

# Design In Movement: The Prospects of Interdisciplinary Design

FRANCES BRONET and JOHN A. SCHUMACHER  
Rensselaer Polytechnic Institute

In what ways can architectural design define identity and challenge received identity? We distinguish two ways: (1) in space, as different meanings from the received ones can emerge, or (2) between space and movement, as the reading of meaning in space is threatened, referring us to mutual movement itself.

On our pedagogy, design in movement is a complement to methods of design in space, including postmodernism. Design in movement constitutes a ground for taking action that contrasts with our dominant visual culture. If we design in this culture without being able to call it into question, we forsake the full range of the liberative potential of design. We investigate how design in movement can challenge the hegemonies of design in space, thereby constituting a new ground of justice.

In our principal example of the pedagogy of design in movement, we use dance as the basis for explaining what we mean when we contrast space—or movement *in* space—with movement. We take contact improvisation dance/movement as one limit of a continuum, and space as the other.

Our pedagogy of design in movement represents a collaboration between an architect and a philosopher, both actively involved in interdisciplinary education, including engineering. We have always taken design in movement as the required framework to get between disciplines (interdisciplinarity) rather than just to place disciplines side by side (multidisciplinarity). In this paper we illustrate how design in movement can be put to work in architecture. Before Part Two below can explain movement in our design pedagogy, Part One has to explain it in design pedagogy in general.

## PART ONE—EYE AND BODY: READY-MADE SPACE AND SPACE-IN-THE-MAKING

In his article, "Defamiliarization: The Tensive Play of Body and Eye," Kenneth Warriner characterizes what he calls "two topologies of movement": those of the eye and of the body. He refers to Michel de Certeau, who writes "about [both] the way people's descriptions of their situations form their no-

tions of space and time" and "the prevalence of actions or bodily movements in these accounts, in contrast to images":

Description oscillates between terms of an alternative: either seeing (the knowledge of the order of places) or going (spatializing actions). Either it presents a tableau ("there are..."), or it organizes movements ("you enter, you go across, you turn..."). Of these two hypotheses, the choices made...overwhelmingly favored the second. (Warriner, 179)

In contact improvisation dance, we also find the distinction between these "two hypotheses," as the "contacters" must cultivate a sense of body as opposed to eye so as not to "interfere with or inhibit contact." One should try to keep "the gaze going with the head rather than focused on the audience or one's partner": "when dancers have established a physical and kinetic familiarity with one another, visual contact can enrich their movement communication without overpowering it" (Luger, 55).

In this familiarity we realize what Warriner calls "the constitutive capacity of bodily action" (179). For body, we should speak of bodily actions as making space (space-making actions, not "spatializing actions," as Warriner puts it), what we think of as *space-in-the-making*. And for the eye, we should speak of *ready-made space* and the associated "order of places" in that space—"a tableau."

The space of the eye is always already waiting for our bodily actions, whereas the space of the body is perpetually in-the-making through those very actions: you go here, then there, exactly as in the descriptions of the Hopi—"that place, that time" (Whorf). Only for ready-made space can all places have the same (simultaneous) time because they are already grasped *at a distance* by the eye. In space-in-the-making, places are realized only through movement of the body, not the eye: we are on our feet, ready to move to make contact with another body, which we precisely do not already grasp at a distance—we are not swept off our feet into the space of the eye (Schumacher). No wonder the "contacters" try to undermine the eye!

Analogously, Warriner believes that an important kind of architectural criticism is best understood through a tension between eye and body: "With *both* body and eye in play we can imagine a combinational frame in which our bodily knowledge of space [or rather, space-in-the-making] works to de-essentialize the strictures of our visual culture." (179) (We discuss an example in Part Two.) Otherwise, what the body knows is "set aside...because inhabitation has an intrinsic temporality that resists representation in the static materials of architecture." (178)

If the space of the eye is essentialized, we cannot easily question a particular spatial hegemony, as it will appear to us as ready-made as the space that makes it possible. If we can question the space, however, we can also question any hegemony of that space. We can insert our body just where, with only the eye, we have trouble mounting the vigilance we need to be critical:

