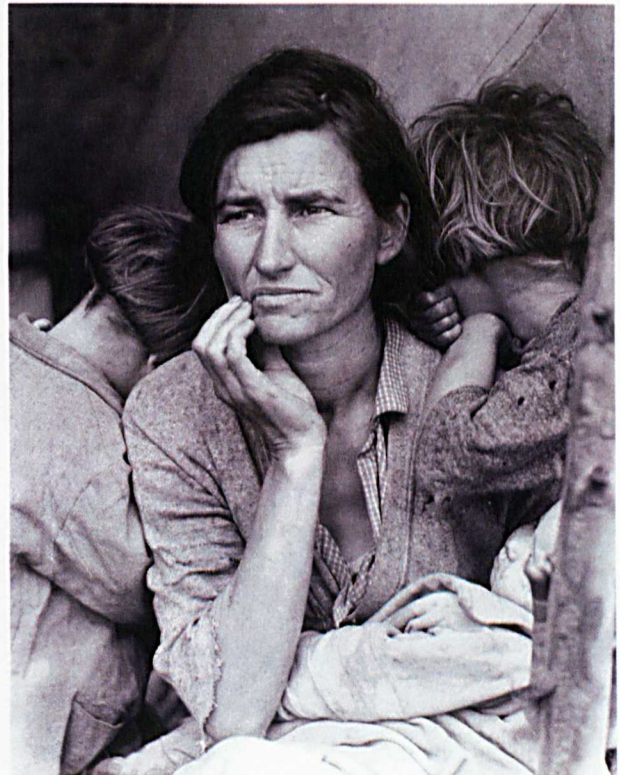
³⁷ Norbert Wiener, "Cybernetics in History," *Theorizing Communication: Readings across Traditions*, eds. Robert T. Craig and Heidi L. Muller (London: SAGE, 2007). P. 132.

MICROFICHE



M201

MIGRANT MOTHER



M301 *Migrant Mother*, Dorothea Lange, 1936.
Source: Prints & Photographs, Library of Congress, Washington, DC 20540.

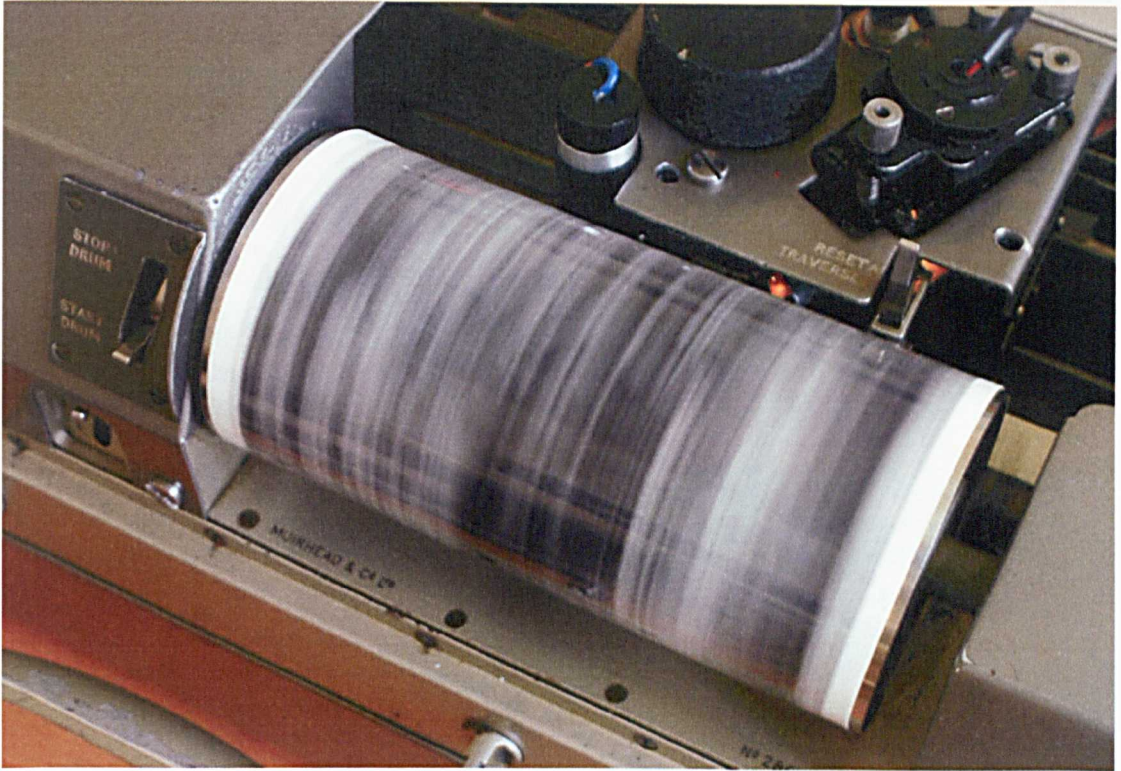
M302: "I saw and approached the hungry and desperate mother, as if drawn by a magnet. I do not remember how I explained my presence or my camera to her, but I do remember she asked me no questions. I made five [actually six] exposures, working closer and closer from the same direction. I did not ask her name or her history. She told me her age, and that she was thirty-two. She said that they had been living on frozen vegetables from the surrounding fields, and birds that the children killed. She had just sold the tires from her car to buy food. There she sat in that lean-to tent with her children huddled around her, and seemed to know that my pictures might help her, and so she helped me. There was a sort of equality about it." (Dorothea Lange, 1960)

M303: In the 1970s, when Florence Owens Thompson was finally identified as the women in Lange's photograph, she recalled a different version of events. "I wish she hadn't taken my picture. I can't get a penny out of it. She didn't ask my name. She said she wouldn't sell the pictures. She said she'd send me a copy. She never did."³⁸

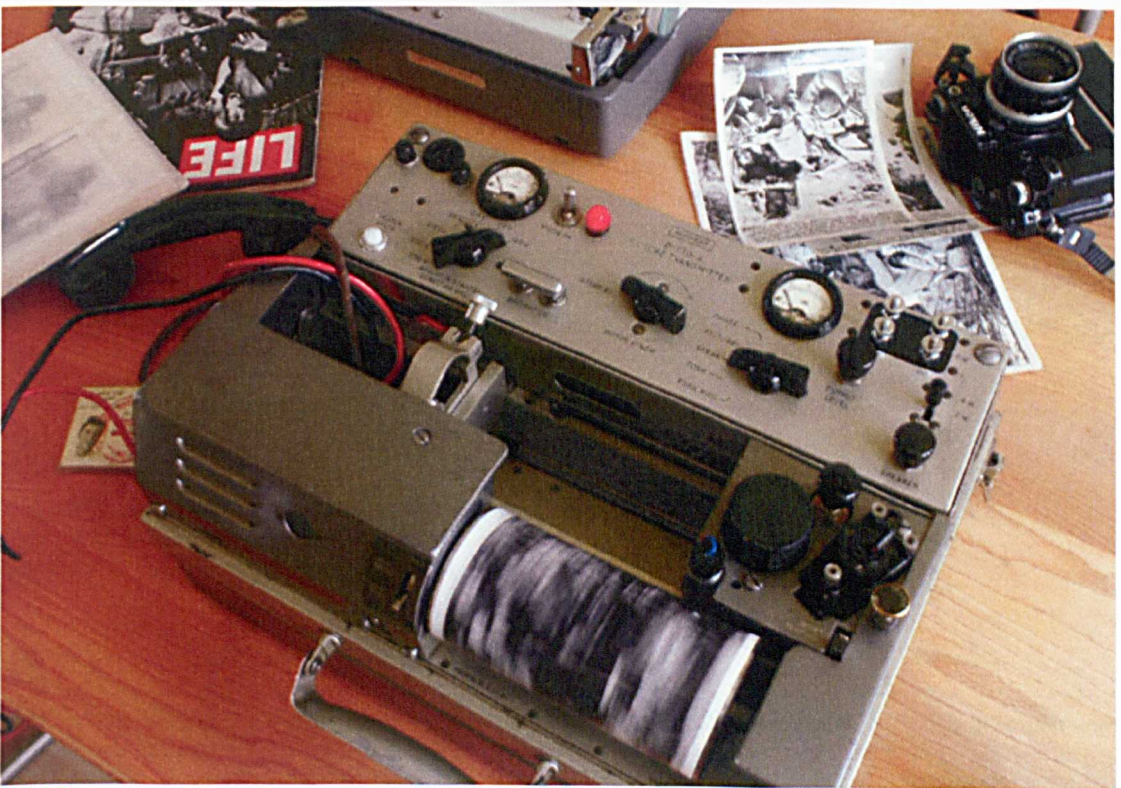
³⁸ Geoffrey Dunn, "Photographic License," *Santa Maria Sun* Feb 8 2002.

MUIRHEAD PICTURE TRANSMITTER

◀→ AUDIO M401: Muirhead image transmission by audio signal.



M402 Muirhead Picture Transmitter. Photo Credit: Michael Ebert/VISUM.



M403 Muirhead Picture Transmitter. Photo Credit: Michael Ebert/VISUM.



N101 NARA Building in College Park, Maryland.

N102: NARA PRESS RELEASE April 12 1996

National Archives Announces Agreement to Accelerate Release of Nixon Tapes

N103: NARA PRESS RELEASE September 1998

National Archives Prepares to Return Private Portions of Nixon Tapes

N104: NARA PRESS RELEASE August 8 2001

National Archives Announces Request for Qualified Candidates to Test Feasibility of Recovering Audio from the Nixon "18½ Minute Gap" Tape

N105: NARA PRESS RELEASE September 7 2001

National Archives Extends Closing Date to Begin Testing of the Nixon "18½ Minute Gap" Tape

N106: NARA PRESS RELEASE February 14 2002

National Archives Releases 500 Hours of Additional Nixon White House Tape Recorded Conversations

N107: NARA PRESS RELEASE May 8 2003

Archivist Accepts Watergate Tape Panel Recommendations

N108: NARA MEDIA ALERT June 19 2003

White House Tape Recordings and Textual Materials

The Richard Nixon Presidential Library and Museum, one of 12 Presidential libraries administered by the National Archives and Records Administration, will be opening approximately 154 hours of Nixon White House tape recordings and approximately 30,000 pages of textual materials from the Nixon Presidency.

THE U.S. NATIONAL ARCHIVES & RECORDS ADMINISTRATION

www.archives.gov

Monday, June 29, 2009

Press Release
April 12, 1996

National Archives and Records Administration Announces Agreement to Accelerate Release of Nixon Tapes

Notice, October 26, 1999: The agreement may be read at Appendix A of [public access regulations \(36 CFR 1275\)](#)

Washington, DC . . . Archivist of the United States John W. Carlin today announced an agreement designed to lift legal obstacles to the release of "Watergate"-related Nixon White House tape recordings never before heard by the public.

Under the agreement, Carlin said, tapes related to what the law calls "abuses of governmental power" during the Presidency of the late Richard M. Nixon could become publicly available within the current year. The agreement further provides a process through which additional Nixon tapes may be released.

The National Archives and Records Administration (NARA) reached the agreement with three other parties to litigation over the Nixon tapes: advocacy group Public Citizen, history professor Stanley Kutler, and the estate of Richard Nixon. Since 1993, release of Nixon tapes had been held up pending resolution of litigation. Now, all parties have reached an agreement designed to facilitate review and release of the Nixon recordings.

"As the representative of one of those parties," said Archivist Carlin, "I wish to express gratitude to all the others for this resolution of our differences. The National Archives and Records Administration is eager to make public all material that the law allows to be released to document the Nixon Presidency. But we also are sensitive to the concerns of the Nixon family about material that is legally personal and private, and we recognize the need to treat materials not related to 'abuses of power' as we would treat materials of any other President in our Presidential library system, consistent with the law that specifically governs the Nixon materials. We believe that this agreement protects both the Nixon privacy rights and the public interest as defined by law."

