Figure 1. First Review: "Of the cities, verily they will build their places of (divine) ordinances, I w make peaceful their shade / Of our houses, verily they will lay their bricks in pure places/ The places our decisions." Photo and performance by Roland Ulfig.

Building Memory
(Damming the Deluge)

Gregory Paul Caicco

Prometheus: *I caused mortals to cease foreseeing doom.*
Chorus: *What cure did you provide them with against that sickness?*
Prometheus: *I placed in them false hopes.*
Chorus: *That was a great gift you gave to mortals.*
Prometheus: *Besides this, I gave them fire . . . and from it they shall learn many crafts.*

Aeschylus, *Prometheus Bound*, 250-56.

THE GIFT OF Prometheus, the gift of fire stolen from the gods and given to mortals, the gift of *techne*, cannot be separated from its explicit moral ambiguity: *techne* implies both practical solutions *and* false hopes.

Techne, understood from the Greeks, was a knowledge, emancipated from intuitive making, which was able to teach something general about objects and tasks, without reference to the things themselves. As emancipated knowledge it carried the awesome and dangerous power of ideas which may cease to refer to reality. *Techne* carried the possibility of unstoppable destruction. At first the ethical responsibility remained in the hands of the gods. However, once fire was stolen from the gods by Prometheus,

by the archetypal craftsman, the ethical burden lay with mortals. The eventual transformation of *techne* into technique and finally into the promise of modern technology now manifests its inherent ethical ambiguity in, for instance, the environmental crisis, or in the often alienating placelessness of our megacities.[1]

In its original Greek sense, however, *techne* was always *techne-poietike*, a product of Divine craftsmanship. *Poiesis*, intuitive making, and *tyche*, or chance, found their source in *mimesis*, that is, in creative imitation as the reenactment of the elementary order of the world. *Mimesis* sought both to balance the ever-fragile poetic harmony of the cosmos and to reveal its mystery through the ritual of dance, music and the rhythmic process of making itself.[2]

Modern thinkers such as Nietzsche, Heidegger, Arendt, and Ellul have characterized our present age as one living under an impending sense of annihilation—where the complexity and acceleration of technological progress threatens, as never before, the human capacity for genuine community, spirituality and ethical action. And yet however much the poetic imagination and the voices of social justice have been reduced or marginalized by the march of technique, they have yet to be extinguished. What then is the capacity of architecture to interpret and perhaps reconcile this uniquely modern dilemma? To what degree can architecture recover its primordial *techne*: its inherent role as both an ethical and poetic medium?

Such were the problems set out at the beginning of an upper-year theory course I directed entitled "Technology and Ethics." Besides weekly three-hour seminar presentations and group discussions based on the participants's ongoing reading, students were assigned a built project whose program and approach were designed specifically to investigate these questions. The process and result of this constructed assignment is the focus of this essay.

The Work of Memory

Modern technology, by nature, reduces the phenomena of the world in order to lurch past them into the promise of an efficient future. An antithesis to technology, I propose, is the practice of history, narrative and mythology, that is to say, the persistence of memory.

Etymologists have traced the English word memory back to a single Proto-Indo-European root *(s)mer–*, whose meaning was cultivated in an intricate pattern of musical and visual imagery. Its grammatical structure offers three striking images: the first, of something folding back upon itself meaning "to mourn"; the second relates to the Old High German *smero*, the inner essence, the flow of the body in breath and blood, the *smear* of a healing salve; and the third, meaning "to receive a share of something," a *merit*, a portion.[3] Together they attest to the concrete rather than abstract notion of reflection: the deep waters of time smash against the rocky shores of a crisis, and as the flow folds back over itself, it returns over and over to the smooth jagged edges, calming the crisis with the meditative balm of its rhythm.

In its most reduced form, the root of memory is *mr*. Its letter m, *mēm*, means "water," as its written form suggests, and forms the bulk of our "watery" words such as moist, mellifluous, mist, immerse, marine, marsh, menstrual, emanate. This sound is related to *mā–*, meaning "good," "mother" and "damp" in a seamless whole. The letter r, *rēsh*, means "head," and relates to the roots *er–*, *ar–* and *or–*. *Er–* means "to set in motion" and is at the root of the Latin *oriri*, to be born or "origin," whereas *ar–* means "to fit together," the Latin *ordo*, the weave, the threads on a loom, *har*mony, *ar*t and *ar*chitecture; finally *or–* means to speak or pray as in the Latin *orare*. Taken together, *mr* could simply be translated as "head-waters," evoking the primordial rhythms of music and dance, composing and re-composing, giving birth to poetry, prayer and healing.[4]

As the house of memory, architecture is an invitation to mourning, to remembering loved ancestors, shattered ideals, lost time. As the house of memory, architecture unveils the healing rituals that mourning awaits: the rhythms, measures, songs and sacrifices imbedded in the material of the world. As the house of memory, architecture gathers community, inspiring the ethical imperative to imagine worlds *otherwise*.