In some architectural set-ups the movements of body and eye are out-of-sync, and the resulting tensions, acting to undercut the expected patterning that leads to habituation, defamiliarize the experience, bringing it back as perception rather than mere recognition. This can have a bearing on how, in these instances, objectification of the architectural experience may be side-stepped, thus lessening the work's susceptibility to consumption as a commodity. (Warriner, 178)

Political authority works the ground of space, setting the rules for reading there. As we noted, the space of the eye is always already waiting for our bodily actions, whereas the space of the body is perpetually in-the-making through those very actions. The space of the eye is a paradigm of political authority, each variety of which commands a *ready-made space of jurisdiction*: whatever terms of jurisdiction hold throughout a space, they do so at once, conferring on each being in it a certain status that may or may not have anything to do with who the being actually is or what the being actually does (just think of who gets to vote). The status is a reading, always already arbitrary exactly as it is always already made. *That* is why we feel the need for political authority in the space of the eye.

Again, if we don't insert the body, we will inevitably assume the very foundation of political authority and hegemony: the ready-made quality of the space of the eye itself. Warriner has outlined an alternative basis for critical architecture, especially in virtue of providing an easy answer to Dutton and Mann's criticism that so much current architecture disorients without reorienting: we offer the reorientation of body.

Let us even try to get beyond the tensive play of eye and body to the primacy of body. Only with the eye, at a point of view, is each person immersed in the ambiguity of reading the world that is the subject of so much critical architecture, and that is so easily obscured by political authority. With body, on the other hand, eyes are referred to the world without the need to wonder — precisely the ground of the natural authority

that serves as a complement to political authority.

To understand this better, consider the following passage by Pearse and Crocker:

The boy who swings from rope to horse, leaping back again to the swinging rope, is learning by his eyes, muscles, joints and by every sense organ he has to judge, to estimate, to know. The other twenty-nine boys and girls in the gymnasium are all as active as he, some of them in his immediate vicinity. But as he swings he does not avoid. He swings where there is space—a very important distinction—and in doing so he threads his way among his twenty-nine fellows. Using all his facilities, he is aware of the total situation in that gymnasium—of his own swinging and of his fellows' actions. He does not shout to the others to stop, to wait or move from him—not that there is silence, for running conversations across the hall are kept up as he speeds through the air. (192)

If the swinging boy actually wonders about his choice of where to swing, of "where there is space," he will invariably miss it. Neither the contact improvisation dancer (Luger, 50) nor the swinging boy can afford to be wrong.

Because the level of eye-going-with-head is precisely the level at which humans can trust each other enough to get outside of hegemonies of space, what comes first in contact improvisation dance is to learn how to trust through one's body: we are *in it together* (what Schumacher called "the solidarity of sensuality"). This is the ground of the justice of mutual aid—what we think of as justice-in-the-making as opposed to ready-made justice—because we are precisely no longer in need of making our connections to each other through reading them in the space of the eye.

The problematic of our pedagogy, then, is represented by a limit question in design: can an architectural set-up grant the body a primacy, if not leave the eye behind entirely. In reaching toward this question, we will include Warriner's tensive play, but at the same time we may well discover that the question has an answer: it is possible to design a set-up that defeats the eye. We wish to investigate the possibility of designing *in* the posture of body, not eye.

But the point is precisely that we are developing a *pedagogy*. If we can ask a question that has no answer in architecture, we will have discovered a limit of architectural design—outside of this question is the rest of life, what architecture cannot reach. Our pedagogy aims to bring back, as Warriner puts it, "perception rather than mere recognition," reopening the question as to how to create identity in life.

## PART TWO—DESIGN IN MOVEMENT

In architectural design, we are inevitably led to believe that a built form takes shape in the ready-made space of our plans and sections of it, as if time were an independent variable: the tacit assumption is that, because the time in which the built form comes into being is added later in construction, the space

of the design cannot depend upon it. Yet we may well be drawn to the construction site to confront the troubling dependence of space on time: the space of building has an in-the-making quality.