The Agreement

With one exception, the agreement settles a lawsuit brought by Professor Kutler and Public Citizen to accelerate the release by the National Archives and Records Administration of approximately 3,700 hours of White House tapes recorded during the presidency of Richard Nixon. The agreement also allows the lifting of an injunction, granted by the court to former President Nixon, prohibiting tape releases by NARA.

The case was filed against NARA in March 1992 because only 63 hours of the White House tapes had been made available to the public since 1974, when Congress passed a law requiring review and release of Watergate materials and Nixon presidential historical materials. Former President Nixon intervened, arguing that NARA should give priority to returning all private conversations on the tapes to him. In August 1993, former President Nixon obtained a court order forbidding any further releases until NARA had completed its review of all of the tape recordings and returned all private or personal materials. As a result, there have been no subsequent releases of any of the remaining tapes, including any of the 201 hours that NARA has concluded demonstrate Watergate "abuses of governmental power."

THE U.S. NATIONAL ARCHIVES & RECORDS ADMINISTRATION

www.archives.gov

Wednesday, March 15, 2006

The Record - September 1998

National Archives Prepares to Return Private Portions of Nixon Tapes

Under court order, the National Archives and Records Administration has begun a project to cut apart the original White House tape recordings made by former President Richard Nixon so that portions that courts have ruled are the private property of the Nixon estate can be returned to it.

The National Archives, which has custody of the tapes, is in the process of opening those to which the government is entitled. In the continuing process of reviewing the tapes, NARA officials so far have identified approximately 820 hours of recorded conversations that must be returned, which is approximately 22 percent of the 3,700-hour total.

As ordered by the courts, the National Archives will have to destroy or return copies it has made as well as return the portions of the original tapes containing private or personal information. But Archives officials are hopeful that the Nixon estate itself might preserve and someday make public at least some of the private conversations.

Archivist of the United States John Carlin has formally asked the Nixon estate to accept the return of the entire master preservation copy so that the Estate can preserve one intact copy of the private or personal information. This would allow the "political" conversations, which are included in those private or personal materials, to be preserved in context with other conversations and possibly to be made available to the public in the future.

President Nixon secretly recorded many conversations during his administration on tapes that came to light during the "Watergate" investigation. The Presidential Recordings and Material Preservation Act of 1974, which the Supreme Court upheld as constitutional in

1977, requires that the National Archives review these tapes, identify and return "private or personal" conversations, and retain the rest, opening to the public material such as conversations related to "abuse of governmental power."

Regulations promulgated under the Act describe "private or personal materials" as materials that relate "solely to a person's family or other non-governmental activities, including private political associations, and having no connection with his constitutional or statutory powers or duties as President or as a member of the President's staff." The regulations further specify that "political materials" can be kept by the government "only when those activities directly relate to or have a direct effect upon the carrying out of constitutional or statutory powers or duties."

In 1997, a federal district court directed NARA to provide the estate of the late President "forthwith with all personal or private conversations identified to date" on the tapes and tape logs and to destroy or return all additional private or personal material identified in the continuing review of the tapes. A U.S. court of appeals subsequently affirmed the order, with which the National Archives is complying. Accordingly, archivists at NARA in College Park, Maryland, will physically cut out of the original tapes all segments identified as private or personal in a painstaking process that could take from three to six years. Despite the delicacy of the process, taped conversations that the law allows to be made public will not be lost or harmed because the Archives can and is retaining them on preservation copies usable with today's technology. Under a court-mediated agreement with the Nixon estate, the National Archives will continue to release in stages recorded material that the law allows to be made public.

THE U.S. NATIONAL ARCHIVES & RECORDS ADMINISTRATION

www.archives.gov

Wednesday, March 15, 2006

**Press Release
August 8, 2001**

National Archives Announces Request for Qualified Candidates to Test Feasibility of Recovering Audio from the Nixon "18½Minute Gap" Tape

College Park, MD. . . Today, the National Archives and Records Administration published a "Request for Information" in the Commerce Business Daily requesting expressions of interest in participating in a project to assess the feasibility of attempting to recover erased audio program material from an 18.5 minute segment of the original "Nixon White House tape" 342.

For the next twelve months, the National Archives will evaluate proof of concept submissions from project participants to determine the feasibility of recovering of the erased audio recording segment of the original "Nixon tape" without damaging the original tape in any way.

This feasibility evaluation project will be organized as a sequence of three proof-of-concept tests. Each of the three tests will consist of a test tape to be recovered, each tape in the sequence being progressively more representative of the original recording. At the end of the 12-month period, if no one has completed the sequence of three test tapes, the National Archives will evaluate any results achieved and consider whether to extend the proof-of-concept test period for another 12 months. The National Archives will assess the feasibility of demonstrated recovery techniques and the potential risk to the original tape before a final decision is made to proceed with an attempt to recover the erased audio from original White House Tape 342. If a decision is made to proceed, a Request for Proposal (RFP) will be issued to any vendors who successfully completed each of the proof-of-concept test tapes without damaging those test tapes.

The test protocol will consist of a sequence of three test tapes recorded with signals and conversation known only to the National Archives evaluation team. Each succeeding ¼ inch test tape will more closely simulate the original recording in terms of signal levels, types of signals, type of tape, etc. After recording the test signals the tapes will be "erased" in the normal fashion on a properly operating recorder. Participants will have to recover all that is recorded on the test tapes without any evidence of damage to the test tape or the signal recorded on it. Identical test tapes will be provided to each candidate. The overall goal of this effort is recovery of intelligible speech on tape 342 that is similar to speech recorded before and after the "gap", not just speech like patterns or an indication that there was recorded material in the gap. This effort is not directed at traditional forensic investigation of the tape to determine authenticity, age, erasure status, etc. Those factors are not in question. The goal is recovery of intelligible speech.

Interested parties should contact Michael Hamilton, Supervisory Audiovisual Specialist, Nixon Presidential Materials Staff, for additional information: National Archives and Records Administration, 8601 Adelphi Road, Room 1320, College Park, MD 20740-6001; (301) 837-1786; michael.hamilton@nara.gov.

For additional PRESS information, please contact the National Archives Public Affairs staff at (301) 837-1700 or by e-mail.

01-84

THE U.S. NATIONAL ARCHIVES & RECORDS ADMINISTRATION

www.archives.gov

Monday, November 28, 2005

Press Release September 7, 2001

National Archives Extends Closing Date to Begin Testing of the Nixon "18 ½ Minute Gap" Tape

College Park, MD. . . The National Archives and Records Administration has extended the closing date for a "Request for Information." The new closing date for interested parties is October 8, 2001. The "Request for Information" published in Commerce Business Daily is for experts interested in attempting to recover erased audio program material from an 18 ½ minute segment of the original "Nixon White House tape" 342.

For the next twelve months, the National Archives will evaluate proof of concept submissions from project participants to determine the feasibility of recovering of the erased audio recording segment of the original "Nixon tape" without damaging the original tape in any way.

This feasibility evaluation project will be organized as a sequence of three proof-of-concept tests. Each of the three tests will consist of a test tape to be recovered, each tape in the sequence being progressively more representative of the original recording. At the end of the 12-month period, if no one has completed the sequence of three test tapes, the National Archives will evaluate any results achieved and consider whether to extend the proof-of-concept test period for another 12 months. The National Archives will assess the feasibility of demonstrated recovery techniques and the potential risk to the original tape before a final decision is made to proceed with an attempt to recover the erased audio from original White House Tape 342. If a decision is made to proceed, a Request for Proposal (RFP) will be issued to any vendors who successfully completed each of the proof-of-concept test tapes without damaging those test tapes.

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Interested parties should contact Michael Zeleny, Contracting Officer, for additional information: National Archives and Records Administration, 8601 Adelphi Road, Room 3360, College Park, MD 20740-6001; (301) 837-3160; e-mail: michael.zeleny@nara.gov.

For additional PRESS information, please contact the National Archives Public Affairs staff at (301) 837-1700 or by e-mail.

01-88

THE U.S. NATIONAL ARCHIVES & RECORDS ADMINISTRATION

www.archives.gov

Tuesday, May 12, 2009

Press Release
February 14, 2002

National Archives Releases 500 Hours of Additional Nixon White House Tape Recorded Conversations

- **WHAT:** The National Archives and Records Administration will be opening approximately 500 hours of White House tape recordings from the Nixon Presidency. This opening constitutes the largest opening of tapes from the National Archives at any one time. Included are approximately 426 hours of conversations that were recorded at the White House from January 1972 to June 1972. These conversations comprise the third of five chronological segments to be released. The 4,127 tape segments are reproduced on 1,100 cassettes. In accordance with the Presidential Recordings and Materials Preservation Act of 1974 and its implementing regulations, the National Archives has designated approximately 154 hours as personal and returnable to the Nixon estate. Approximately 4 hours are restricted for national security, as provided for in Executive Order 12958. Approximately 30 minutes are restricted for invasion of privacy, 7 ½ hours as unintelligible, and 7 ½ hours as non-historical. There are no taped telephone conversations for the month of February.

The National Archives is also releasing approximately 69 hours of Cabinet Room tapes that were previously withheld security classified segments.

On February 28, the National Archives will have opened 1,779 hours of tapes from the Nixon Presidency.

The tapes cover a wide variety of domestic and foreign topics. Topics of interest include:

- **Vietnam:** A recurring theme throughout the conversations during this period is Vietnam. In January, the President discussed his important January 25 speech on the peace proposal plan. In April the President speaks with Henry Kissinger on a number of occasions about the ramifications of losing the Vietnam war, of bombing strikes in the area. He also has conversations in April with Admiral Thomas H. Moorer and Bob Hope about the war. In May, the President announced the U.S. mining of Haiphong Harbor and the intensified bombing of North Vietnam. Conversations between the President, Kissinger, Alexander Haig, John B. Connally and H.R. Haldeman discuss the progress of the North Vietnamese offensive, plans for U.S. bombing, and a mining blockade of North Vietnam.
- **Watergate:** The break-in at the Democratic National Committee Headquarters at the Watergate took place on June 17. There are four conversations relating to the break-in that are part of this release.

At the opening, the National Archives will also release corresponding portions of a tape log that includes the date, time, location, outline of conversations, and names of participants that will help locate conversations. Because this portion of the log contains 6,000 pages, researchers are encouraged to use the electronic version in CD-ROM, which can be accessed in Word and WordPerfect 6.1 formats.

- **WHEN:** 9 A.M., Thursday, February 28, 2002
- **WHERE:** National Archives at College Park, 8601 Adelphi Road. Lecture Rooms D & E.

IMPORTANT INFORMATION: For the first time, the public will be able to make copies of the taped conversations that are being released. Researchers must bring their own tape recorders and tape stock if they wish to make copies.

THE U.S. NATIONAL ARCHIVES & RECORDS ADMINISTRATION

www.archives.gov

Monday, November 28, 2005

Press Release
May 8, 2003

Archivist Accepts Watergate Tape Panel Recommendations

College Park, MD. . . Archivist of the United States John W. Carlin announced today that he has accepted the recommendations in the final report of the National Archives Technical Evaluation Panel. The panel was created in 2001 to determine whether current advancements in the field of forensic audio technology could recapture sound from the famous "18 ½ minute gap" (Tape 342) in the Nixon White House tape recordings. Based on the results of two tests that were conducted by participants in an open-invitation proof-of-concept exercise, Mr. Carlin decided not to proceed with further testing.

The two-phase testing procedure sought qualified participants to attempt to recover intelligible audio from erased 1/4-inch analog open reel test tapes developed by the National Archives. The purpose of these tests was to determine if technology exists to recover intelligible audio from erased 1/4-inch magnetic tape with out damaging the tape. Five individuals or companies participated in the tests which consisted of two test tapes recorded on an original Nixon White House Sony 800B tape recorder, then erased on Rosemary Woods' UHER 5000. The UHER 5000 was determined by the Advisory Panel to Judge John Sirica in 1974 to be the machine that actually erased the 18 ½-minute portion of Tape 342.

