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Artists Using Science and Technology



Contemporary Collaboratives

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Sabrina Raaf and Amy Youngs

We decided to devote this Ylem issue to the exploration of recent trends in collaborative identity and practice in new media work, as consistently some of the most cutting-edge art work today is being created by collaborative groups. In using the word “collaboratives,” we are referring here to both the formation of the “cellular”, common-action group (of two or more persons) as well as to accompanying work methodologies of task partitioning. The collaborative groups invited to participate in this issue include *sine::apsis* experiments, Critical Art Ensemble, The Remote Experience Lab, Marlena Novak and Jay Alan Yim, and HaHa. We asked each group to write about the benefits and pitfalls of collaborative practice including their perspectives on the collaborative process, their recent projects, and the attitudes of the institutionalized art world towards the work they do as a group.

Collaboration between one or more artists and/or researchers is certainly not a new process. From the atelier of Rembrandt to that of Andy Warhol, artists throughout history have worked with teams of apprentices who were intrinsic to their creative output. In the end however, the completed works were known under one name - that of the head artist of the atelier. The 20th century saw the proliferation of artist's groups with self-assigned identities - as opposed to identities or labels assigned to them by critics and/or historians. These included groups such as the Futurists, Dadaists, Surrealists, Bauhaus, Gutai, Fluxists, and more recently, the Harry Who. These were groups of artists with similar visual and conceptual sensibilities, which functioned as both social communities for the artists and as think tanks. Yet, the works created within the groups were still, for the most part, attributed to individual artists.

Within the field of art and technology, we have also had the model of collaboration pioneered by the legendary Experiments in Art and Technology (EAT) program in the 1960's, which matched artists up with technology researchers. For the artist, this certainly appeared to be an ideal situation; they came up with an idea for a technology-based project and then would be matched with someone who had the technical means to produce the work. And, while interesting art was created within this structure, the resulting works were attributed not to a team of creators, but to the individual artist in the end. The relationship was cast as “creator” and “implementor” rather than as co-creators. Though the EAT project is no longer in existence, there have been several large institutions, such as Xerox, Digital Equipment Corporation, MIT and Carnegie Mellon University that have instituted Artist-in-Residence Programs based loosely on this model.

Contemporary collaboratives have evolved out of these models and proliferated primarily over the past 20 years. We

have seen the lives of groups such as General Idea, Gran Fury and Group Material come and go, while others, such as Repo History, etoy, subrosa and Survival Research Laboratories, continue to flourish. Not surprisingly, this type of artist-formation is still considered “non-traditional” by the established art world. Parameters that might identify a group of this nature do not necessarily include the number of artists in the group, their administrative structure, or that their art be exhibited under the group's singular name (and not an individual's). A contemporary collaborative could include just two artists - much like the model of two musicians co-composing and performing a score. Perhaps the factor that would most define a group as a contemporary collaborative is the membership's reasoning behind choosing to work in that manner.

On the most practical level, the artists in this issue have described working in collaboratives as being a necessity, due to the sheer complexities involved in working with new technologies. To gain the knowledge-set to master a new array of technologies, to attain access to necessary equipment, and to acquire the funding necessary to complete a series of work is often both time and expense prohibitive for the individual. Even more attractively, the collaborative approach begets an immediate community of artists and researchers with similar concerns. With the right mix of people it begets a think tank. And in a true collaboration, it begets the possibility of making a greater statement — with several minds and talents at work on the same project(s) — than perhaps one individual could make alone. These benefits are discussed by Peter Coppin of The Remote Experience Lab at Carnegie Mellon University, who writes that, “Creating an environment populated with creative people from many different disciplines, backgrounds and inclinations increases the odds of turning creative potential into reality.”

On a deeper level, the fact that artists are increasingly turning towards collaborative practice and identity is a manifestation of a shift in their own perceived cultural role. The role of the artist in society is finally accelerating away from the musty, modernist, anti-social art star phenomenon (à la Francis Bacon) and towards one of artist as soaked in the streaming undercurrents of information networks and systems consciousness. Daily we seek useful information from non-static resources: our computer *systems*, data *directories*, television *networks*, and other media *machines*. This has resulted in a “systems consciousness¹” — a shift in how we perceive the functioning of our society and the location of the individual within that assembly. It is natural then that in a search for a true understanding and reflection of their cultural moment, artists are choosing not only to create art objects that embody complex productive systems, but also to join in

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Forums

For an up-to-date calendar of events in the arts and sciences please visit our web site:

<http://www.ylem.org/NewSite/news/Calendar.html>

Forum:

At the Edge of Not Being Seen

Wednesday, November 15, 7:30 PM

McBean Theater

The Exploratorium

3601 Lyon St.

San Francisco, CA 94123

At the Edge of Not Being Seen explores science and computer visualization. Learn about fascinating brand-new discoveries in cosmology, molecular biology as well as 3D visualization and prototyping for sculpture!