Even when we draw a plan or section, we tend not to get the feeling in our hands that we are making the space of the plan or section. We are led to feel that this space does not come into being gradually, but rather at once, not even in need of waiting until we are done drawing. It is as if we were tracing it out of our mind's eye. Even if the process of designing involves iterations—design, redesign, multiple modes of representation and critique—we still tend to regard our drawings as ready-made spaces.

So, one of the first things we did is give our first-year students a measurement exercise in which they freely chose a device of arbitrary value (rolling a yam, for example) to measure a site that they had previously designed and produced. We wanted the students to ask whether they were moving in the space of what they were measuring, or to some extent still participating in its making? Does the imagined space of the site already exist? Does the space of the building we intend to make on a site already exist? What, after all, can we say about a site independently of measuring it? We tried to make it possible for students to understand a site not as a ready-made space, but rather as at rest in an order of movement, in this case the order of movement of a necessarily imprecise measuring instrument (exactly as imprecise pieces of wood, for example, which will be used in building on a site, are quite different from the precise lines of plans and sections).

For our experiment with dancelmovement in the second part of the semester, we also tried to blur the distinction between the designers' bodies and their movement, on the one hand, and the dancers' bodies and their movement, on the other. The students were asked to design a series of six inhabitable installations inspired by the concept of movement determining space or space-in-the-making. The movement that determined the space was to be performed by dancers, who were themselves involved in the studio, as critics and performers. And, finally, exercises also led the students to blur the distinction between designing and building.

To elaborate on the eye/body or space/movement tension, we introduced a variety of perspectives on dance and its analogies to architecture. For one exercise, the Doug Verone Company performed some of its repertory as well as improvisational acts based on words offered by students. The students were then divided into small groups one dancer from the company. Each dancer drew a diagram of a shape that the students were asked to compose with their bodies. Once shapes were established by understanding where which bodies were, or had to be, in relation to each other, the students were asked to "morph" one shape into the next. They experienced a kind of contact improvisation, because a true awareness of where each body was in relation to every other was necessary.

Had we run this exercise instead of Verone, we would have opened the window of opportunity to space-in-the-making.



Fig. 1.

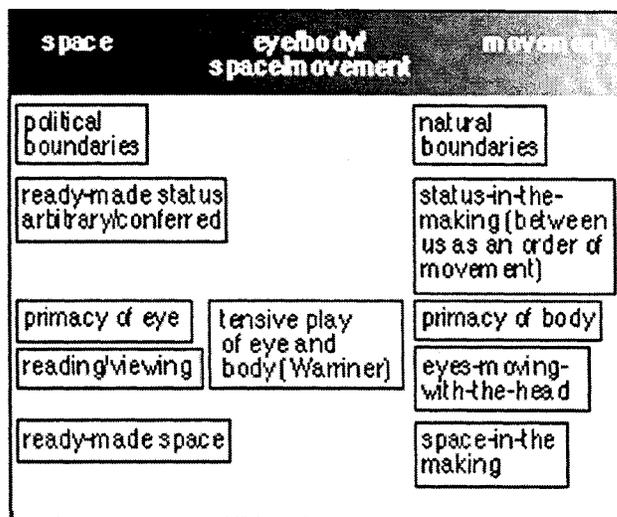


Chart 1.

Instead, the students were led to take thirty-second clips of a video of Verone's company and to create a notation of these clips. The idea of the notation was to record movement and use it as a vehicle for the design of an inhabitable space. Hereby the students were led to understand the movement in the ready-made dance space they were asked to design: the dance clips were inevitably spatialized, as if each frame were a posted plan or section.

Yet in transforming from a drawn shape to a body shape, the students had to relate to each other's bodies. They might have at first imagined them as arrayed completely in a space, a ready-made space, derived from the space of their drawing of the particular shape they were trying to assume. Then once they had to support each other, though they might have valiantly held onto the sense of a ready-made space in which they took on a shape, they might also have begun to feel the dependence on time in their very muscles, as they strained to hold still, ever so imperfectly, even momentarily.