The first test tape which was distributed to participants on February 19, 2002, consisted of erased test tones and spoken word recorded as close to broadcast quality as was possible. Results included partial identification of test tones. There was no recovery of spoken word.

On August 28, 2002, the second test tape was sent to participants. This test tape was recorded using blank .5-millimeter tape confiscated from the Nixon White House. It was recorded and erased at 15/16 inches per second (IPS) and contained speech similar in quality to the speech before and after the 18 ½-minute gap on Tape 342. None of the participants recovered any intelligible audio from the second test tape.

In accepting the recommendations of the panel, Mr. Carlin said, " I am fully satisfied that we have explored all of the avenues to attempt to recover the sound on this tape. The candidates were highly qualified and used the latest technology in their pursuit. We will continue to preserve the tape in the hopes that later generations can try again to recover the this vital piece of our history."

For press information, contact the National Archives Public Affairs Staff at 301-837-1700.

03-43

← AUDIO N201: Nixon resignation August 8 1974.

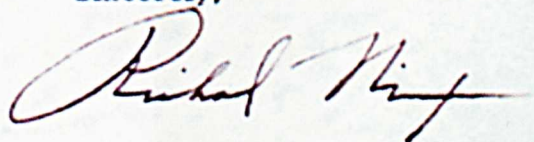
THE WHITE HOUSE
WASHINGTON

August 9, 1974

Dear Mr. Secretary:

I hereby resign the Office of President of the
United States.

Sincerely,

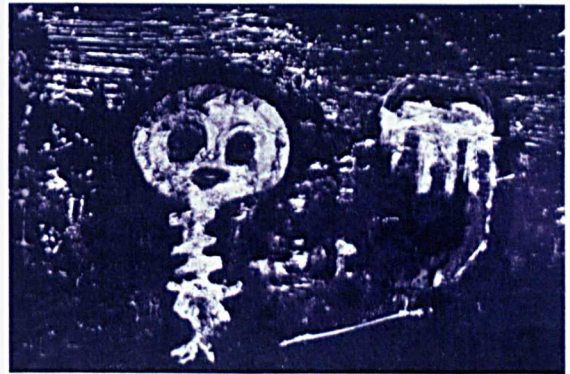


The Honorable Henry A. Kissinger
The Secretary of State
Washington, D. C. 20520

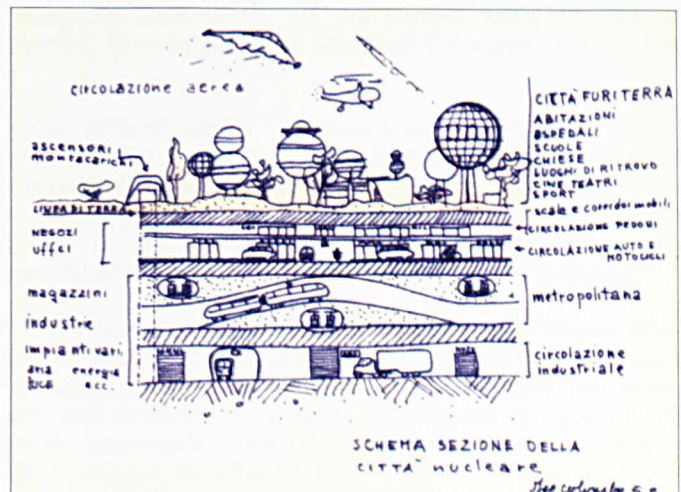
11.35 AM

HK

N301: Both troubled and excited by the new horizons of the atomic age, a small group of avant-garde Italian artists led by Enrico Baj created the *Movimento D'Arte Nucleare* in 1951.³⁹ "The idea of atomic fusion, symbolized as a great unleashing of energy, captured the turbulence and disintegration of the post-war world."⁴⁰ Although the vocabulary of atomic science would influence graphic and industrial design well into the 1950s and 60s, for example André Waterkeyn's *Atomium Building* for the Brussels's Expo in 1958, these architectural and design manifestations were notably celebratory in emphasising the utopian promise of nuclear power, whereas the darker unconscious of the atomic age propelled the short-lived project of the Milan-based *Movimento D'Arte Nucleare*. Unlike other artists of the time who inferred ideas of chaos and obliteration through the expressive language of abstraction (such as de Kooning discussed in *Chapter Three*), the paintings, drawings, and schematic diagrams of the *Nucleare* artists referred directly to the terrors of the nuclear, resulting in images of atomic explosions and architectural renderings of irradiated cities. Described as "primordial, cosmic and naïve" theirs was a fascinated engagement with the mythic dimensions of science, as they understood them. But ultimately they too were caught in the vortex of atomic energy, which loops perpetually between the nodal points of shock and awe, as even their more politicised representations of the nuclear were subject to harsh criticism by physicists who found their revolt against nuclear technology at odds with their interest in the beauty of atomic fission. Professor Giovanni Polvani, Chair of Physics at Milan University, attended a talk at the first group exhibition of the Nuclear Movement. Deeply unsettled by this contradictory impulse in their work, he is said to have "fled in horror" when confronted with the 'scientific' theories of the artists.⁴¹



N302 Arte Nucleare, *Black Sun*, Enrico Baj, 1953.



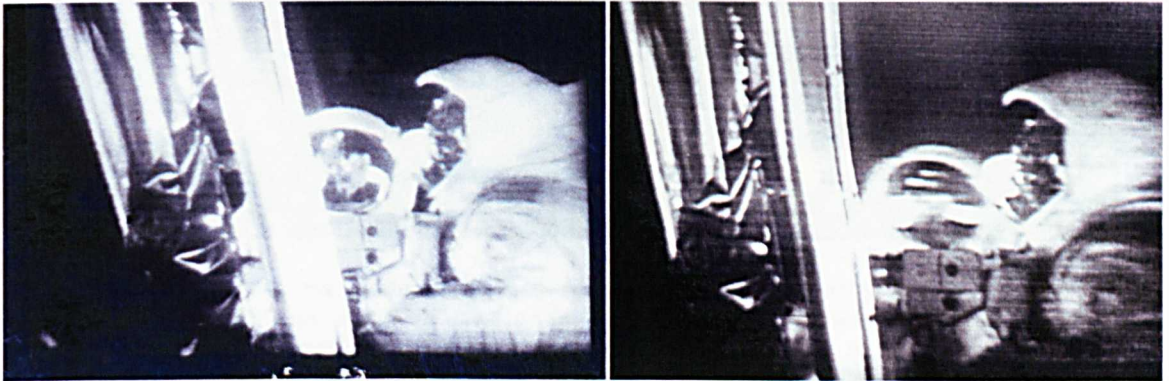
N303 Arte Nucleare, *Schema Sezione Della Città Nucleare*, Joe Colombo, 1952.

³⁹ Members of the movement included artists Enrico, Baj, Roberto Crippa, Sergio Dangelo, and Gianni Dova as well as designer Joe Colombo.

⁴⁰ David Crowley and Jane Pavitt, *Cold War Modern: Design 1945-1970* (London: V&A, 2008). P. 105.

⁴¹ The event was further sabotaged when the projection of a Nuclear colour-film made by Baj and Colombo, "who had photographed spontaneous movements of blots of colour in emulsion" was deliberately broken during its screening. Tristan Sauvage and John A. Stephens, *Nuclear Art* (New York: Maestro, 1962). P. 30.

📖 O101: In a surprising confession in August 2006, NASA admitted to loosing all of its original high-quality broadcast footage of the lunar landing of Apollo 11 1969, as well as that of five other Apollo missions. While they have searched their facilities at the Goddard Space Flight Center (Greenbelt, Maryland) in vain, NASA fears that the magnetic recordings may rapidly deteriorate if stored in substandard conditions. In 1970 the tapes were moved from Goddard to the National Archives, but in 1984 approximately 700 boxes of space-flight tapes were returned to Goddard for some apparently unknown reason. "We have the documents to say they were withdrawn, but no one knows exactly where they went," said Mr. Sarkissian (a CSIRO scientist now stationed at the Parkes radio telescope in NSW, Australia).⁴² Not only have the majority of people involved in the historic broadcast retired or died, but the only known equipment capable of decoding the original analogue tapes is located at a Goddard facility slated to be closed. Even if the lost NASA tapes are found before they disintegrate, the technical means to transfer and decode them may itself already be lost. The original images transmitted from the moon were recorded on telemetry tapes, an unconverted slow scan TV format whose high resolution data was incompatible with the commercial technology used by television networks at the time. "So the images received at Parkes, and at tracking stations near Canberra and in California, were played on screens mounted in front of conventional television cameras" thus accounting for the blurry and degraded images we have come to associate with the Apollo missions.⁴³



O102/O103 These two images were broadcast by Apollo 11 and received by the Parkes Radio Telescope, Australia. On the left is a Polaroid Image taken off the Parkes SSTV Monitor at Paddington and on the right the scan-converted broadcast image taken at the same time as the Polaroid image on July 21, 1969.

Surely no other event takes to heart more ardently Brian Massumi's injunction that "media transmission is the becoming of the event" than that of the first lunar landing, which for most of us only exists as a retroactive televisual transaction. It is the implicit contract enacted between the machine and its transmissional regime that underwrites the lunar landing as an actual event and as such is also that which fuels conspiracy theories questioning the broadcast's artefactual veracity; a detail not lost to many when the disappearance of the lunar tapes was made public.

As luck would have it however some 100 tapes marked "NASA Manned Space Center" have since been recovered; found in boxes under derelict electronic equipment in the basement of a physics lecture hall at Curtin University of Technology in Perth, Western Australia. The tapes are hand-labelled as containing recordings of data collected from the lunar dust detector unit though not the coveted footage of Neil Armstrong's celebrated moonwalk. "One of the old tapes has been sent to the American space agency to see whether it can be deciphered and 'stripped' of any important data which may have survived the ravages of time."⁴⁴ A gesture that recalls the earlier forensic ministrations of NARA to decipher the clicks and hisses of Tape 342: lost but not found.

⁴² CSIRO is Australia's Commonwealth Scientific and Industrial Research Organisation.

⁴³ Richard Macey, "One Giant Blunder for Mankind: How Nasa Lost Moon Pictures" *The Sydney Morning Herald* 2006. P. 2.

⁴⁴ Carlos Amalfi, "Lost Moon Landing Tapes Discovered" *COSMOS* (2006), March 7, 2007 <<http://www.cosmosmagazine.com/node/818>>. P. 1.

NASA'S EARLY LUNAR IMAGES, IN A NEW LIGHT

Pictures from the mid-1960s Lunar Orbiter program lay forgotten for decades. But one woman was determined to see them restored.



O104: "Rising over the battered surface of the moon, Earth loomed in a shimmering arc covered in a swirling skin of clouds. The image, taken in 1966 by NASA's robotic probe Lunar Orbiter 1, presented a stunning juxtaposition of planet and moon that no earthling had ever seen before. It was dubbed the Picture of the Century. But in the mad rush of discovery, even the breathtaking can get mislaid. NASA was so preoccupied with getting an astronaut to the moon ahead of the Soviets that little attention was paid to the mountains of scientific data that flowed back to Earth from its early space missions. The data, stored on miles of fragile tapes, grew into mountains that were packed up and sent to a government warehouse with crates of other stuff. And so they eventually came to the attention of Nancy Evans. She had been trained as a biologist, but within the sprawling space agency she had found her niche as an archivist.

Evans was at her desk in the 1970s when a clerk walked into her office, asking what he should do with a truck-sized heap of data tapes that had been released from storage. "What do you usually do with things like that?" she asked. "We usually destroy them," he replied.