Einstein's Biggest Blunder? **The Case for Cosmic Antigravity** Talk by Alex Filippenko, Professor of Astronomy, University of California at Berkeley. Recently, observations of very distant exploding stars have provided evidence that the expansion of the Universe is speeding up with time, rather than slowing down as expected. This discovery resurrects the idea of a long-range "antigravity" effect in the Universe, first proposed by Albert Einstein and later renounced as his "biggest blunder." If correct, it implies that the Universe is currently 14 billion years old, and that it will easily expand forever. These results were voted the "Science Breakthrough of 1998" by Science magazine. Filippenko's primary areas of research are exploding stars, active galaxies, black holes, and the expansion of the Universe. He has won numerous awards for his teaching and research, most recently a Guggenheim Fellowship. In 1998 he produced a 40-lecture video course on introductory astronomy with The Teaching Company.

Art Prototyping: A Sculptor Goes Digital Bathsheba Grossman graduated summa cum laude from Yale in mathematics, and then received a masters in sculpture from the University of Pennsylvania. She went on to teach programming at Pratt Institute and work as a freelance Perl/CGI programmer while developing her artwork. Now she divides her time between sculpture and operating Protoshape, an art prototyping service bureau. Her sculpture can be seen

online at www.bathsheba.com, and art prototyping information is available at www.protoshape.com.

The Impact of Visualization on Molecular Biology Prof. Peter Kuhn from Stanford is an expert on visualization at the molecular level, using synchrotron radiation at the Stanford Synchrotron Radiation Laboratory. He has done ultra-high-resolution studies of enzyme function using protein crystallography and is now developing highly automated systems to explore the proteins of different genomes. This field, called structural genomics, is a new frontier in the life sciences and will lead to a better understanding of living systems.

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sine::apsis experiments

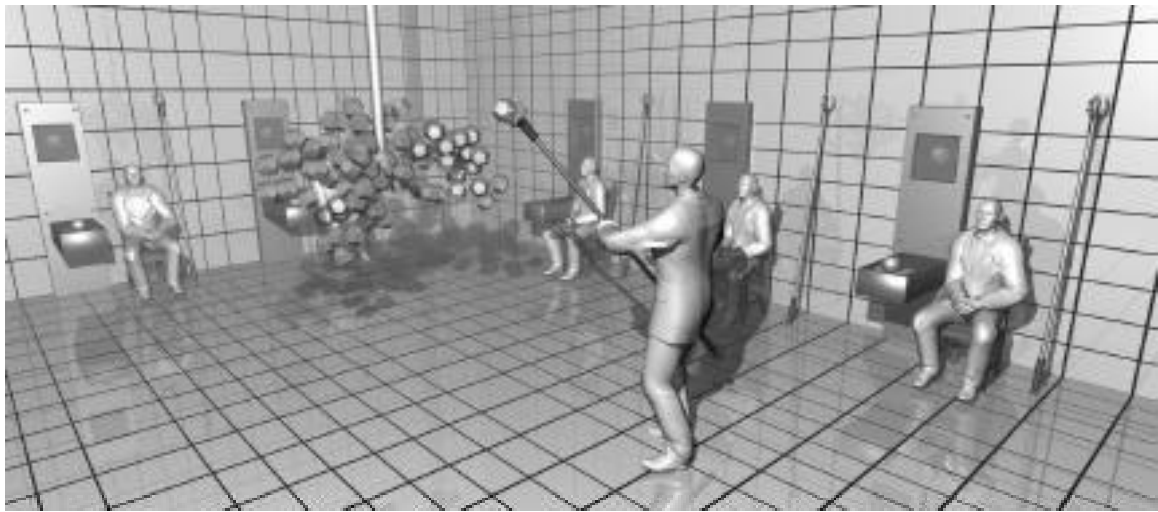
Andrea Polli and Sabrina Raaf

For myself as a participating artist in Fluidia and an active artist in other solo and group projects, one of the early challenges in being in the group was finding the time needed to participate in the evolution of the group. Another challenge I faced and still face is finding my personal voice as an individual collaborator. I think this issue is very significant for current and future collaborative groups in all disciplines as technology use becomes more and more widespread.