The aim of the built project was to investigate the poetic foundations of architectural making by challenging students to shoulder the inherently architectural responsibility to embody, interpret, perform and construct a given narrative mythology. By doing so, the focus was on making, on the means of architecture rather than its product or its end as the sum of its parts. Our wager was that the parts of our world may be greater than the whole.[5] Through building, the architect, the dwelling (as narrative) and the intended community may construct their identity together.

The project had three successive stages which took place over the course of a thirteen-week academic term. The first stage was only three weeks in length, but was essential to the success of the project. Here, a narrative mythology from the Western tradition was divided into ten sections and distributed to the ten students. In being responsible for a portion of the given myth, they were challenged to embody the text through a practice long since assigned to the dustbins of modern education: memorization. My aim, however, was not to initiate a sentimental journey into the arcana of our pedagogical history. The nineteenth-century practice of rote memory training, that is, the heuristic regurgitation of a given text whose success was measured by its precision, has found its logical and most efficient replacement in the use of computers. The practice of memorization I am speaking about, however, is a tradition more associated with oral cultures, for whom the technology of literacy was unavailable.[6] Such a tradition was responsible for the transmission of Western culture through the middle or dark ages, and continues to be practiced in many isolated or otherwise marginalized cultures today. Its aim was the mnemonic embodiment of the deeds of great heroes or gods to form their ethical counterpart in the person doing the memory work: less memorization by ear (such as that popular song we can't get out of our heads), than memorization using all the senses (attempting, one might say, to re-enact the stories in one's daily life). This memorization as hermeneutics, as interpretation, was, until the eighteenth century, the basis of Western education—an education geared to forming ethical character and, by extension, communities of justice.[7]

Perhaps the greatest exponent in the Western tradition of this memorial pedagogy was Hugh of St. Victor.[8] In the twelfth century, Hugh undertook to compile all the best methods of the middle ages. His first lesson, taught on the first day of elementary school, was to remember a given text in its unique context: its exact position on the manuscript page, the colour of its initial, the lines above, below and beside it. But one did not stop there; the context had to extend to the specific day, hour, classroom, weather condition—anything that could jog the mind to recall the unique occasion when it was first committed to memory.[9] Together with singing the text interiorly as if in choir, and smelling and tasting the imagery it evoked, pupils received each verse in a total synaesthesia. As a result, their life experiences merged with the experience of the text: the Psalms' praises and laments, for instance, become their own, its characters are sitting next to them, and their monastery classroom becomes Jerusalem itself.[10] This is the main reason why references to ancient authors in medieval manuscripts are often seamlessly knitted into the body of the text, without quotation marks or footnotes: they were paraphrased and adjusted to the argument at hand. The issue was not precision—let alone the dictates of copyright legislation—but the need to merge the deeds of the ancient authorities into one's own context. An example of this practice in architecture may be seen in the 1124 of the church of St. Denis by Abbot Suger, a close friend of Hugh of St. Victor. Here, the biblical descriptions of Heavenly Jerusalem and the Temple of Solomon and the crusader's tales of the Hagia Sophia and St. Peter's tend to merge seamlessly with St. Denis' Romanesque foundations in the language of its local craftsmanship and materiality.[11]

To arrive at a similar outcome, I first asked my students to read over and become familiar with the narration, characters and metaphors given in their portion of the text. While doing so, they were required, in the course of the first week, to gather a number of objects which could represent the parts of the text to them. The objects could either be found in back alleys, or, if they wished to make a personal sacrifice, be sacred mementos or heirlooms from their own things. The students' poetic intuition was imperative in this step: they were to trust that as they searched for their objects, the objects would also find them. As well, I stipulated that the objects should have no visibly printed or written words on them, for the sake of keeping the subsequent act of memorization visually uncomplicated.

Once the objects were gathered, the students then followed the steps of a fairly close adaptation I made of Hugh of St. Victor's recommendations, geared to their found objects:

1. Search for a place of solitude. The students needed to find a completely silent place, their laboratory if you will, to do their memory work: no other people, no T.V., no radio, no sound of any kind, all phones unplugged. Finding this place, according to Hugh, is essential.