If there is an unsung hero of the moon race, it is the Lunar Orbiter program of 1966 and 1967. There were five unmanned spacecraft, resembling stubby candleholders with 12-foot-diameter solar arrays at their bases. On board each were two large telescopes that could focus on objects as small as a yard, along with specially built Kodak cameras using 70-millimeter film. An on-board darkroom developed the lunar images and prepared them for transmission back to Earth. Their mission was to map the entire surface of the moon in preparation for the Apollo landings—and all five performed magnificently. Altogether, nearly 2,000 frames were photographed by the five missions, each of which ended with a silent crash onto the lunar surface. But there was a problem. Although the original high-resolution images were saved on 2-inch-wide tape, those pictures weren't seen by the public. The images that scrolled across television screens and appeared on the front pages of newspapers were snapshots of the originals using standard 35-millimeter film. The images were grainy and washed-out, like a poorly tuned television set.

When the clerk came in to ask about the Lunar Orbiter tapes, she didn't hesitate. **"Do not destroy those tapes," Evans commanded.**

She talked her bosses at JPL into storing them in a lab warehouse. "I could not morally get rid of this stuff," said Evans, 71, in an interview at her Sun Valley home. She had no idea what she was letting herself in for. The full collection of Lunar Orbiter data amounted to 2,500 tapes. Assembled on pallets, they constituted an imposing monolith 10 feet wide, 20 feet long and 6 feet high. The mountain of tapes was just part of Evans' new burden. There was no point, she realized, in preserving the tapes unless she also had an FR-900 Ampex tape drive to read them. But only a few dozen of the machines had been made for the military.

The \$330,000 tape drives were electronic behemoths, each 7 feet tall and weighing nearly a ton. Evans scoured salvage lists for a castoff FR-900. As a member of the federal government's Trash Evaluation Board, she was privy to everything being thrown away from government institutions. One day in the late 1980s, she got a call from Eglin Air Force Base in Florida: "We heard you're looking for FR-900s. We've got three of them. Where do you want us to send them?" Having already stretched her bosses' goodwill at JPL by storing the tapes there, she reluctantly agreed to take the drives herself. Evans stored the three tape drives from Eglin and a fourth she got off a salvage list -- none of which worked -- in her own garage. There they sat, for two decades. "I was stuck with these drives," Evans said. "I couldn't get rid of them."

Evans applied regularly to NASA for funding to repair the drives. She was turned down every time. One NASA center estimated it would cost \$6 million to restore the drives and digitize the tapes. Finally, in 2005, retired and increasingly doubtful that the historic images would ever see the light of day, Evans gave up on NASA and went public. She submitted a paper to a lunar conference stating her plight. Her plea ended up on a blog frequented by space buffs, where it caught the attention of Dennis Wingo, a kind of space junkie extraordinaire.

"I have been working in lunar exploration for 20 years," Wingo said. "I knew the value of the tape drives and the tapes." Wingo went for a second opinion from his friend Keith Cowing, who worked for NASA for several years. Cowing agreed that they had stumbled on a treasure trove of space history. One evening in April 2007, he and Wingo pulled up to Evans' home with two rented trucks and loaded up the dirty, dusty and broken FR-900s. Three hundred miles later, they pulled up to the gate at Ames Research Center in Mountain View, probably the only NASA institution that would even consider admitting them and their pile of junk.

But repairing the FR-900s was beyond him. It was also beyond almost everyone else they tried. Finally, they heard about an old Army vet, Ken Zin, who knew machinery and happened to work at Ames repairing video equipment. "Can you make that thing run?" they asked him. "Yeah, I can make it work," Zin replied. It turned out to be a lot harder than he expected. "We felt a sense of urgency," said Greg Schmidt, deputy director of NASA's Lunar Science Institute at Ames. They had managed to get \$100,000 from NASA for their project, and decided they would focus their efforts on the Earthrise picture. The drives kept breaking down. Rebuilding the demodulator that converted the electronic signals into images proved particularly difficult. When they couldn't find parts at warehouses, they dug through rusted rocket shells at Ames' junkyard to perform what Zin called a "wrecking yard rebuild." They had been at work for three months when Schmidt got a call from Wingo one afternoon. "You'd better get over here."

After 42 years, Cowing gazed again at the image of Earth rising above the lunar landscape. "When that picture came up, I had tears in my eyes," Cowing said. Unlike the picture that the public had seen, this version had twice the resolution and four times the dynamic range. It "was breathtaking," Schmidt said. **"It felt like looking into the past."**

The project has so far cost \$250,000, far less than the \$6-million estimate by NASA. Having succeeded once, the team released its second image this weekend -- the Copernicus crater. The team eventually hopes to retrieve all 2,000 images from the five missions. Schmidt flew Nancy Evans up for a small ceremony at Ames in November, when the first image was released. To the old-timers at NASA, she was a heroine, the best example of a person who, in Schmidt's words, "goes far beyond her professional duties" in the name of science. Evans herself was less impressed. "Anybody in the same place could have done this," she said."

(Edited excerpt from an article by John Johnson Jr. March 22, 2009. Source: *Los Angeles Times*)

OUT-TAKES



O201 Remaining images printed from Nick Ut's 240 negatives. Collection Science Museum, London, UK.



O202 Films stills from the television broadcast of Kim Phúc and the napalm bombing of June 8 1972.

→ **FILM O203: Napalm Attack, Hearts & Minds**, dir. B. Schneider and P. Davis, 1974.

MIGRANT MOTHER OUT-TAKES



O204 Migrant Mother out-takes, Dorothea Lange, 1936. (See also Glossary entry *Migrant Mother*.)

P → PHÚC, POISON, PRAVDA, PREEMPTION

KIM PHÚC



Associated Press
ACCIDENTAL NAPALM ATTACK: South Vietnamese children and soldiers fleeing Trangbang on Route 1 after a South Vietnamese Skyraider dropped bomb. The girl at center has torn off burning clothes. Details on Page 9.

The New York Times

P101 Nick Ut's image of Kim Phúc as it appeared on the front page of the *New York Times*, June 9 1972. AP

POLONIUM POISONING

P201: Approximately 97% of the world's supply of Polonium 210 is produced by state-controlled nuclear reactors in Russia and even when obtained by commercial means is supplied in minuscule quantities far below that discovered by British medical examiners in Alexander Litvinenko's body, almost certainly precluding the possibility of an accidental ingestion. The poisoning, upon legal determination as a deliberate act of murder, prompted the UK government to reconvene its emergency civil contingencies committee ominously named COBRA (Cabinet Office Briefing Room A), which in turn met with their US counterparts in the FBI because of their radioactive weapons expertise.⁴⁵ *(See also Glossary entry Litvinenko.)*

PRAVDA



P301 Pravda newspaper front-pages from April 27 & May 15 1986 respectively.

⁴⁵ Jennifer Quinn, "FBI Joins Investigation of Poisoned Spy," *The Boston Globe* December 1 2006.

"Preemption does not prevent, it effects. It induces the event, *in effect*. Rather than acting in the present to avoid an occurrence in the future, preemption brings the future into the present."⁴⁶— Brian Massumi

P401: Counter to the established understanding of preemption as a tactical form of self-action intended to prevent an anticipated event from occurring, my use of the term relies in part upon Massumi's conceptualisation of preemption as a form of pre-programming that "calibrates" the machine so that it is always-already in a state of aperceptive arousal. It feels the event before the event has even arrived. It acts not to block the event from happening in the model of command-control, but on the contrary to bring the event into being through a series of feedback loops or transmissions between past events and future happenings.

"The event's consequences precede it, as if it had already occurred. It [the] event remains virtual—future-past—but is real and present in its effects."⁴⁷

Massumi has written a number of recent texts in which he examines the ways in which preemption operates as a trigger effect that is capable of producing affective modulations in the body well in advance of the event's portentous arrival. This body, whether singular or collective, is so attuned towards the future that it doesn't even require the event's occurrence to produce its anticipated effects. Fear in particular operates as a mechanism of self-effect; so much so, that a body properly programmed to be afraid (as in the post 9/11 environment of spectral warning codes) can induce a state of anxiety prior to any event actually taking place. Living in a permanent state of heightened security alert under the aegis of Code Orange [and occasionally the hyper-emergency state of Code Red] is enough to ensure that most Americans, according to Massumi, are already feeling the premonitory effects of an event that may or may not be just around the corner.

(See also *Glossary entry Warning*.)

"Rather than acting in the present to avoid an occurrence in the future, preemption brings the future into the present. It makes present the future consequences of an eventuality that may or may not occur, indifferent to its actual occurrence."⁴⁸

The mere possibility that something may happen colludes with our psychic and physical predispositions and is sufficient for bringing the virtuality of the future into the immediacy of the present as a felt-effect. We intuit the unknown because it has already been pre-narrativized for us. The "preemptive event" writes Massumi "is not content to juxtapose the before and after, but contrives to overlay them. It is this overlay that presently strikes. The before-after seizes the moment. The future-past colonizes the present."⁴⁹

While my version of preemption is not proactive in terms of its established meaning as a strategic deterrent designed to disable and interfere with an adversary, neither is it necessarily reactive in the sense of merely registering the effects of the future passing upon the present.⁵⁰ More appropriately it can be said to be intra-active. This is an important distinction because the conventional logic of preemption as a technology of power obviously raises the related question of resistance, whereas the machinic mode of capture as "open" to any eruptions coming from the future complicates the instrumental notion of preemption as only interested in the future to the extent that it is concerned with trying to shape and control the present. This is the same conservative "rear-view" image of the future that Marshall McLuhan critiques when he observes that technological changes tend to script the advances of tomorrow entirely within the familiar registers of the past to assuage the anxieties of the present.

⁴⁶ Brian Massumi, "The Future Birth of the Affective Fact," *Conference Genealogies of Biopolitics* (Montreal: Concordia University, Université du Québec à Montréal, Université de Montréal, 2005). P. 8.

⁴⁷ Massumi, "The Future Birth of the Affective Fact." P. 8.

⁴⁸ Brian Massumi, "Fear (the Spectrum Said)," *positions* 13.1 (2005). P. 8.

⁴⁹ Massumi, "The Future Birth of the Affective Fact." P. 6.

⁵⁰ One of the first tasks facing each incoming British prime minister is that of writing a letter in their own hand "giving instructions detailing what the UK's response should be in the event of a pre-emptive nuclear attack. The letter will be opened only by the commander of a British Trident submarine, who would have to assume that the prime minister was no longer in a position to take "live" command of the situation. The options are said to include the orders: "Put yourself under the command of the US, if it is still there"; "go to Australia"; "retaliate"; "or use your own judgment". Richard Norton-Taylor, "Go to Australia or Use Your Own Judgment " *The Guardian* June 28 2007. P. 1

Pre-narrativization in this project is overturned in favour of an "expansion" of the narrative terrain by telling other stories, other accounts of events—narratives that can in effect "populate our worlds and imaginations in a different way."⁵¹ Rather than a capture circuit that arrests the future within the temporal fixity of the present, preemption can be creatively re-engineered to refer to processes whereby the future colludes with the present, but the present never knows in advance which of its many virtual tendencies it will ultimately realise. A conception of preemption in which the machine and by extension its media artefacts are not entirely predetermined by their embeddedness in the past and are therefore not entirely limited by what they were, their form, and their history but remain open to the dynamism of time.⁵²

This is the basic notion of preemption that is at stake in my research project, one that also aligns it with the transmissional mode advanced in the *Introduction* of the thesis. Both conceptions refer to the becoming of the event although they cannot be used interchangeably. If preemption is that which "induces the event" and transmission is the "becoming of the event", might it be possible to stitch Massumi's two ideas together to suggest that the preemptive dimensions of my media machines, as already calibrated towards and entangled with future happenings, can by extension activate transmissional flows that may bring certain events into actualisation while repotentialising the past at the same time?

Machines conceptualised as such (composed of manifold subfields each with their potential latencies) already "prehend" the events that will eventually be triggered, transmitted, and recorded by them. Each machine already exists in an entangled state, nested within its own historical assemblage, prior to its further re-entanglement with other machines and events. Each machine is itself already a preemptive event for inducing another event.