When we draw a shape, it is easier to take what we do to be ready-made. When we support each other's bodies in that

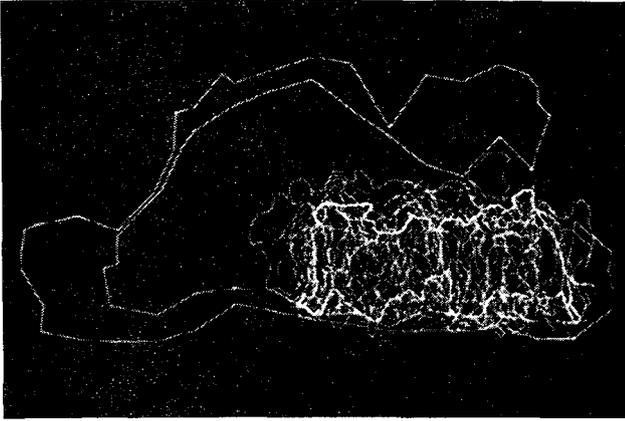


Fig. 2

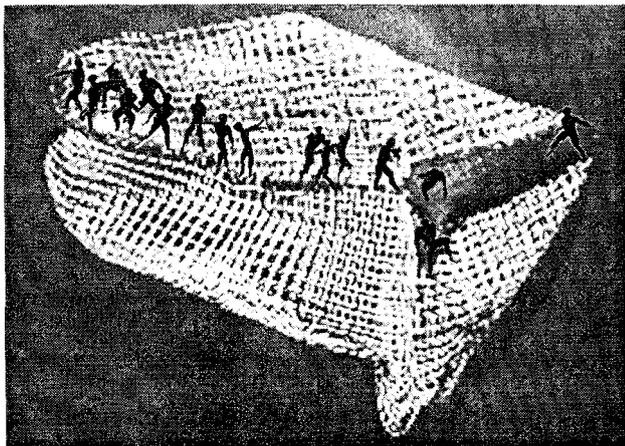


Fig. 3

space	eyebody space in movement	movement
moving so as to accord different meanings to the space in which the moving occurs (eye)		moving so as to feel the space issuing from the movement (body)
a sense of making a shape through moving to it together—so that we aim for a fixed point/shape in a ready-made space and an associated sense of moving in that space to that shape (eye)		a sense of making a shape through relating to each other's movement—so that we aim for a resting point in an order of movement (body)
highly choreographed	Doug Verone	contact improv
ready-made space		space-in-the-making

Chart II..

shape, it is much harder to do. (By analogy, we could also compare what arises between the materials that realize our designs in buildings.) We aim for the ready-made shape/space, but always feel the shape/space-in-the-making in our bodies. This "moving" condition could have been realized in this exercise, if the dance leader himself had not aimed to work in ready-made space.

But the point of design pedagogy should not be to settle this issue about the nature of dance. We need instead just to raise it, to get the students to feel the difference between (1) a sense of making a shape through relating to each other's movement—so that we aim for a resting point in an order of movement (body)—and (2) a sense of making a shape through moving *to* it together—so that we aim for a fixed point/shape in a ready-made space and an associated sense of moving in that space *to* that shape (eye).

So, suppose further that the idea of notation was instead an attempt to record movement in an "emergent" mode, where the movement diagram was transformed in an interactive manner: do the first analysis and develop a proposal—see how the site transforms the movement and how the new movement transforms the site, though ideally site and movement would no longer be independent.

But, again, when we talk about a movement transforming a site, and vice versa, we have to be careful to distinguish between moving so as to accord different meanings to the space in which the moving occurs (eye), or *actually moving so as to feel the space issuing from the movement (body)*. In the latter, the order of movement of bodies actually begins to take in the larger space or arena, as if it too were a body realized only through the mutual movement of all. In the actual exercise students used moving elements to try to achieve this effect, but some chose to have stable ones. The point here is that the stability needs to work with the other bodies—no doubt including the dancers—in order to be realized as a resting point in an order of movement.