2. Relax and pace your learning. The students were to do memory work no more than in twenty- to forty-minute periods with fifteen-minute breaks.

3. Divide the text. They were to divide their text up into

phrases, if it was not already in verse form, averaging approximately seven words per chunk, or whatever length they could comfortably speak aloud in one breath.

4. Arrange the objects. The students were to arrange the objects in a set series or pattern thematically related to each section of the text. They were to be arranged on, around or near each student's body in an order whereby the given text could be "read off" the objects, so to speak, which acted as visual or tactile prompts. The objects were not to be marked or altered at this point, but worked with just as they were found.

5. Visualize and experience the text. They were then to memorize the text as if it were nested in the objects, in their body and the gestures that would connect the body, text and objects. Each divided phrase had to be visualized. If the wording did not lend itself easily to an object or image, nevertheless an image needed to be visualized for that word. For instance, the word "hermeneutics" may be more easily remembered by visualizing one syllable at a time: I imagine a loose woman pointing to her lovers ("her men"), with sparkling new bugs leaping out of their hair ("new ticks"). The more outrageous or startling the image the better. Things should not be imagined too small (I would make my sparkling ticks quite big), and every image needs to be very clearly and distinctly placed: each seven-word chunk had to have its very own "nest" or resting place in or on the objects.

6. Repeat. The students were to go over and over their journey through the images and objects, always arranged the same way in front of them, always saying them out loud. A sure indication that the text was not simply memorized by rote was that the student should have been able to say the text both backwards and forwards, or to pick up any one object at random and ask it for the contents of its "nest." The aim was to have the flow and non-hesitation of a storyteller, even if some of the parts were fudged. Precision was less important than the general idea of each phrase negotiating the space between gesture and object.

Before describing the outcome of this assignment, perhaps a word should be said about the specific text I asked the students to memorize. Out of the desire to select a narrative whose roots were in Western mythology (since the seminars dealt with memory and ethics in the Western architectural tradition), and whose original use was both oral and ritual, I chose one of the earliest surviving narratives known to scholars with an explicitly architectural content, the third-millennium BCE Mesopotamian flood myth *Atrahasis*. The tale recounts the sending of a flood by the gods to reduce overpopulation and mark the end of the time when gods and the wisest of humans mingled. Atrahasis himself stands as the literary ancestor of Noah in the Book of Genesis. Like Noah, he is charged with building a boat, filling it with members of his family and two each of every creature in order to survive a deluge. This tale is not only a creation history culminating in the foundation of a celestial and a terrestrial temple as a type of *axis mundi*, but also an extremely poetic theogony, mapping out both the ritual destruction and sacred generativity of various divinities.[13]

Through the history of the art of memory, Noah's ark stands as a profound metaphor for memorization. For instance Hugh of St. Victor, in the twelfth century, designed his own memory in the form of Noah's ark, and described it as an indispensable tool for narrative-making, interpretation and ethical action. Hugh says,

> The memory-ark is like an apothecary's shop, filled with a variety of all delights. You will seek nothing in it which you will not find, and when you find one thing, you will see many more disclosed to you . . . . Here the narrative of historical events is woven together, here the mysteries of the sacraments are found, here are laid out the successive stages of responses, judgements, meditations, contemplations, of good works, virtues and rewards.[13]

No doubt, Atrahasis was disseminated not by written texts, silently read, but orally, within an oral culture which had to reenact the myth during annual festivals. Here, designated priests or leaders would become Atrahasis in costume, word and gesture, just as every citizen would act out the primordial chaos and flood in orgies, feasting and ritual combat, as well as prepare for its conclusion with fasting, sacrifices and days of corpse-like incubation. The success of the ritual and the re-consecration and re-establishment of creation through the temple was absolutely crucial not only for the outcome of the harvest or battles with other states, but for the regeneration of life itself for another solar year. Here, one may argue, architecture explicitly radiated its primordial identity as a receptacle for embodied communal memory, as well as a talisman for the determination of life into the next day.

Architecture Performed

At the end of three weeks, the students spread out in a large room, arranged their objects around themselves, and, one by one, told their portion of the Atrahasis myth. Most of the students chose to become vigorously involved with their objects and created

what seemed like a personal ritual or liturgy: standing, sitting, dancing, picking up objects to receive one phrase, and then turning them over to "see" the next line. Afterwards the students attested to a new and unique relationship with their objects. The various found objects now oscillated between their first identity as discarded objects (a toaster for example) and their narrative identities (as the war god Marduk, popping hot, electrically connected to other characters). The same can be said of the students' simultaneous conception of themselves as participants and interpreters in the reenactment of the given mythology (figs. 1 and 2).