But an important question still looms large, one that the thesis must tackle throughout the analysis of its case studies: can this adapted notion of preemption be adequately redeployed to sabotage the circuits of power that typically underwrite its logics (those of tactical aggression) without at the same time relinquishing its connection with struggle?

In the same way that compliance and resistance are intertwined concepts, protest as an oppositional politics to the traditional preemptive narratives of warfare should not surrender its urgency because a semantic manoeuvre has been proposed first by Massumi and now by myself. Rather, the concept must repeatedly be "tested" to ensure that it can in fact do the work that is needed, even if that "doing" is in fact largely an "undoing"; a disarticulation of dominant narratives. The point [says Deleuze] is not simply to say something new but to say something differently; to not only describe a concept theoretically, but to create actual situations for evaluating how a given concept does its work.

Surely an open-ended rapport with the future as that proposed throughout thesis must not be confused with a free-for-all position, as this would refuse any notion of relational relevance. (See also discussion "A Question of Interest" in the *Introduction*.)

⁵¹ Isabelle Stengers, "Diderot's Egg: Divorcing Materialism from Eliminativism," *Radical Philosophy*. 144 (2007). P. 3.

⁵² Paraphrased from Elizabeth Grosz, *Time Travels: Feminism, Nature, Power*, Next Wave: New Directions in Women's Studies (London: Duke University Press, 2005). P. 40.

Q → QUANTUM

QUANTUM WEIRDNESS

Q101: Quantum events, like Deleuzian events, do not conform to conventional understandings of time, in that events occurring in the far distant future can actually modify the past behaviour and trajectory of particles headed towards the detector screen of the famous double-slit experiment. They can, in a sense, be reactualised by the provocations of the virtual after the fact.

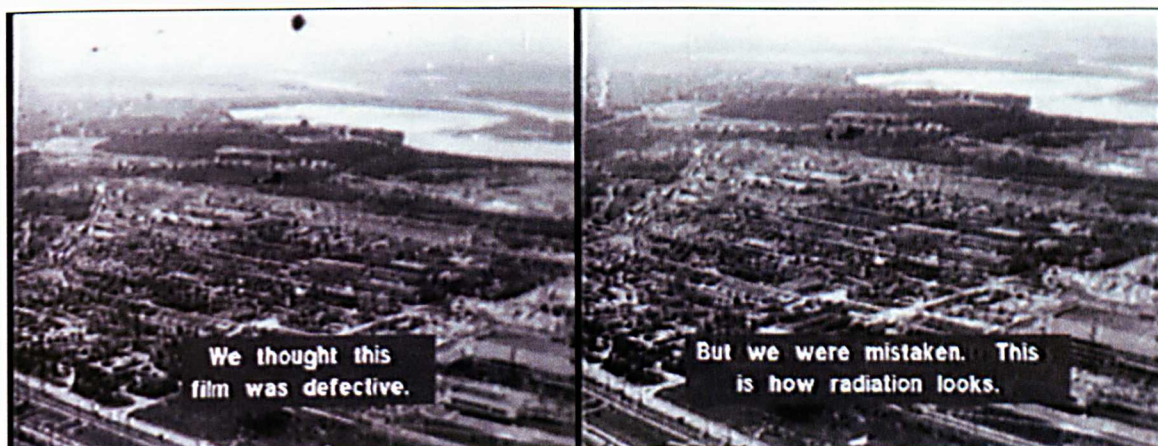
"A variant of the double-slit experiment confirms that erasing photons prior to their arrival at the detection screen changes the ways in which the particles originally approached the two slits. The act of erasure in the future undoes the trajectory of their past. "In principle this kind of erasure could occur billions of years after the influence it is thwarting, in effect undoing the past, even undoing the ancient past."⁵³

This form of causal retro-adaptation, known as the "quantum eraser" was initially developed by Marlan Scully and Kai Drühl in 1982. Physicist Brian Greene remarks that only "when an event in the past seems to definitively preclude another event's happening in the future would we think there was something awry if we were subsequently told that the precluded event had actually happened. The *quantum eraser* hints at this kind of strangeness in quantum mechanics."⁵⁴

What interests me in considering quantum mechanics in concert with the theoretical formulations of a materialist philosophy is precisely the ways in which each tries to account for actual events inuring in the world regardless of how improbable and peculiar their emergences might appear.

R → RADIOACTIVE

RADIOACTIVE FILM



R101 Film stills from Vladimir Shevchenko's *Chronicle of Difficult Weeks*, 1986, 54 mins.
Source: Russian Press Service.

→ FILM R101: Sequence of irradiated film footage in *Chronicle of Difficult Weeks*, dir. Vladimir Shevchenko, 1986.

⁵³ Brian Greene, *The Fabric of the Cosmos* (London: Penguin Books, 2005). P. 192.

⁵⁴ Greene, *The Fabric of the Cosmos*. P. 192.

S → SECRETARY, SILENCE, SPHERES, SUBLIME

SECRETARY / KEEPER OF THE SECRETS

"Next to a man's wife, his secretary is the most important person in his career. She has to understand every detail of his job; to have unquestioning loyalty and absolute discretion. On every count Rose measures up. I'm a lucky man."⁵⁵—Richard Nixon, 1957



S101/102 Magazine covers from December 10 1973.



S103 Rose Mary Woods demonstrating how she may have erased Tape 342. Dec. 1973. Photo #E1874-16A.

🔊 → AUDIO S104: Death of Rose Mary Woods and her alleged role in Tape 342.

⁵⁵ Richard Nixon, in a press interview, 1957. Anon., "The Secretary and the Tapes Tangle," *Time* Monday December 10 1973. P. 1.

STRETCH / FOR REASONS OF STATE

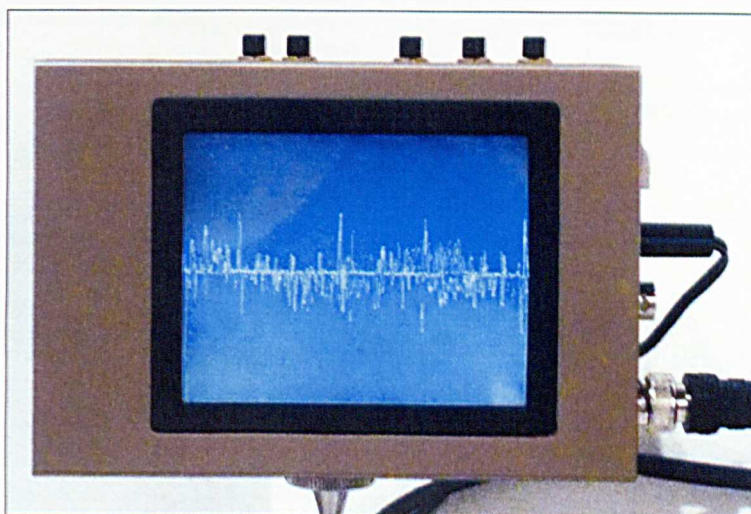


S105 Video re-enactments of the Rose Mary Woods "Stretch", Susan Schuppli, *For Reasons of State*, The Kitchen, Whitney ISP, New York, 2008.

S106: "In his article "Mobilizing Shame," theorist Thomas Keenan suggests that the once effective attempt to employ reason to intervene with acts of atrocity will have to be updated: "The aesthetic finds itself in extreme proximity to the ethical-political now." By appropriating and tracing documents, the works by Julia Meltzer and David Thorne, Lin + Lam, and Susan Schuppli suggest that despite the current regime of secrecy and opacity, artistic production provides a way to speculate and materialize the hidden and the unknown. If the secret impedes and blocks democratic deliberation, these practices mirror processes of declassification, offering methods in discussing a form of "politics beyond evidence."⁵⁶—Steven Lam, Curator *For Reasons of State*



S107 "Stretch Timeline", Susan Schuppli, *For Reasons of State*, The Kitchen, Whitney ISP, New York, 2008.



S108 "18-1/2 Minutes". Video visualisation of silence, which appears highly energetic and syncopated and not a flat-line as might be expected by an erased recording. *For Reasons of State*, Whitney ISP, New York, 2008.

⁵⁶ Excerpt from Steven Lam's catalogue essay. Angelique Campens, Erica Cooke and Steven Lam, *For Reasons of State*, ed. Whitney Museum of American Art (New Haven: Yale University Press, 2008). P. 13.

SILENCE AS ALWAYS SOUND



S201 John Cage in the Anechoic Chamber, Harvard University, 1951.

18-1/2 MINUTES OF SILENCE



← **AUDIO S202: 18-1/2 minute tape-gap or 'silence' in Tape 342.**

Nixon Presidential Materials Staff
National Archives and Records Administration
8601 Adelphi Road
College Park, MD 20740

Item Approval Request List
Nixon Presidential Materials

Telephone: (301) 837-3290
Facsimile: (301) 837-3203
Electronic Mail: nixon@nara.gov

A. Customer/Researcher Information					For NLNP Office Use Only	
Preferred Contact Person Susan Schuppli			Date Submitted January 29, 08		Control Number	Assigned To/Date
Name/Company Name Susan Schuppli					For Vendor Use Only	
Street Address 500 Emery Street East						
City London	State Ontario	Zip/Mail Code N6C 2G1	Country Canada			
Telephone 519-434-1783		Fax	E-Mail schuppli@uwo.ca		Reviewed By	Date

B. INSTRUCTIONS: Provide complete information for boxes A, B1 and B2. We cannot approve incomplete listings. NOTE: "Pending" codes: "1" = needs intermediate; "2" = restricted; "3" = projection print; "4" = projection print for film transfer, video intermediate required

1. File/ID Number	2. Subject	Intermediate Format	Archival Format	Running Time/ Footage Count	3. Type of Copy Wanted	Approved	Pending (above)
342-16	18 1/2 min. gap in Tape 342			unknown	CD/wav		

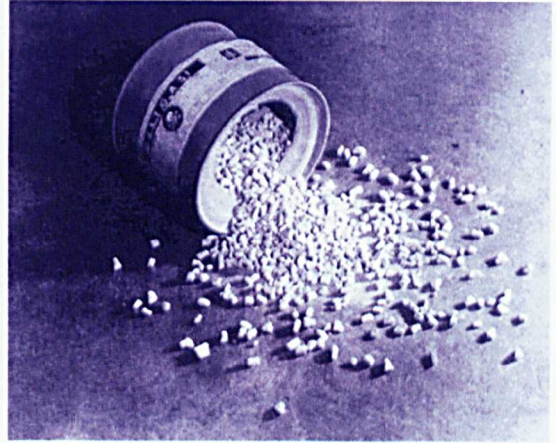
OMB No. 3095-0025. expires 08/31/2007

NA FORM 14110A (3-98)

S203 Invoice for ordering 18-1/2 minute tape-gap. This took three attempts because of the anomaly in ordering just the gap. Instead Nixon's bracketing conversations were sent each time.



S301 Dali, London Surrealist Exhibition, 1936.



S302 Zyklon B (Degesch & IG Farben), 1941.

"When the body of the enemy can no longer be liquidated by direct assault, the possibility presents itself to the attacker of making his existence impossible, by immersing the enemy in an unliveable milieu."⁵⁷

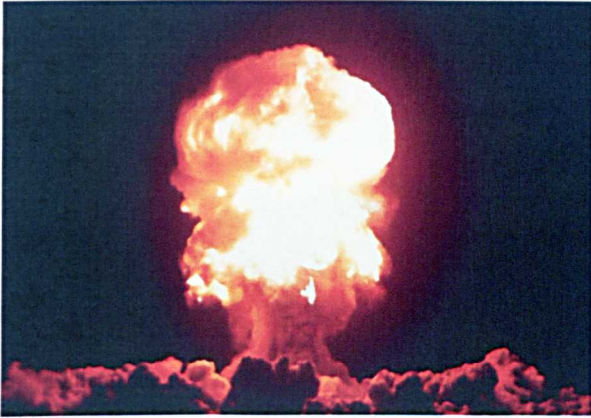
"As Jean Paul Sartre noted, despair is not only an attack of the human against itself, the air attack of the gas terrorist (*Gasterroristen*) produces in the attacked the despair of being forced to cooperate in the extermination of their own lives, because they cannot breathe."⁵⁸



S303 Gas Spheres, Belgian Refining Corporation (BRC).