At this point in the studio, the students took the movement analyses (of shoulders, of gaze, of feet, of arms, of hands—notation not being a simple procedure) and superimposed them onto the site models they had developed in the first half of the semester. Superimposing the movements and the models is interesting only if we can make it sufficiently iterative so that we do not presuppose the model as space, standing apart from the movement to be superimposed on it.

The best example is the Entropy project by one of the final 7-person groups the students had chosen themselves. One student in the group took his existing model from the first half of the semester, superimposed his analyses of the dance clips, and eliminated those columns and ceiling planes, for example, that prohibited his analyzed movements. The whole group understood through discussion that given these physical conditions a different dance would have emerged. But to encourage the original dance as a possibility, the group developed 15 huge turnstiles that allowed the clearing of space when needed for a particular sequence of steps. The project developed into an array of malleable, transparent, and

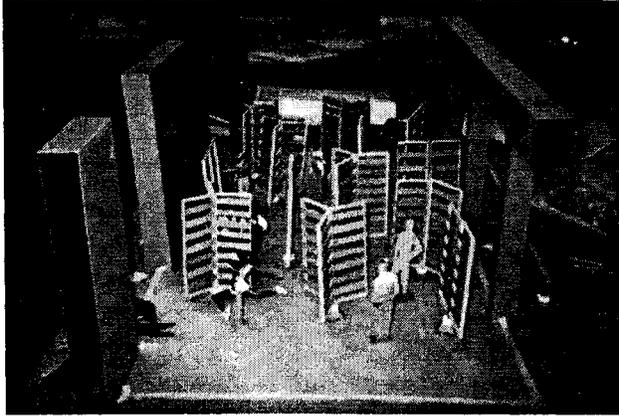


Fig. 4.

rotating elements that could be dense when the dancers were not there, but readily be cleared when they were—a kind of space-in-the-making.

Through a series of modeling exercises, the Entropy students then developed various proposals that showed possibilities of spaces that would be transformed through light and heavy pressures on the vertical wall panels. The full-scale model of the turnstiles was a turning point. Once they were all built, it was evident to the group that they were "heavy," like 15 object-like elements. The space between them felt like leftover space, not space defined by the arms of the turnstiles—defeating the possibility of the dancers moving where there was space, as did the boy in the Pearse and Crocker quote. Because the objects themselves were the positive figures, any concept of movement seemed to be connected to those elements themselves as elements of a ready-made space.

So, in order to realize the space-between and its symbiosis with movement, the students again developed options for new vertical elements, still taking as a premise their rotational movement. They produced 4 new full scale prototypes and hung or mounted them in the main lobby of the studio building. People coming up or down the stairs had to engage these elements. One was the previous turnstile built out of wooden climbable slats, on a heavy concrete base; one was a very light plastic-encased set of shelves set on their ends; one had a set of 2 centrally pivoting planes which were curved in at the sides; and one had a series of 1/2" diameter rolled parallel horizontal newspaper tubes hung on fishing line at 2" intervals.

In the subsequent review, students, staff and faculty interacted with these full scale models. Different strengths emerged from each proposal, but only the paper tubes allowed for full body interaction, because the panels could be pushed and molded to the anatomy of the pusher. The heavier elements were less likely to get pushed, though once the elements were moving people liked going around and around the turnstile.

This was a critical juncture. The students of Entropy did not want a project in which the object became the focus of the movement; they were not interested in a carousel where the