Architectural design using found objects can be a tricky task in both the classroom and in the office. For instance, if an old thread spool becomes a turret in an architectural model, it often remains a meaningless if not corny substitute: a simile and not a metaphor. By using narrative experientially embodied, the objects in this assignment were permitted, at the outset, to symbolically reverberate between their own scale and one at cosmogonic proportions, between their given interaction with the human body, and the imagined interaction within a text.

The next stage of the project was to edit the narrative on two fronts: in the text and through the objects. The students were now to investigate the text by researching the translations, etymologies and tropes of certain words that seemed to capture the essence of the story *for them*. Simultaneously, they were likewise to dismantle their objects and investigate their material, structural or symbolic nature. The aim at this stage was to restate the narrative in an edited version, taking account of their own interests, memories and relationship to the words and objects to arrive at an interpretation adjusted to our shared world. A narrative still had to be performed in the end, but now it was in their own words and with refashioned, dismantled or fused objects. At this point they were to add no new objects, besides fasteners and glues, but if they needed more materiality, so to speak, they could request pieces of objects from the students performing the parts of the narrative just before and after them. This rule was enforced to place a limit on the scope of the project, to be responsible for the now narrative-infused objects they already had, and to facilitate a story-telling seamlessness with their fellow performers (figs. 3 and 4).

After five weeks, they performed this new edited narrative. For this performance we brought in guest critics, including the established performance and installation artist Shauna Beharry, to initiate a reflection on the architecture performed. Depending on the part of the story each student had to tell, they choreographed an interaction with collaged, distended or symbolically connected objects which involved, for instance, saying certain lines in chorus, reflecting light off objects to other objects in the room, tapping out rhythms and verses on varying surfaces, ritually destroying some objects and building up others in the process. This performance of architecture provoked a lively discussion concerning, from the professors's point of view, whether or not the embodiment of the text and objects would have an impact on their eventual outcome as a silent building. However, Beharry responded to these comments from her experience of performance. She claimed that not just galleries and theatres, but communities, buildings and cities would cease to have any meaning without stories continuously being told about their formation. Many of the buildings of our cities are and will remain silent, she said, because they are dead. No one tells their stories or engages them meaningfully: their often rich history is eventually reduced to the figure of its price on the real estate market. The architect's responsibility is to invite and inspire imagination through his or her imagination, long after the ribbon has been cut (figs. 5 and 6).

The last five-week stage of the project required the students to do one further edit and interpretation in order to find a site for the project through a final performance. The residue of this performance, the parts or pieces assembled in this final ritual, was meant to be an architectural presentation, understood literally in the sense of "gifting." The result, in this case, was a carefully edited construction that had a series of positions as a house of memory. For the final presentation, however, the students chose not to present, or formally "gift" their construction to a specific community as asked, since, in their argument, the community was always present in the objects themselves and in their new narratives. In some of the reviewers's minds, the students seemed to have become too attached to their constructions, or had simply chosen to opt out of their responsibility. Their hesitancy may have been the result of being brought face to face with the inherent danger of poetic composition. By attempting to revive the memories of a community through interpretation and performative interaction, what was once repressed or denied by