Andrea Polli of sine::apsis experiments

sine::apsis experiments (formerly synApse) is a Chicago-based collaborative art group which was founded in 1998. Each participant in the group is involved both in new

gather this data via local sensors (light and motion) and via the Web (from participants who log on our system and also network crawling "spiders"). The Fluidia system will process that data in a visibly intelligent and continually evolving manner. Participants who log on will have the chance to volunteer data to the system to process, but will also be surreptitiously scanned by our system for personal and local network information. The evolution of the Fluidia system will be controlled by it's own request for new "nodes", or computational pockets, to add to its current, physical network. (Data is distributed to each node in the network for processing.) In design, the nodes are polymer incased



The Fluidia Project. Image. ©2000 Fernando Orellana.

technologies research and fine arts practice. Our currently developing project is called the Fluidia project. From the outset, all the members of the sine::apsis experiments collaborative group embraced the use of technology as a way to enhance our collaboration. So to open our new project, we created an on-line discussion group with the practical goal of connecting members without temporal and spatial restrictions. The Fluidia project was initiated with this conceptual goal (as laid out by member Fernando Orellana): "In order to portray the ever increasing direction of humanity's evolutionary steps towards a united mind or consciousness, we come together to create an artistic system that mimics this network of minds. By doing this, we give the viewers the chance to reflect on what this union means, how we arrived at this branch in the evolutionary ladder, and where it might take us."

What we have arrived upon is an art installation and custom, computational network designed to explore relationships between human and machine intelligence. Our purpose is to initiate and foster the evolution of a creative intelligent system. This system is designed to autonomously harvest and synthesize data from its immediate local environment as well as remotely from the Internet. It will

processors which have capabilities of independently emitting light, sound, and vibration. Within the gallery, the Fluidia system is arranged as a vineyard of potentially hundreds of nodes and miles of looping wire connecting them. The addition of new nodes to the system will be ritually carried out by human workers who are to be constantly on duty in the service of our system.

The Fluidia project involves the creation of a decentralized system in which there are multiple nodes, each node sending and receiving data in very different ways. It is telling that our collaborative structure of artists operates in the same way. We work together through discussion forums, individual and group emails, various networking activities, by telephone, and in person. In person activities are formal group meetings or small group meetings that are both formal and informal. Our meetings are nomadic, each member acting as a host "node" at their respective site. Combined with all this collaborative activity, our project involves individual research and artistic development.

As a fairly new collaborative group whose structure continues to evolve, we have faced some challenges. Building

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Size Matters: Collective Constructions Critical Art Ensemble

One problem that seems to plague collective organization is the catastrophe of the group reaching critical mass. When this point is reached, group activity violently explodes, and little or nothing is left of the organization. The reasons for hitting this social wall vary depending on the function and intention of the group. CAE's experience has been that larger artists/activists' groups tend to hit this wall once membership rises into the hundreds. At that point, a number of conflicts and contradictions emerge that cause friction in the group. For one thing, tasks become diversified. Not everyone can participate fully in each task, so committees are formed to focus on specific tasks. The group thus moves from being a direct process to a representational process. This step toward bureaucracy conjures feelings of separation and mistrust that can be deadly to group action, and that are symptomatic of the failure of overly rationalized democracy. To complicate matters further, different individuals enter the group with differing levels of access to resources. Those with the greatest resources tend to have a larger say in group activities. Consequently, minorities form that feel underrepresented and powerless to compete with the views of the majority and their methods. (Too often, these minorities reflect the same structure of minorities found in culture as a whole). Under such conditions, group splintering is bound to occur, if not group annihilation. Oddly enough, the worst case scenario is not group annihilation, but the formation of a Machiavellian power base that tightens the bureaucratic rigor in order to purge the group of malcontents, and to stifle difference

Such problems can also occur at a smaller group level (between fifteen and fifty members). While these smaller groups have an easier time avoiding the alienation that comes from a complex division of labor and impersonal representation, there still can be problems, such as the perception that not everyone has an equal voice in group decisions, or that one individual is becoming the signature voice of the group. Another standard problem is that the level of intimacy necessary to sustain passionately driven group activity rarely emerges in a mid-size group. The probability is high that someone, for emotional or idiosyncratic reasons, is not going to be able to work with someone else on a long-term basis. These divisions cannot be organized or rationalized away. Much as the large democratic collective (such as WAC) is good for short-term, limited-issue political

and cultural action, the mid-size group seems to function best for short-term, specific-issue cultural or political projects.