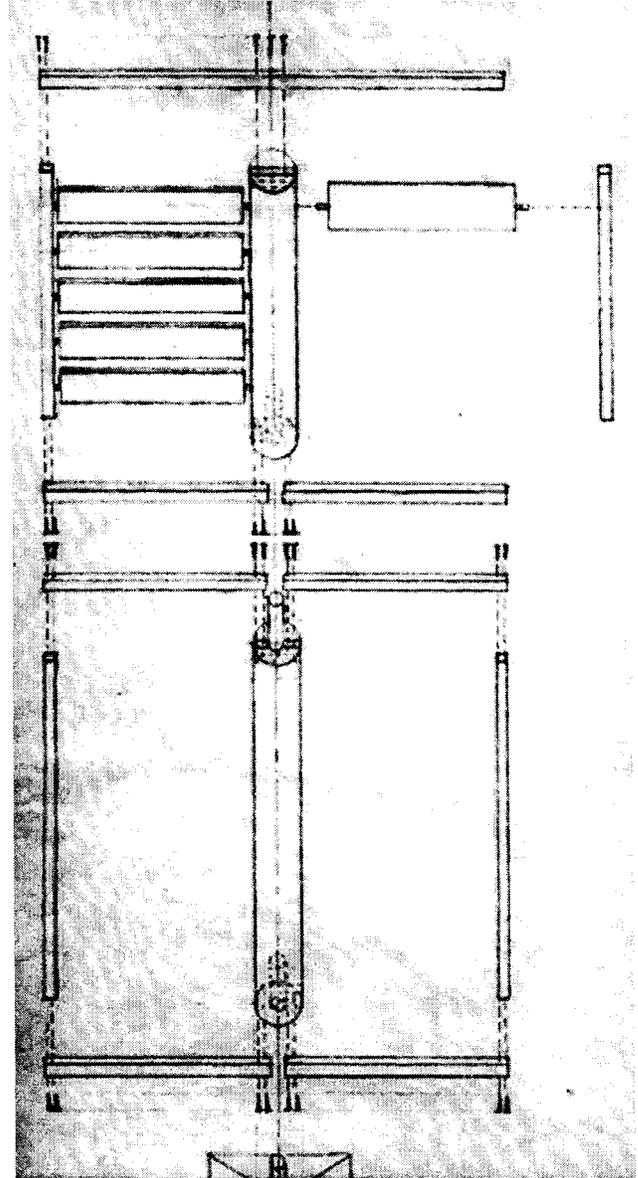


Fig. 5.

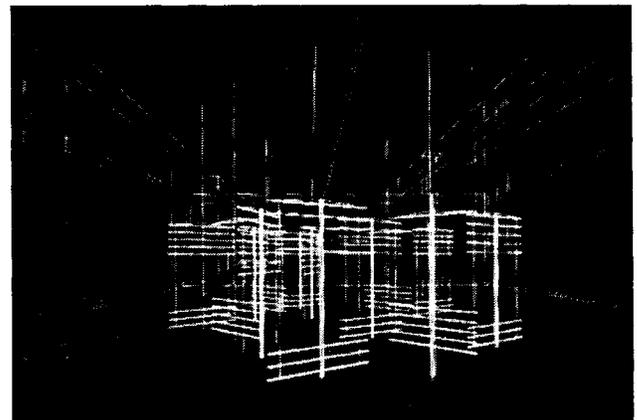


Fig. 6.