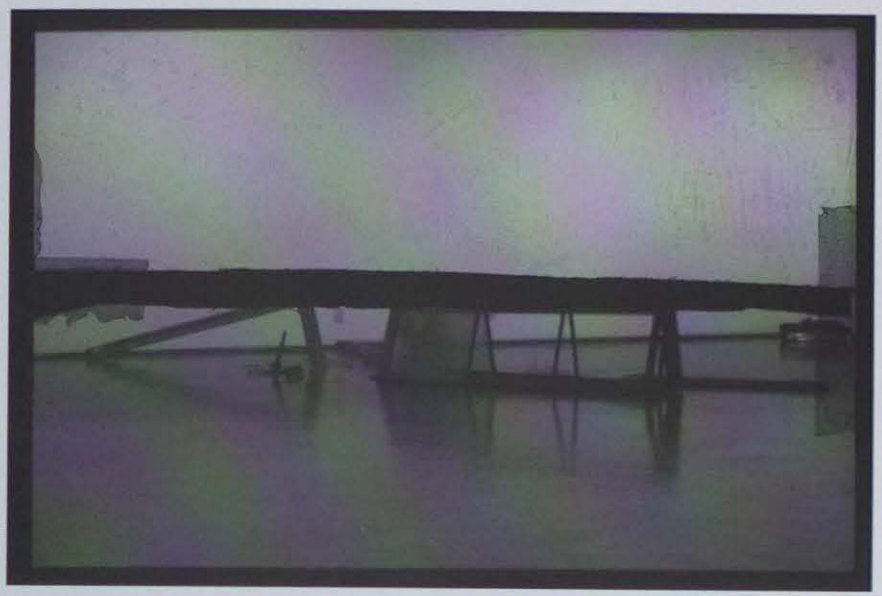

Figure 2. First Review: "Wall, listen constantly to me! / Reed hut, make sure you attend to all my words / Dismantle the house, build a boat / Reject possessions and save living things / . . . Roof it like the Apsu." Photo and performance by Scott Richler.

Figure 3. Second Review: Mummu (threaded with nose-rope) by Enlil with magician coat and flood propeller: the winds are created. Performance and photo-collage by Dionisios Psychas.

the community becomes open for discussion, and therefore open to rejection. When metaphor is carefully employed, however, it welcomes participation in a gentle manner. If a series of architectural elements can oscillate at different scales and between narratives, the work may be meaningfully engaged both individually and communally at varying levels of complexity and depth.

This project was proposed as a response to late-twentieth-century postmodern or deconstructionist architectural practice. With Roland Barthes, postmodernists described Western culture as a civilization of the image, where images parody or reflect one another, devoid of any fixed reference of origin or meaning in a narcissistic hall of mirrors.[14] Similarly, language, according to Jacques Derrida and the deconstructionists, has become a closed, self-referential structure which negates the possibility of communication.[15] Thus, the imagination of the architect and the community he or she builds for, is simply cancelled, relegated to the role of a passive observer of, or a cynical participant in, the myth of scientific progress, its commodification as advertising, or the skin-deep formal games of cyber-driven technophilia.

By damming the deluge of the information highway, memory invites the imagination to build narrative. Communication thus becomes an aim rather than an obstacle or impossibility. Any tendency, however, toward meta-narratives, false utopias or totalitarian projects, is kept in check by the shifting, questioning nature of poetic metaphor. The plurality of interpretations that metaphor invites undermines the reductive commodification of architecture for corporate or political ends. To the degree that architects shoulder the responsibility, on behalf of their community, to interpret the depth of the given world is the degree to which architectural design is less a cynical aesthetic game than an ongoing ethical engagement.

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Previous page: fig.ure 6. Final Review: Optical device for the reverse projection of the constellations, the Igigi-gods and site section A-A, rue Saint-Laurent, Montreal. Performance and photo-collage by Tom Yu.

1. See Edward S. Casey, *The Fate of Place: A Philosophical History* (Berkeley: University of California Press, 1997).

2. See Dalibor Vesely, "The Question of Technology" in Alberto Pérez-Gómez and Louise Pelletier, eds., *Architecture, Ethics and Technology* (Montreal: McGill-Queen's University Press, 1994).

3. Carrin Dunne, "The Roots of Memory," *Spring* (1988): 113-15; Edward Casey, *Remembering: A Phenomenological Study* (Bloomingdale: Indiana University Press, 1987), 273-75; compare memory as mourning with Heidegger's thinking as thanking in *What is Called Thinking?* (New York, 1968), 138-43.

4. For the PIE roots of memory see the appendix of the *American Heritage Dictionary of the English Language* (Boston, 1969).

5. Maurice Merleau-Ponty, "The Primacy of Perception and Its Philosophical Consequences," in *The Primacy of Perception*, ed. James Edie (Evanston: Northwestern University Press, 1964), 15.

6. See Walter J. Ong, *Orality and Literacy: The Technologizing of the Word* (London; New York: Methuen, 1982), 5-30.

7. Frances A. Yates, *The Art of Memory* (Chicago: Chicago University Press, 1966); Paolo Rossi, *Clavis Universalis: Arti mnemoniche e logica combinatoria a Lullo a Leibniz* (Milan: Riccardi, 1960); Mary Carruthers, *The Book of Memory: A Study of Memory in Medieval Culture* (Cambridge: Cambridge University Press, 1990), 8, 11, 156-220. Concerning motor-mnemonics, see Birger Gerhardsson, *Memory and Manuscript; Oral Tradition and Written Transmission in Rabbinic Judaism and Early Christianity*, trans. Eric J. Sharpe (Copenhagen: Ejnar Munksgaard, 1964), 163-67.