For sustained cultural or political practice free of bureaucracy or other types of separating factors, CAE recommends a cellular structure. Thus far the artists' cell that typifies contemporary collective activity has formed in a manner similar to band society. Solidarity is based on similarity in terms of skills and political/aesthetic perceptions. Most of the now classic cellular collectives of the 70s and 80s, such as Ant Farm, General Idea, Group Material, Testing the Limits (before it splintered), and Gran Fury used such a method with admirable results. Certainly

these collectives' models for group activity are being emulated by a new generation. However, CAE has made one adjustment in its collective structure. While size and similarity through political/aesthetic perspective has replicated itself in the group, members do not share a similarity based on skill. Each member's set of skills is unique to the cell. Consequently, in terms of production, solidarity is not based on similarity, but on difference. The parts are interrelated and interdependent. Technical expertise is given no chance to collide and conflict, and hence social friction is greatly reduced. In addition, such structure allows CAE to use whatever media it chooses, because the group has developed a

broad skill base. Having a broad skill base and interdisciplinary knowledge also allows the group to work in any kind of space.

Solidarity through difference also affects the structure of power in the group. Formerly, collective structure tended to be based on the idea that all members were equals at all times. Groups had a tremendous fear of hierarchy, because it was considered a categorical evil that led to domination. This notion was coupled with a belief in extreme democracy as the best method of avoiding hierarchy. While CAE does not follow the democratic model, the collective does recognize its merits; however, CAE follows Foucault's principle that hierarchical power can be productive (it does not necessarily lead to domination), and hence uses a floating hierarchy to produce projects. After consensus is reached on how a project should be produced, the member with the greatest expertise in the area has authority over the final product. While all members have a voice in the production process, the project leader makes the final decisions. This keeps endless discussion over who has the better idea or design to a minimum, and hence the group can produce at faster rate. Projects tend to vary dramatically, so the authority floats

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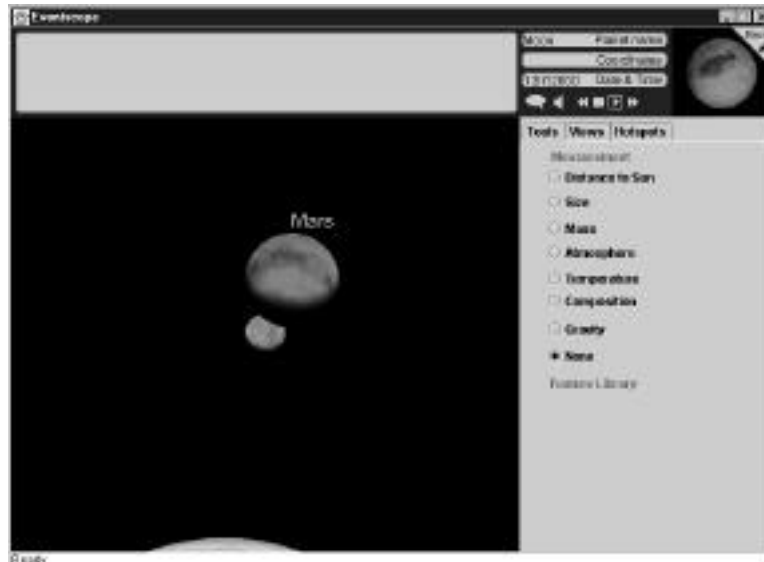
Cult of the New Eve, 1999-2000, group logo

The Remote Experience Lab

Peter Coppin

HISTORY: The Remote Experience Lab at Carnegie Mellon University is a descendent of the Centre for Metahuman Exploration (CME) group. Between 1996 and 1999, CME (www.metahuman.org) produced seven projects that allowed the public to experience remote locations using publicly accessible communications networks such as television and the telephone. The team included members from robotics, art, and architecture at Carnegie Mellon University. Our work was made possible by the University's interdisciplinary environment and the student loans of the team members. After graduating, many team members left the Centre for Metahuman Exploration and scattered across the country. Over the last year and a half we continued to exhibit in Austria and Italy, but no new work was produced. However, some team members have remained in the Pittsburgh, PA area and continue to produce work at the Remote Experience Lab based on the principles that guided CME.

something with that idea. Creating an environment populated with creative people from many different disciplines, backgrounds and inclinations increases the odds of turning creative potential into reality. Such an environment simply allows a kind of creative "critical mass" to be reached more quickly and more frequently than it would otherwise. This diverse environment also increases the chances for people to view their own disciplines from fresh perspectives and get feedback from people with completely different backgrounds. For example, our lab contains artists, psychologists, educators, a legal/business person, a writer, software engineers, and a roboticist. Whether someone is getting a cup of coffee or describing an idea during a team meeting, the odds are high that someone else is hearing a concept for the first time, and reacting to it by expressing their viewpoint or asking questions. This spurs the mind into directions that it would not go within a more specialized environment.