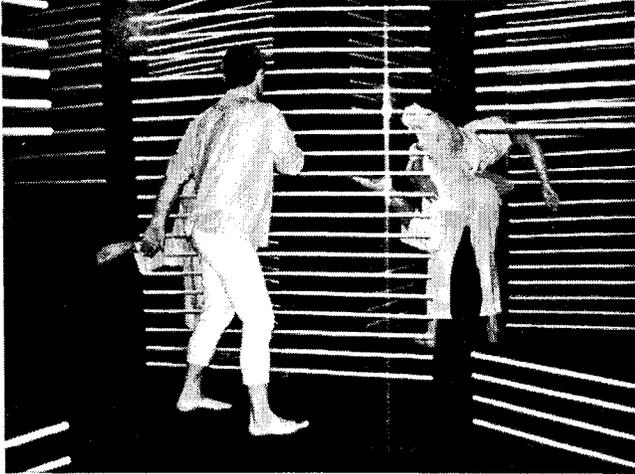


Fig. 7

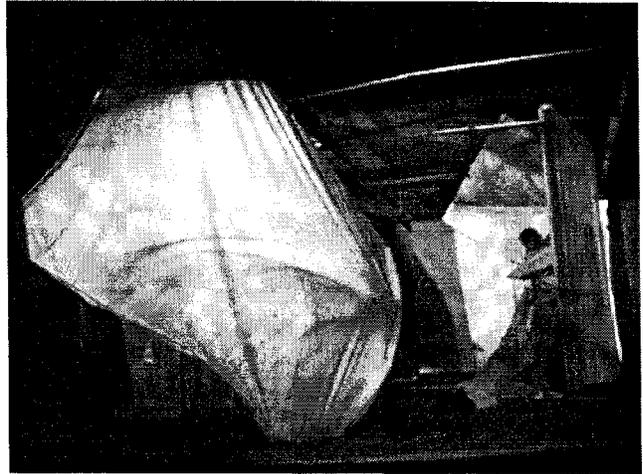


Fig. 9.



Fig. 8.

people are in separate containers in a ready-made space, anchored by the heavy turnstiles. They had hoped that the space-between — where there was space — would be stronger than the walls, but it did not seem to be so when people were there. By the next day, the 3 1/2 weeks of turnstile development were abandoned, and a series of hanging paper tube panels was born. Analogous to Warriner's analysis of van Eyck's Sonsbeek Sculpture Pavilion in Arnheim (181), the advantage was the tension between the eye being drawn through the hangings to the walls beyond and the body being called upon to move where there was space, a "moving" condition of hangings and human bodies.

The actual site of our installation was the gutted building to be renovated for the new home of the Rensselaer County Council on the Arts (RCCA), and the RCCA had determined that our installations should be in and out within a one-week to two-week period. We established *that* as a criterion for working. Moreover, instead of having one dance company work with us for the seven weeks of the project, we had four different companies come in at key points of the project. The different companies were built into the assignments by asking the students not to develop a proposal that could work only with a predetermined set of one dance troupe's work. As it was, however, we could still use the final dance performance

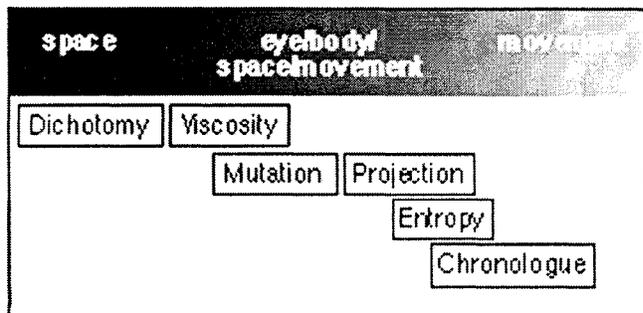


Chart III.

as a way of critiquing the various project installations.

For example, *Dichotomy*, the project that was most impressive visually — in terms of its form, lighting, quality — actually was able to be read at once. The dancers could do little that was not spatially predictable; we could anticipate how they would use the forms. This was partially due to its stage-like set-up and the location of the audience, but also to the quality, location, and materiality of the stable spaces of the proposal. But, as in all the pieces, the dancers were responding to the exact conditions of the site.

In *Chronologue* (the large projection screens' proposal) the space was mobile. In the original performance with the Bennington College students and faculty, slides from 4 projectors were projected, switched, projected, and so on. In the moment of the slide switch, the room went black, and it was impossible to know where anything was. The dancers began to use their voices to find each other. They had to drop their eyes, so to speak, in the ready-made space of which everything would have stood apart at once, and instead had to refer to each other's movement to continue. Like these dancers, the boy on the rope is put to the test more when his eyes cannot anticipate the movement of the others. Then the urge/ability to spatialize the dance/swinging is defeated.

Overall, the biggest difference between the conceptual framing for *Chronologue/Entropy* versus the others was that even though some of the others moved, the fundamental

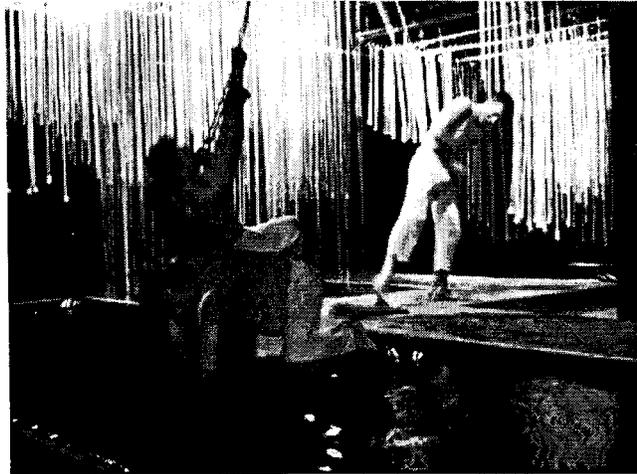


Fig. 10.