8. On Hugh of St. Victor and memory see Ivan Illich, *In the Vineyard of the Text* (Chicago: University of Chicago Press, 1993), 61; Grover Zinn, "Hugh of St. Victor and the Art of Memory," *Viator*. 5 (1974): 211-34.

9. Carruthers, *Book of Memory*, 94.

10. Hugh of St. Victor, *De tribus maximus circumstantiis gestorum*, 491, lines 3ff, as translated in W. M. Green, "Hugo of St. Victor: *De tribus maximus circumstantiis gestorum*," *Speculum* 18 (1943): 484-93; and Zinn, "Hugh of Saint Victor and the Art of Memory," 227.

11. Otto Georg von Simson, *The Gothic Cathedral: Origins of Gothic Architecture and the Medieval Concept of Order*, 3rd ed. (Princeton: Princeton University Press, 1988), 61-141; On Hugh's possible contribution to St. Denis see Conrad Rudolph, *Artistic Change at St-Denis: Abbot Suger's Program and the Early Twelfth-Century Controversy Over Art* (Princeton: Princeton University Press, 1990), 58.

12. J. B. Pritchard, ed., *Ancient Near Eastern Texts Relating to the Old Testament*, 3rd ed. (Princeton, N.J.: Princeton University Press, 1969), 42-44; and for an updated translation see Stephanie Dalley, *Myths From Mesopotamia: Creation, the Flood, Gilgamesh, and Others* (Oxford: Oxford University Press, 1989), 228-77.

13. Hugh of St. Victor, "De arca morali" in *PL* 176. Translated by a Religious of C.S.M.V. in *Hugh of St. Victor: Selected Spiritual Writings* (London: Faber and Faber, 1962), IV: 9; 680B.

14. For an overview of postmodern nihilism and artistic creation see Richard Kearney, *Poetics of Imagining: From Husserl to Lyotard* (London: Harper Collins, 1991), 170-209; and, with respect to architecture, see Alberto Pérez-Gómez and Louise Pelletier, *Architectural Representation and the Perspective Hinge* (Cambridge, Mass.: MIT Press, 1997), 281-368.

15. Jacques Derrida, *Of Grammatology*, trans. Gayatri Chakravortry Spivak (Baltimore: Johns Hopkins University Press, 1976), 164-268.

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Figure 4. Second Review: The throne, gardens, city and main frame of Anu: the establishment of the chairperson.
Performance and photo by Roland Ulfig.

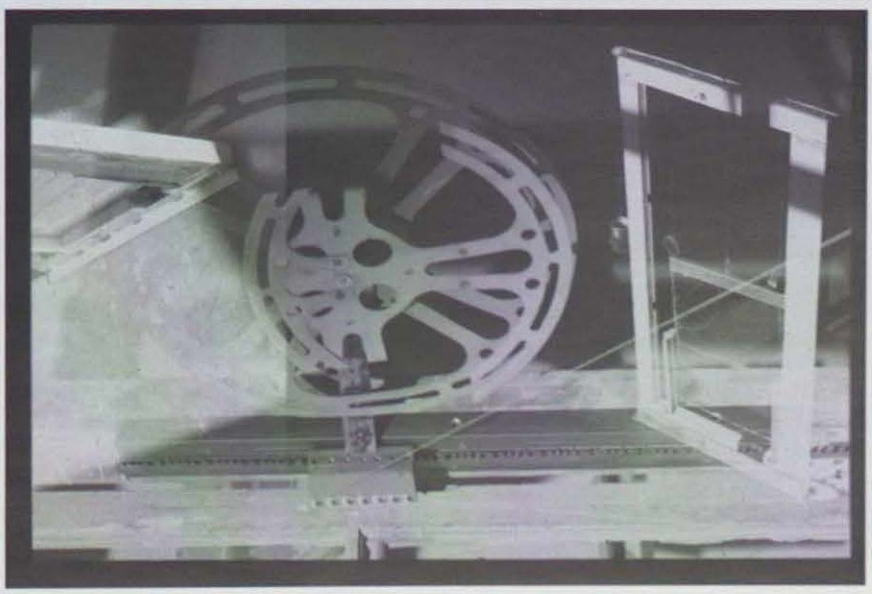

Figure 5. Final Review: "Ziusudra opened a window of the huge boat / The hero Utu brought his rays into the giant boat." Plan and axonometric.
Performance and photo-collage by Sonya Jensen.