⁵⁷ Peter Sloterdijk, "Airquakes," *Environment and Planning D: Society and Space* 27 (2009). P. 44.

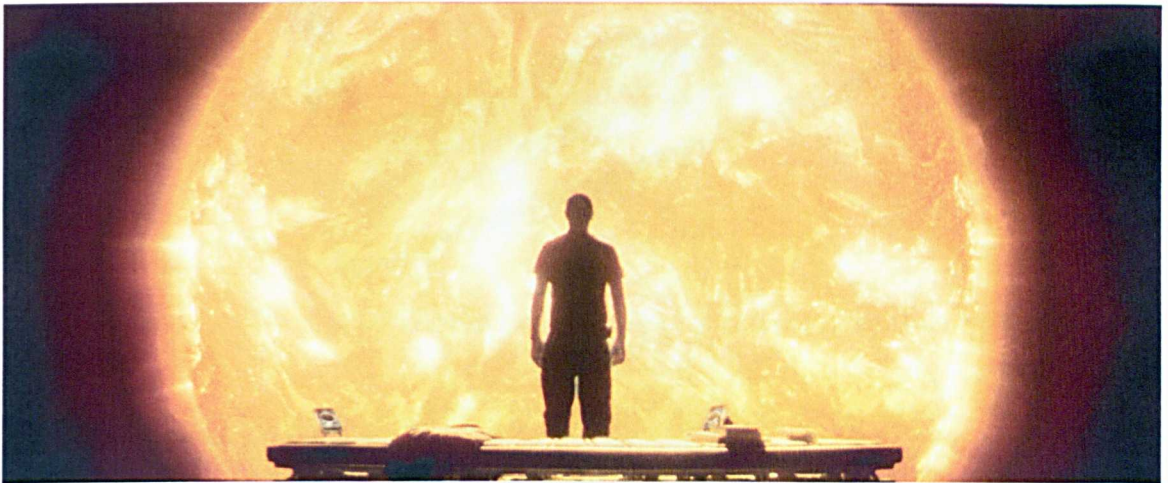
⁵⁸ Sloterdijk, "Airquakes." P. 47.



S401 Atomic bomb, Hiroshima, Japan, August 6 1945.



S402 Cattenom Nuclear Power Station, France.



S403 Film still from *Sunshine*, directed by Danny Boyle, UK, 2007.



S404 Accidental napalm bombing of Tran Bang by the South Vietnamese army June 8 1972.

◀ → **AUDIO T101: Discussion of 18-1/2 minute Watergate tape recovery.**



T102 SONY TC-800B Audio Recorder used by Nixon to record the White House Tapes.



Universal 5000: Is the talk gone forever?
Joe Beriberger—Washington Post

Doing the Twist While Erasing the Tape

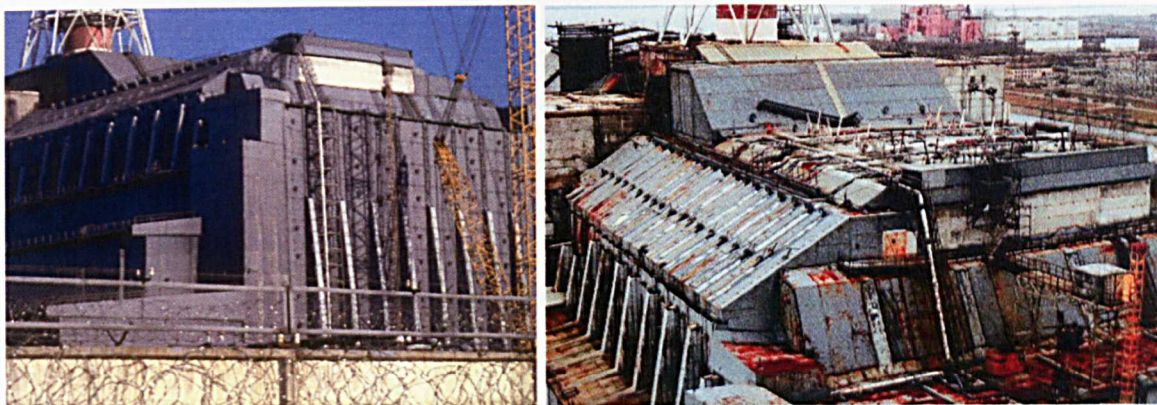
28

Newsweek

T103 Newsweek article about Rose Mary Woods dubious Watergate testimony. December 10 1973.

◀ → **AUDIO T104: NARA archivist John Carlin discusses the Presidential Tapes.**

TOMB



T201/T202 Chernobyl Sarcophagus under construction and now in a state of decay.



T203 English archaeologist Howard Carter discovers King Tutankhamun's tomb - the only intact burial chamber in the Valley of the Kings, 1922.

U → UHER 5000

UHER 5000



U101 UHER 5000. Photo Credit: Susan Schuppli.

Although Tape 342 was recorded on a SONY TC-800B, it was determined by the Advisory Panel to Judge Sirica in 1974, that a UHER 5000 was the machine that actually 'erased' the 18-1/2 minute portion of Tape 342.

V → VAULT, VIETNAM, VODOO

VAULT



V101



Concern for the deteriorating physical condition of Tape 342 (maintaining the integrity of the residual magnetic particles that still cling to the 18-1/2 minute gap) have meant that after a mere half-dozen playbacks the tape was permanently removed from circulation and placed into the storage vaults of the US National Archives and Records Administration (NARA) located in College Park, Maryland. There Tape 342 has lain undisturbed in deep-sleep for over 30 years, stored at precisely 65 degrees Fahrenheit and 40 percent relative humidity.

SUBTERRANEAN VAULT



V102 Corbis Film Preservation Facility, subterranean photographic archive. Photo Credit: Chris Wendt, 2002.

INES SCHABER / PICTURE MINING

V103: "Sometimes it is as if traveling images achieve a spatial fluidity in which the place itself, its local terms and conditions are transported into another dimension—the images link up to new contexts and frozen subjectivities are liberated from categories of knowledge, unmooring assumptions so that meaning can move across a range of connections, descriptions and networks.

Sometimes a place is reunited with traveling images—the interconnections invite the temporal, reincarnating previous relationships. [Lewis] Hine's images for the NCLC [National Child Labor Committee] leads us to an underground archive that Corbis uses in northwestern Pennsylvania. The archive is not far from Pittston where Hine photographed the breaker boys in 1911. The location was first mined for limestone about a hundred years ago—a remnant of the hard, manual labor that shaped Pennsylvania during the industrial period.

Today the cool, dry mine shafts house one of the largest underground archives in the world and more people work there than did then. There are almost three hundred miles of potential archive space, thirty of which are now in operation, occupied by various firms and institutions. Its contents include the government archives of the Department of Defense and a storage space for the Social Security data of all US citizens as well as the data, films, and documents of many commercial institutions like Disney and MGM. Through the holdings of the Corbis archive, it is also home to Angelo Ross [a youngster photographed by Hine who worked in Breaker #9]. Regarding questions of production today, this location is as relevant for me [Ines Schaber] as the images themselves.

To travel to Pennsylvania almost one hundred years later with Hine's photographs and to search out the places they were made is like traveling through time, although there is little to see of the landscape's previous history—it has outlived its material traces. But on returning to their initial site of production, Hine's photographs enter into conversation with this absence in the landscape.⁵⁹



V104 Exhibition photographs, Ines Schaber, *Unfinished Business*, 2007. Images courtesy of the artist.

ICONIC VIETNAM



V201 Buddhist monk Thích Quảng Đức's act of self-immolation in a busy Saigon intersection on June 16 1963 to protest increasing religious persecution by the American-backed regime of President Ngô Đình Diệm (1955-63). Photo Credit: Malcolm Browne. (LEFT)

V202 South Vietnamese General Nguyen Ngoc Loan executing a Viet Cong officer with a single shot to the head on February 1 1968. Photo Credit: Eddie Adams. (CENTRE)

V203 Kim Phúc, June 8 1972. Photo Credit: Nick Ut. (RIGHT)

⁵⁹ Excerpt from exhibition catalogue. Ines Schaber, "Unfinished Business: Lewis Hine's Mine Photographs and Some Questions About Documentary Photography," trans. Elizabeth Felicella, *No Matter How Bright the Light: the Crossing Occurs at Night*, ed. Anselm Franke (Antwerp, Berlin: Extra City, KunstWerke, 2007). P. 20.

NIXON & VIETNAM

 **V204: NARA PRESS RELEASE FEBRUARY 14 2002**

The US National Archives and Records Administration made public another 500 hours from the 3,700 hours of "Nixon White House Tapes" recorded illegally over a period of four years between 1971 and 1973. This tape release documents conversations recorded primarily during 1972 between then-President Richard Nixon and his staff in which they discuss methods for escalating the conflict in Vietnam as well as for responding to the mounting domestic opposition to the war.

On one rather shocking tape recorded in the Executive Office Building in Washington on April 25, National Security Adviser Henry Kissinger presents Nixon with various scenarios aimed at intensifying the Vietnam War.

Nixon counters: "I'd rather use the nuclear bomb." "That, I think, would just be too much," replies Kissinger. But Nixon rebukes him saying: "The nuclear bomb. Does that bother you? I just want you to think big."

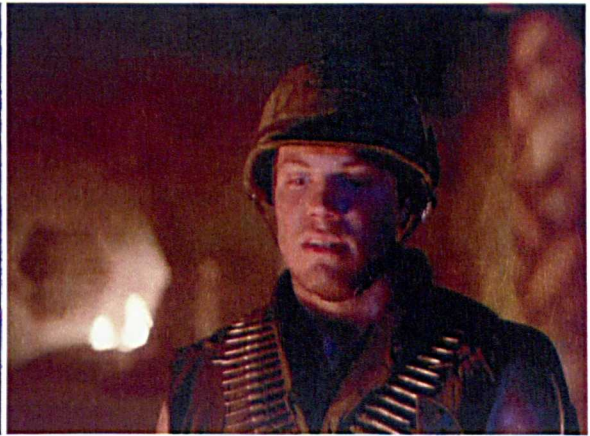
In the month that directly followed this conversation the war was raised to levels of violence not experienced since 1968. At a later stage in the same recording Nixon reproaches Kissinger for being overly preoccupied with the issue of civilian casualties. "I don't give a damn," he boasts. "I don't care."

On another tape recorded on June 12, Nixon again discusses the war in Vietnam, but this time with his White House chief of staff HR Haldeman. Their conversation centres upon a photograph of a young Vietnamese girl and several other children fleeing a napalm attack.

Nixon is callously heard questioning the veracity of the photograph: "I'm wondering if that was fixed?" Haldeman replies: "Could have been."⁶⁰


(See also Glossary entry Phúc.)