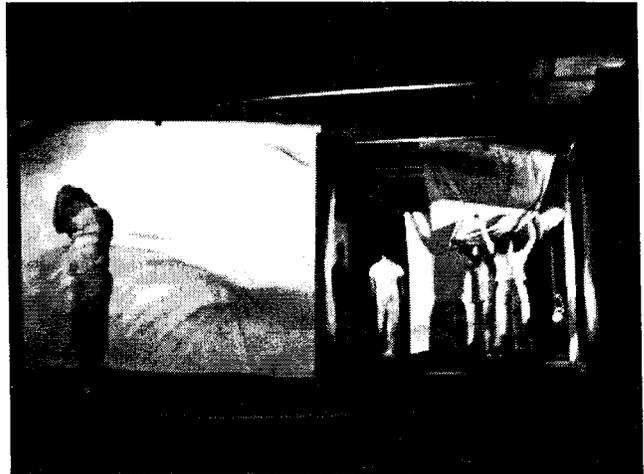


Fig. 13.



Fig. 11.

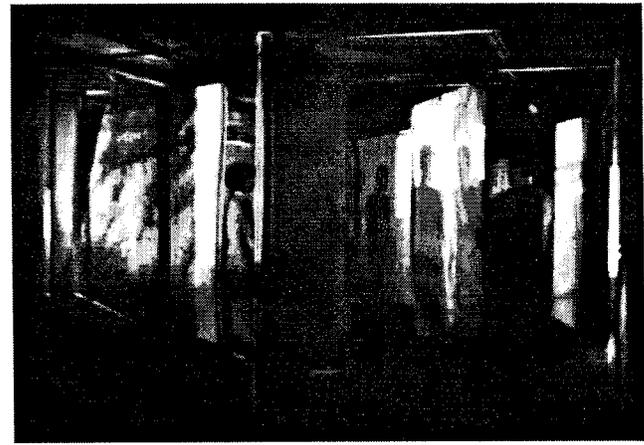


Fig. 14.

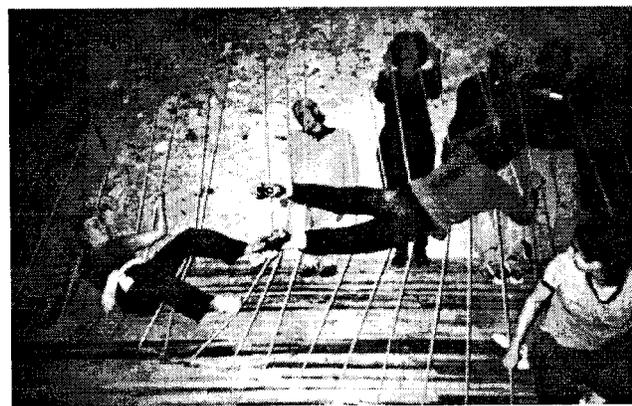


Fig. 12.

relationships between the elements and the people remained the same. Even though the ropes of Viscosity or the tubes of Projection did shift, they were relatively predictable. In Chronologue and Entropy everyone participated in making the space in a necessarily more unpredictable manner.

The transformation of the project from an illegal intervention in a non-occupied, future RCCA home into an active

community project was also an issue of movement. Once the proposals were experienced by the directors of the RCCA, three professional dance companies, an international experimental musician, and a video artist, they were taken over. A 3 beta-cam shoot was held; a professional artistic piece was edited and produced. The RCCA hosted a groundbreaking gala later as well, and three professional dance companies performed in 4 of the installations. The project took on a life of its own.

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