A screen shot of the Eventscope Project

GOAL: The Remote Experience Lab uses information technology to allow people to experience real remote sites that would be hard or impossible for them to visit physically, and to create public areas within information space for social interaction. This process is a hybrid of art, human-computer interaction, software engineering, psychology and robotics. Depending on the project, education can also play a major role.

THE COLLABORATIVE PROCESS: Creating new collaborative ideas might seem as nebulous as creating the correct conditions for life to evolve out of the primordial soup. However, scientists believe that when the conditions are right, life will evolve. At the Remote Experience Lab, we create the conditions for the birth and evolution of new ideas. The ability to create interesting projects has less to do with one's own creativity than with the ability to recognize a good idea when it crosses one's path or to brainstorm a promising idea until it becomes a good one - as well as having the opportunity to do

Another important ingredient seems to be having extremes within the same environment. *Project Club* is an experimental on-line game; *EventScope* is an educational project designed to enhance middle-school science and math education nationwide. This kind of sharp contrast between projects is part of what allowed the Centre for Metahuman Exploration to flourish. As an art student in the late 90s, I worked part-time alongside roboticists, software engineers and fellow CME members in Carnegie Mellon University's Planetary Robotics Building. NASA-funded robotics and CME art were done simultaneously, because the project manager and principal investigator were open to housing experimental projects in the space. This allowed a critical mass of smart people to interact on a daily basis. This is a paradigm we are attempting to repeat, but for a different kind of project.

Dancing Cranes

Marlena Novack and Jay Alan Yim

The following commentary presents our developmental thoughts—as visual artist and composer—on our multimedia sound-and-animation collaboration, *Dancing Cranes*.

I've heard a colleague insist that all works of art are collaborations existing between the artist and the viewer; one could argue further that all "viewing" is a collaboration between physiology and perception. It is my personal experience, however, that working collaboratively embodies a significant distinction from working independently. To begin with, you must coordinate schedules and deadlines with your partner. Since we each have professional commitments outside of our collaboration we must find a way to work with the other's scheduling needs while still giving our project the necessary attention. Right now this is our biggest challenge. Because we have respect for each other's careers we are able to do this, so I would say that the spirit of respect is very important for a successful collaboration. Trust is also an operative requirement. We have to trust that each of us will be generous in contributing the richness of experience garnered from years of commitment to our solo work.

Our joint history and engagement with music and visual culture has stimulated numerous discussions over the past decade. These talks would often take place during long drives across Germany or Switzerland while returning from concerts and exhibitions to our home in the Netherlands. It appeared that we were both able to process the work from the other's discipline in such a way as to provide a fresh response and sometimes unexpected commentary to the experience. This was exciting to us—our individual perceptual capacities seemed to expand through these cross-disciplinary interactions in conjunction with the opportunity to articulate these experiences to each other. As a result, the dialogue that developed between us over the years suggested that we should someday create a piece together, however, the format of our collaboration was not clear to us. We discussed various possibilities that included making objects that would be interactive in generating sound compositions. Although we have since enjoyed similar works by others, in our specific case this felt like a forced solution to our interest in finding a way to collaborate. Jay had previously worked with computer-generated sound at MIT and Stanford. I, however, sought an

alternative to "object-making"—to authentically work with (at least) one intangible aspect relating to music. Incorporating the aspect of time into my work has provided the answer, initially in the form of three CG-animations that were premiered in 1998.

As educators, both of us are intrigued by the relationship between non-linear time during the creative process and the resultant linear experience for the audience. A year ago I made sketches, using Adobe Illustrator, of a series of three vertically-proportioned *Dancing Cranes* pieces which were to be executed in encaustic on wood for an upcoming exhibition. When the images were reproduced as full-size paper sketches, they had the lightness and impression of long banners or Japanese noren. I wondered how they would look if they were painted on silk and could move a bit in the wind. Jay had a splendid idea; he suggested that I make another digital piece for screen projection in which the "cranes" could in fact move through digital animation. Shortly afterwards we saw a documentary on tribal



Marlena Novack and Jay Yim

genocide in Africa and were both equally moved and frustrated by the film in which peace did not seem to be a likely possibility anytime soon. I decided to dedicate my "crane" project to the concept of 1000 cranes for peace. Fortunately, I had recently been invited to be an artist in residence at Loughborough University (UK). This British Arts Council program provided the use of equipment and technicians for a two-week period to realize *Dancing Cranes*. I invited Jay to create an audio component for my project.