SHOOTING VIETNAM



 → **FILM V205: "Shoot me" scene from *Full Metal Jacket*, dir. Stanley Kubrick, 1987.**

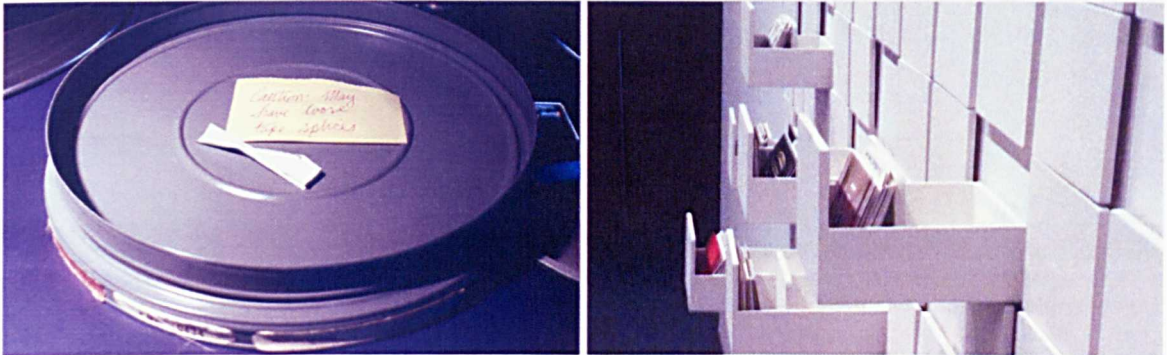
UNIDENTIFIED VIETNAM

 **V206: UNIDENTIFIED VIETNAM, 2003+** "Since 2001, artists Lana Lin and H. Lan Thao Lam have been researching an archive of South Vietnamese propaganda films at the Library of Congress.

⁶⁰ Paraphrased from various newspaper accounts. Anon., "Nixon Proposed Using a-Bomb in Vietnam War," *The New York Times* March 1 2002. Anon., *Nixon, the a-Bomb, and Napalm*, 2002, Television, CBS News, Available: <http://www.cbsnews.com/stories/2002/02/28/politics/printable502490.shtml#>, July 17 2008.

The exhibition takes its name from over a dozen films in the Library's collection labeled only as "Unidentified Vietnam." These 1960's films—made with US support—call into question the policies and politics of nation building. With exacting attention to the material artifacts and architecture of the archive, *Unidentified Vietnam* simultaneously expands and contracts the space of history, offering a view of the present moment through the lens of past events. At the center of the installation, a card catalogue contains photographs of Library of Congress interiors and empty film cans. On the reverse of the cards are excerpts from interviews about the propaganda films conducted by the artists.

In their video re-enactment of archival footage, former leaders of the failed republic refute Graham Greene's implication that Vietnam is "invisible like peace." Employing irony, humor and melancholia, Lin + Lam expose the force of bureaucracy, the dangers of nationalism, and the ramifications of U.S. foreign intervention. Recognizing the contingency of democratic discourse, they ask viewers to consider the viability of and possibilities for ethical interaction between nations and peoples."⁶¹



V207 Lin + Lam "Unidentified Vietnam," installation view.

VOODOO EINSTEIN

V301: A 1931 invitation to the California Institute of Technology in Pasadena, California by Edwin Hubble, whose astronomical research confirmed the expansion of the universe something Albert Einstein previously refuted, brought the physicist and his wife to the west coast. There he visited his friend, political agitator and author Upton Sinclair. Einstein had agreed to write the preface to Sinclair's new book *Mental Radio* an account of experiments that Sinclair had conducted to prove the existence of telepathy, an area of growing fascination for the author. While Einstein's metaphysical beliefs in the existence of God are well documented, his mysticism did not extend to the spirit-realm of the paranormal. Avowedly sceptical of psychic phenomenon, his agreement to write the preface to Sinclair's book seems perhaps a little unusual but can be seen as an act of friendship. More unusual however, was the decision that Einstein made to participate in a séance organised by Sinclair and Count Roman Ostoja, a polish émigré and medium whose fame included his live burial in a coffin for three hours.

Amongst the sitters attendant at the séance were scientists Richard Tolman, soon to be chief scientific adviser to the Manhattan Project, and Paul Epstein, a professor of theoretical physics at Cal Tech. Ultimately the table-rapping vocalists of Sinclair's uncanny enterprise never made a 'live' appearance that evening. While Upton's motivations were directed towards proving the scientific validity of extra-sensory perception, Einstein's participation in this unlikely event suggests that the irrationality he perceived within the quantum world while unacceptable in the realm of science was entirely amenable within the context of parlour entertainments. Spirit communication was paradoxically perceived as a benign activity of social diversion whereas the spooky action of quantum particles communicating telepathically at a distance was at best unnerving and its worst perceived as malevolent force intent upon destroying the empirical foundations of the physical sciences.⁶²

⁶¹ Lin + Lam, *Unidentified Vietnam*, Whitney ISP, New York.

⁶² The spirit world refused to corroborate Sinclair's experiments that evening and his guests left with their conviction in scientific rationalism firmly intact. See George Pendle, *Einstein's Close Encounter*, July 14 2005, Guardian Unlimited, Available: <http://www.guardian.co.uk/life/feature/story/0,13026,1527621,00.html>, April 18 2007.

SPECTRAL WARNING CODES

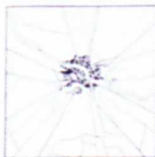
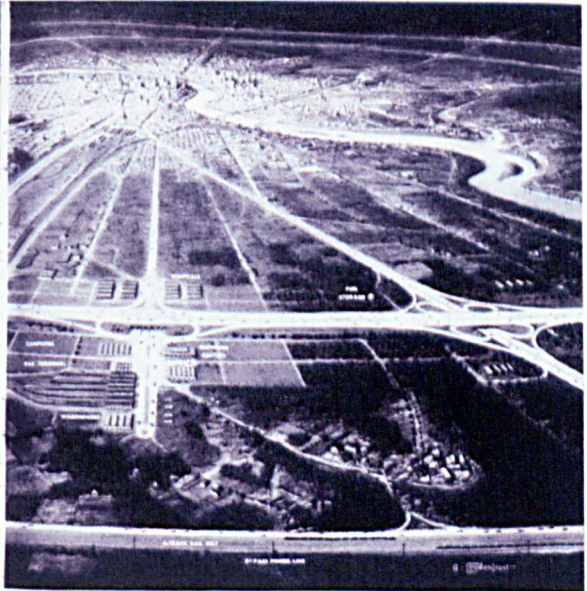


W101 Department of Homeland Security Advisory System, USA.



W102 The Homeland Security Tower is a threat advisory system serving the residents of Nolita, Chinatown, Little Italy and the Bowery, New York.

NORBERT WIENER

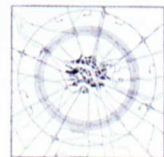


LIFE BELTS AROUND CITIES WOULD PROVIDE

The Wiener and Bowen plan is designed to provide a safe haven for the city's population in the event of a nuclear attack. The plan calls for the construction of a series of life belts around the city, which would provide a safe haven for the population in the event of a nuclear attack. The plan also calls for the construction of a series of life belts around the city, which would provide a safe haven for the population in the event of a nuclear attack.

A PLACE FOR BOMBED-OUT REFUGEES TO GO

While beyond the regular highway or general transit system, the Wiener and Bowen plan provides a safe haven for the population in the event of a nuclear attack. The plan calls for the construction of a series of life belts around the city, which would provide a safe haven for the population in the event of a nuclear attack.



W201 "How US Cities Can Prepare for Atomic War". Pictorial essay by Norbert Wiener. *Life Magazine*, December 18 1950. Norbert Wiener, Karl Deutsch, and George de Santillana. Illustration: Alexander Leydenfrost. Source: *Life Magazine*, December 18 1950. Pp. 78-79.

X → XENAKIS, X-RAY

IANNIS XENAKIS

X101: "Isn't time simply, an epiphenomenal notion of a deeper reality? . . . The equations of Lorentz-Fitzgerald and Einstein link space and time because of the limited velocity of light. From this it follows that time is not absolute. . . It "takes" time to go from one point to another, even if that time depends on moving frames of reference relative to the observer. There is no instantaneous jump from one point to another in space, much less spatial ubiquity—that is, the simultaneous presence of an event or object everywhere in space. To the contrary, one posits the notion of displacement. Within a local reference frame, what does displacement signify? If the notion of displacement were more fundamental than that of time, one could reduce all macro and microcosmic transformations to weak chains of displacement. Consequently. . . if we were to adhere to quantum mechanics and its implications, we would perhaps be forced to admit the notion of quantified space and its corollary, quantified time. But what could a quantified time and space signify, a time and space in which contiguity would be abolished. What would the pavement of the universe be if there were gaps between the paving stones, inaccessible and filled with nothing?"⁶³

X-RAY



X201 The first X-ray image taken in 1895 by Wilhelm Konrad Röntgen of his wife Berthe's hand.

Y → YEARN

RADIOLOGICAL YEARNINGS

Y101: "For a long time people believed that quasi-mystical experiences such as falling in love were in fact cases of poisoning or contagion. This belief assumed that the interior space of the human body was a kind of crucible containing liquid substances that were able to melt and mix with other, possibly alien, substances, a process with often unforeseen and hence dangerous consequences. For people living in a Cartesian world, with all its logic of purity, it is difficult to understand how literally the physiology of intermingling liquids was taken. However, for many writers in the Middle Ages togetherness in the amorous sense of the word was not only something that belonged to a spiritual realm, but also something which implied a 'subtly physiological conditioning with remote effect'.

Sloterdijk provides us with the example of Marsilio Ficino (1433–99) who argued that the passion between a particular man and woman is caused by mutual eye-contact. This implies that two persons looking at each other are not engaged in an innocent process. Ficino conceives of it as a radiological event during which both partners cast rays towards each other. These rays are, he believed, poisonous, basically because they contain 'subtle and nebulous blood' which is left behind in the heart region of the beloved partner. Once arrived there, it quickly mingles with the blood of the other. Lovers looking at each other are hence quite literally engaged in a process of contamination. Because the blood of the partner longs to return, an unstoppable desire to be with the other develops, a desire we know as love. There is more than the intermingling of substances. The imagery invoked by Ficino is also obsessed by radiology. The heart is an organ of radiation and emanation or, as Sloterdijk puts it; it is the sun of all organs."⁶⁴

(See also Glossary entry Poison.)

⁶³ Curtis Roads, *Microsound* (Cambridge: MIT Press, 2001). P. 36.

⁶⁴ René ten Bos and Ruud Kaulingfreks, "Interfaces," *Theory, Culture & Society* 19.3 (2002). P. 139.

Z → ZOMBIFICATION, ABU ZUBAYDAH

ZOMBIES

"The only modern myth is the myth of zombies—mortified schizos, good for work, brought back to reason."⁶⁵—Deleuze & Guattari


"There is no dead matter, lifelessness is only a disguise behind which hides unknown forms of life. The range of these forms is infinite and their shades and nuances limitless."⁶⁶—Bruno Schulz

"Not change mummified but stasis zombified."⁶⁷—Steve Reinke



Z101 Film still from George Romero's *Night of the Living Dead*, 1978.

ABU ZUBAYDAH

 **Z201:** Declassified document from Abu Zubaydah "Combatant Status Review Tribunal" Hearing (CSRT) on 6/12/09. The following excerpts are from a 30-page report.

⁶⁵ Gilles Deleuze and Félix Guattari, *Anti-Oedipus: Capitalism and Schizophrenia*, trans. Robert Hurley, Mark Seem and Helen R. Lane (London: Continuum, 1984). P. 335.

⁶⁶ Bruno Schulz quoted in DVD commentary on "Street of Crocodiles", 1986. *Quay Brothers: The Short Films 1979-2003*, dir. Stephen Quay and Timothy Quay, BFI, 2006.

⁶⁷ Reinke, *Folk & Still*. P. 2.

(b)(1)
(b)(3)



Verbatim Transcript of Combatant Status Review Tribunal Hearing for ISN 10016

OPENING

PRESIDENT: This hearing shall come to order.
RECORDER: This Tribunal is being conducted at 1334 hours on 27 March 2007 on board U.S. Naval Base Guantanamo Bay, Cuba. The following personnel are present:

Declassified from Abu Zubaydah CSRT transcript on 6/12/09

Colonel [redacted] United States Air Force, President,
Lieutenant Colonel [redacted] United States Air Force, Member,
Lieutenant Commander [redacted] United States -- Commander
[redacted] United States Navy, Member,
Lieutenant Colonel [redacted] United States Air Force, Personal Representative,
Language Analyst,
Sergeant First Class [redacted] United States Army, Reporter,
Lieutenant Colonel [redacted] United States Army, Recorder,
Colonel [redacted] is the Judge Advocate member of the Tribunal.