Since this was to be a collaboration rather than a straightforward film-with-score, we wanted to determine the structure of the piece together. During a three-hour boat ride in Thailand we unexpectedly had several ideas about the form. One thousand "units" of cranes seemed appropriate to the symbolism. We also developed a structure based on Golden Proportions, a system which we both use in our work. The Golden Ratio is present in terms of the deployment of ordered time segments based on Fibonacci numbers. The order of these segments has been composed jointly to yield a temporal scaffolding that fuses subjective aesthetic decision-making with a rationalized set of harmonized proportions. Using a digital-video camera, we recorded

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Haha has been working together since 1988. As a collaborative of four artists including Richard House, Wendy Jacob, Laurie Palmer, and John Ploof, Haha produced work in a variety of media, including 18 site-related installations in Europe and the US. In the past year one of the original four members (House) has stepped out and the remaining three are considering the question of whether what remains is still Haha—having been stably quadratic for 12 years—or Aha, or Hah, or a nascent something else altogether.

Our process for generating ideas might best be addressed by inverse example. This summer we were invited to participate in a group exhibition in Monaco, the gambling kingdom (ruled by a Prince). Haha has worked both inside and outside established art venues, but has maintained a consistent approach of critically questioning the specific context of viewing in every project. Instead of developing a new piece, the Monaco curators wanted us to remake a piece that was originally conceived for and shown in Grenoble in 1992.

The original piece, *Nana*, was a helium-filled blimp covered with red lipstick that kissed the walls of the gallery, plus the visitors and the other art. Until this summer, we have never considered adapting a previous work for a new site. Because we were interested in Monaco as an unusual municipality, we began to brainstorm updated versions of the old *Nana*. Since we no longer live in the same state, and can't spend long hours at the kitchen table over coffee, we used email and conference calls as meeting space, and met once together in a Chicago pizza parlor.

The original *Nana* had been, in part, about transgression, with the art-object leaving its mark on all elements of the context which made it possible. *Nana* literally rubbed off on the audience, the walls, the curators, the other art; it was infectious, seductive, ridiculous, vulnerable, outrageous, messy, dangerous, irresistible. Was there some other way to

respect and re-stage this essential aspect of the piece in a different guise?

All of our intimate relationships were at that moment subjects of discussion, and kissing was on our minds for various reasons besides the Monaco invitation. For the only time in Haha's history of making work could we trace directly who came up with the central idea for this piece, since ideas usually get distilled at high temperatures in a collective pressure cooker until all traces of origin have been steamed away. But in this case one of us suggested that the piece

simply involve hiring people to kiss, passionately and inspiringly, at various locations during the opening. At first the completely performative aspect of this idea seemed too raw and unformed—we have often been mistaken for a performance group but we have never made performance work. Plus, how could we use an idea that was so unbaked by collectivity? But the idea took hold



Delinquency and Opportunity, Les Abattoirs, Toulouse, France, June 2000.

anyway, with these additions: at least one of each kissing couple would be a security guard, and there would have to be several differently gendered combinations. When we found out that the Prince of Monaco would be present at the opening and Security was going into high gear, the pot was sweetened. The authority of those fancy uniforms diverted from surveillance to engulfment in blind desire was appealing, with the hope that their embrace would inspire others to acts of passionate affection. However, the curators in Monaco very politely refused to acknowledge the transformation of *Nana*, and continued to ask for the precise dimensions of the blimp. At that point, we decided instead to incorporate the new kissing piece into another project we were working on this summer, for a group exhibition of collaborative works in Toulouse, France (LesAbattoirs). We had already developed one element of the Toulouse project (based on another earlier project!) and putting the two together resulted in *Delinquency and Opportunity*, both a sculptural installation and a performative action. from the statement:

The action, which will take place during the opening of "L'Oeuvre Collective", will be performed by

16 participants (8 couples), 10 working as security guards and 6 working as museum goers. During most of the evening, the guards will blend in with the existing security force. Periodically, throughout the evening, they will deviate from their normal responsibility to engage in a more personal activity, to kiss openly, passionately, at length, and in variously gendered combinations; with each other, and/or with the six participants employed as museum visitors.

Kissing on the job is an act which occurs perhaps less frequently or at least less visibly than kissing in public, but both actions transgress socially agreed upon borders between the public and private; between the personal and professional. For *Delinquency and Opportunity* security guards will be offered a delinquent opportunity to transgress.

Haha's assumption is that seeing persons kissing who look like they have authority will grant permission for others to act similarly, and the opportunity for a collective transgressive action will spread contagiously.

Delinquency and Opportunity also includes a bottomless bank that accepts deposits in a slot at the top then spews them out, rolling and skittering, across the floor fifteen meters below in a glittery torrent of currency. This piece offers an opportunity to satisfy the "illogical and irresistible impulse" to throw one's money away. This impulse counters logic and common sense, but exists as a fundamental, if unmentionable, dimension of capitalism—a collective necessity for sacrifice, as well as a temptation for individual liberation—to "let it go" or "give it up", associated variously with sex and bungee-jumping.



Delinquency and Opportunity, Les Abattoirs, Toulouse, France, June 2000.

Haha's design of this piece in relation to Les Abattoirs pairs this temptation to let go with the vertigo inspired by the new architecture of the building, with which Les Abattoirs officially lets go of its history as a slaughter house to reveal its new mission as a cultural institution. If vertigo is a flirtation with falling, this installation offers participants and observers an opportunity to experience the flight of the fall, substituting a part for the whole, the coin for the body, and to gauge the distance between body and ground by the sounds of the coin turning corners in the tube as it marks the stages of its falling.

This part of *Delinquency and Opportunity* legitimates and attempts to make visible counter-productive impulses, similar to Bataille's "in subordinate function," reminding us of the illogical and non-sensical inherent in reigning imperatives to produce, possess, and protect.

In the end, part I, the kissing part, was not realized. 16,000 visitors streamed through Les Abattoirs each of the three

days of its initial opening and the security guards were overwhelmed with a sense of professional obligation, as well as the curators having quietly dropped the buck. So this text narrates development of a piece that has not yet happened, that may exist only in these pages. Working as an artist inevitably involves some kind of collaboration with the context in which a work is presented; adding a few more persons to that mix is in some senses, a small step. The hardest part is when old ideas, residual ideas of what art should be interfere in one's psyche—when you lose sight of what exactly is going on here—a collective process of making meaning, a process that is always inevitably collaborative: between makers, presenters, and participant/viewers. ~~XXXX~~

For more info on Haha:
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Flesh Machine, 1997-98, Vienna Manifestation. A doctor draws participant's blood for DNA amplification at an on-site lab as part of the process of creating a donor profile

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among the membership. At the same time, CAE would not recommend this process for any social constellation other than the cell (three to eight people). Members must be able to interact in a direct face-to-face manner, so everyone is sure that they have been heard as a person (and not as an anonymous or marginalized voice). Second, the members must trust one another; that is, sustained collective action requires social intimacy and a belief that the other members have each individual member's interests at heart. A recognition and understanding of the irrational components of collective action is crucial-without it the practice cannot sustain itself.

Collectives also have to consider what is pleasurable for its members. Not all people work at the same rate. The idea that everyone should do an equal amount of work is to measure a member's value by quantity instead of quality. As long as the process is pleasurable and satisfying for everyone, in CAE's opinion, members should work at the rate at which they are comfortable. Rigid equality in this case can be a perverse and destructive type of Fordism that should be avoided. To reinforce the pleasure of the group, convivial relationships beyond the production process are necessary. The primary reason for this need is because the members will intensify bonds of trust and intimacy that will later be positively reflected in the production process. To be sure, intimacy produces its own peculiar friction, but the group has a better chance of surviving the arguments and conflicts that are bound to arise, as long as in the final analysis each member trusts and can depend on fellow members. Collective action requires total commitment to other members, and this is a frightening thought for many individuals.

While cellular collective structure is very useful in solving problems of production, long-term personal cooperation, and security (for those involved in underground activities), like all social constellations, it has its limits. It does not solve many of the problems associated with distribution, nor can it fulfill the functions of localized cultural and political organizations. Consequently, there has always been a drive toward finding a social principle that would allow like-minded people or cells to organize into larger groups. In order to bring people together from different subsystems who share a similar concern, hybrid groups have to be intentionally formed. These groups are made up of people who are focusing their attentions on one or two characteristics that they share in common, and who put potentially conflicting differences aside.

This kind of alliance, created for purposes of large-scale cultural production and/or for the visible consolidation of economic and political power, is known as a coalition, and in the best case scenario is constituted by a diverse body of cells. This model of autonomous cells connecting for short-term action, with no centralized leadership, seems to have demonstrated its usefulness not just in cultural production, but the general realm of political action. Surely the examples of Seattle and Washington, DC, have shown how effective liquid coalitions can be. Much to the surprise of the old guard of organizational strategy, radically decentralization groups can work together in harmony; they can also do so with far less fear of appropriation by internal or external authority, and with less fear of infiltration and subversion by the police or other agents of authoritarian order. Most significantly, productive politicized actions can be staged without sacrificing difference for the good of the whole-micro and macro politics can function as complements rather than

tending toward conflict! By employing and integrating these varying levels of collective activity, we can be ready for powerful resistant actions in a manner adaptable to a variety of situations--one that does not fall prey to internal bureaucratization, and that is pleasurable due to lessened alienation..XXXX

Critical Art Ensemble (CAE) is a collective of five tactical media practitioners of various specialties including computer graphics, film/video, photography, text art, book art, and performance. Formed in 1987, CAE's focus has been on the exploration of the intersections between art, critical theory, technology, and political activism.