OATH SESSION 1

RECORDER: All rise.
PRESIDENT: Standby, we'll correct the record on that. Lieutenant Colonel [redacted] is the Judge Advocate member of this Tribunal. Recorder, you may proceed. All rise. The Recorder will be sworn. Do you, Lieutenant Colonel [redacted] swear or affirm that you will faithfully perform the duties as Recorder assigned in this Tribunal so help you God?
RECORDER: I do.
PRESIDENT: The Reporter will now be sworn. The Recorder will administer the oath.
RECORDER: Do you, Sergeant First Class [redacted] swear or affirm that you will faithfully discharge your duties as Reporter assigned in this Tribunal so help you God?
REPORTER: I do.

¹ Language Analyst, Translator, and Linguist are used interchangeably.



[REDACTED]

CLOSING UNCLASSIFIED SESSION

PRESIDENT: ZAYN AL ABIDIN MUHAMMAD HUSAYN, this concludes the presentation of the unclassified information for the Tribunal. We are about to conclude the unclassified portion of this hearing. I understand that you have a final statement that you would like us to receive at this time. And again I believe, the Personal Representative will be reading that statement on your behalf. Is that correct Personal Representative?

PERSONAL REP: That is correct, Sir. Again, with the understanding that the Detainee may interject or add to what I say to correct what I say.

PRESIDENT: Very well. You may proceed.

PERSONAL REP: "In the name of God the Merciful. Mr. President and Members of the Tribunal, I would have liked to have spoken to you today on my own, but I have been having seizures lately which have temporarily affected my ability to speak and write without difficulty. Therefore, I asked my Personal Representative to speak on my behalf. I hope from you justice, and I know that is what you seek. Do not make the mistake [REDACTED] when they first arrested me on 28 March 2002. After months of suffering and torture, physically and mentally, they did not care about my injuries that they inflicted to my eye, to my stomach, to my bladder, and my left thigh and my reproductive organs. They didn't care that I almost died from these injuries. Doctors told me that I nearly died four times. Then they transferred me to a secret location. They transferred me in a way that a normal, ordinary person would be embarrassed to be treated. [REDACTED]

Declassified from Abu Zubaydah CSRT transcript on 6/12/09

[REDACTED] They did this to me because they thought I was the number three leader in al Qaida and a partner to USAMA BIN LADEN, as is mentioned in the unclassified Summary of Evidence against me. After a few months went by, during which I almost lost my mind and my life, they made sure I didn't die. Therefore, year after year, I am losing my masculinity. Even my beard is falling out, not from injuries but from the lack of treatment. [REDACTED] discovered after all of this that I am not USAMA BIN LADEN's partner, and that I am not number three in al Qaida, and that I'm not even in al Qaida. [REDACTED]

Declassified from Abu Zubaydah CSRT transcript on 6/12/09

After this, I started feeling the symptoms of my 1992 injury to my head, including the complete loss of my memory and an inability to speak, read, or write. But, these abilities slowly came back to me although I still have shrapnel in my head. Also, another form of torture was when they-- when

[REDACTED]

[REDACTED]

contained much evidence [REDACTED]

[REDACTED] I also do not have a lawyer to defend me in front of this Tribunal. Take notice that if a lawyer was present, he would not have allowed me to say what I said because I said the truth without reservation. And I am willing to be hung for it for something I have done. I am not a lawyer to defend myself. I can't even speak clearly, temporarily, God willing. It is only to demonstrate to you."

PRESIDENT: ZAYN AL ABIDIN MUHAMMAD HUSAYN, do you have anything to add to that statement?

DETAINEE: No.

PRESIDENT: No. Thank you. In your statement, you mentioned months of torture. Has anything that you provided us today regarding your written statements related to those times that you have been tortured?

DETAINEE: No. [conversation between Detainee and Language Analyst discussing the President's question] Actually, most of what they say I did in first months they take against me even for some things or like this they take I was--I was nearly before half die plus what they do torture me.--it--There I was not afraid from die because I do believe I will be shahid [Language Analyst translates] martyr, but as God make me as a human and I weak, so they say yes, I say okay, I do I do, but leave me. They say no, we don't want to. You to admit you do this, we want you to give us more information. This part I can't because I don't know. I say, "yes, I was partner of BIN LADEN. I'm his number three in al Qaida and I'm his partner of RESSAM." I say okay but leave me. So they write but they want what's after, more information about more operations, so I can't. They keep torturing me, tell me why them self they discover you are not torturing. So some, not all, some what you have here even me say of me here in the paper, it is from FBI. But I don't know of the dealing; I was in the hands of FBI or CIA. But FBI people when I met them in the last month, I

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[REDACTED] And they have my part--four part of my diary and the origin is with them. So who's torture me and taking over information. Maybe they are FBI, maybe are CIA; I don't know, 'till now. So here they say FBI-- FBI, they not talk about the CIA, so I don't know.

PRESIDENT: So you did make statements during that treatment?

DETAINEE: A lot.

PRESIDENT: And what you said, was it correct, was it incomplete or was it not correct or untrue in any way?

[REDACTED]

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[REDACTED]

DETAINEE:

They say "this in your diary." They say "see you want to make operation against America." I say no, the idea is different. They say no, torturing, torturing. I say, "okay, I do. I was decide to make operation." This first part the second part, okay. What is the operation? I not have the specifics; I talk about open idea. So most of this here the CIA, they admitted that I admitted too.

[REDACTED]

They start asking me again and again about this thing. I tell them no.

[REDACTED]

I was like this, I was like this, I want to finish this. And something they not believe all what I do, say in that time. Some they believe, some they not believe. I don't know what they need or not need. They only ask and I answer.

PRESIDENT:

In your previous statement, you were saying specific treatments. Can you describe a little bit more about what those treatments were?

DETAINEE:

[REDACTED]

PRESIDENT:

I understand.

DETAINEE:

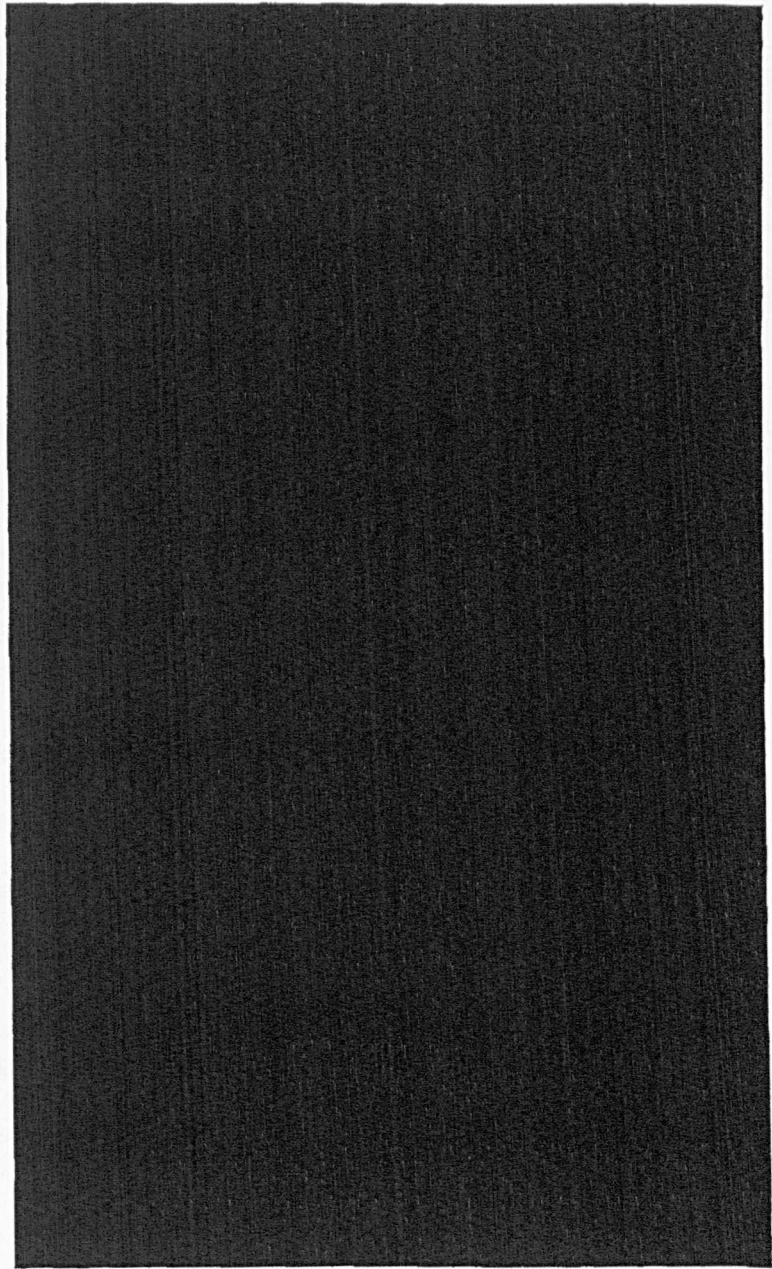
And they not give me chance all this,

[REDACTED]

[REDACTED]

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🔊 → AUDIO

🎬 → FILM, VIDEO, TV BROADCAST

- 🎬 **A102:** Clip discussing time-line of images and photographic equipment from *Standard Operating Procedure*, dir. Errol Morris, 2008. 4:17 mins.
- 🎬 **C103:** Clip discussing the infamous photograph from the Sudanese famine in the film *The Death of Kevin Carter*, dir. Dan Krauss, 2004. 6:38 mins.
- 🔊 **C203:** History of the black box (created by David Warren) discussed by Janice P. Witham, 2005. 9:26 mins.
- 🔊 **D102:** Nixon's "I'm not a crook" speech, November 17 1973. 31 secs.
- 🔊 **F301:** William Burroughs discusses the origin and the theory of tape cut-ups. 3:29 mins.
- 🎬 **G202:** May 14th television broadcast of Gorbachev's official announcement that a major nuclear accident had taken place at Chernobyl on April 26 1986. 1:36 mins.
- 🔊 **H201:** Heisenberg and Baron von Weissäcker discuss the issues Germany faced in considering the making an atomic bomb and how he [Heisenberg] sought Bohr's advice (BBC March 2 1956). 2:12 mins.
- 🎬 **I101:** *Time Lag [Documenting Chernobyl]*, produced by Schuppli, 2007. 6 mins.
- 🎬 **K202:** Film clip of shark-whale from *Kon Tiki*, dir. Thor Heyerdal, 1947. 55 secs.
- 🔊 **M401:** Muirhead image transmission by audio signal. 18 secs.
- 🔊 **N201:** Nixon resignation speech August 8 1974. 15:28 mins.
- 🎬 **O202:** Napalm attack of Kim Phúc and villagers depicted in the documentary film *Hearts & Minds*, dir. B. Schneider and P. Davis, 1974. 35 secs.
- 🎬 **R101:** Sequence of irradiated film footage in *Chronicle of Difficult Weeks*, dir. Vladimir Shevchenko, 1986. 2:12 mins.
- 🔊 **S104:** Death of Rose Mary Woods and discussion of her role in Tape 342. 2:20 mins.
- 🔊 **S202A:** 18-1/2 minute tape-gap or 'silence' in Tape 342. 18:30 mins.
- 🔊 **T101:** Discussion of 18-1/2 minute Watergate tape recovery. 4:32 mins.
- 🔊 **T104:** NARA archivist John Carlin discusses Presidential Tapes. 6:57 mins.
- 🎬 **V205:** "Shoot me" scene from *Full Metal Jacket*, dir. Stanley Kubrick, 1987. 2:26 mins.

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