To see recent CAE projects and texts visit:

critical-art.net critical-art.net/cone

critical-art.net/SRA

critical-art.net/biocom

critical-art.net/documentation

MY PERSONAL INSIGHTS ON COLLABORATION:

- I am an artist because I want to communicate with people. The collaborative working process allows me to mix creativity, visualization and people within the same process.

- I can experience more projects at a time than would otherwise be possible.

- Individual ego is the biggest danger to a group or collaboration. The healthiest environment appears to be the one where one's ego is linked to the success of the group. I find myself saying "we" or "us" more than I say "I" or "me." This is especially true when it comes to ideas. When people cannot let go of their personal ownership/authorship of an idea it can be extremely destructive. It not only makes it hard for other people to be satisfied by participating, but also makes an author defensive to criticisms or suggestions.

- Attempting to please everyone can result in a diluted final product. The difficult thing is navigating the territory between letting things go and trying to encourage a direction.

- The most satisfying thing is when ideas emerge that no single person could have created. This is when the group knows that the endeavor is really worth it.

PROJECTS:

The EventScope project

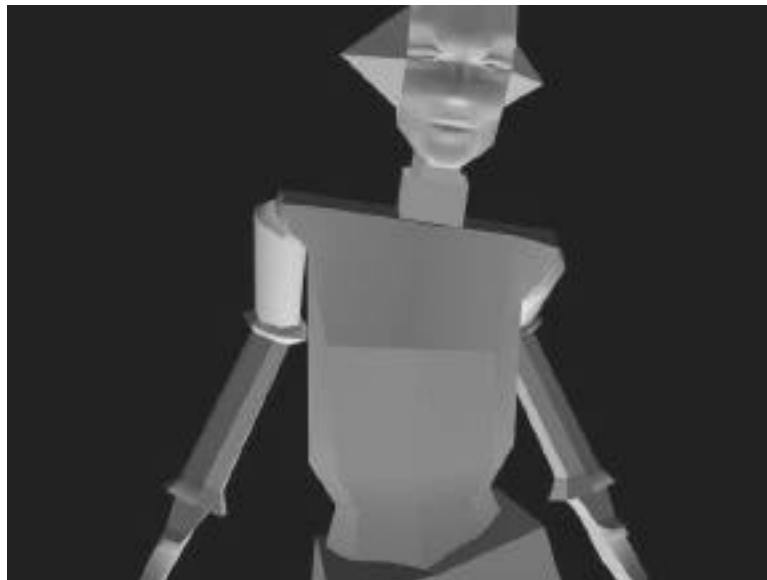
(www.eventscope.org) is a public interface to NASA planetary missions that will combine robotic sensors and Web technology to allow people to explore a remote environment from their classroom or home computers. Our system takes data from these missions and turns them into 3D models that can be explored the same way a user would explore a 3D computer game. However, in this case they are exploring a representation of a real remote site. In addition, the remote sites are placed in a scientific and historical context that addresses national science-education standards. This project was influenced by the Centre for Metahuman Exploration's *Rover TV*.

Project Club is an on-line social environment where users enter a virtual space via 3D avatars. *Project Club* enables social interaction on the Web, but instead of being based on text or voice communication, it also allows individual expression and interaction through movement, dance, music and design. Users can enter a virtual nightclub and dance, DJ, play music, talk to each other, and explore spaces created by architects and designers. They can also add their own rooms to the virtual nightclub, including their own music and interior

design. *Project Club* is a response to the lack, in many cities, of public forums for interaction and unregulated, "autonomous" public spaces for socialization and expression.

FUNDING: *EventScope* is funded by NASA and the Heinz Endowments, the Henry C. Frick Fund of the Buhl Foundation and the Grable Foundation. NASA pays the necessary University overhead to sustain the lab. *Project Club* is funded by a local start-up company called Adaboy (www.adaboy.com). None of these funders are typical art funders. Many are philanthropic, high-technology oriented, or education oriented. A strategy we use is to create an environment with a solidly funded project surrounded by smaller experimental projects. Money is as real as gravity and small projects need shelter within which to survive. Likewise, a large project with several full-time people can become rigid in its thinking. The existence of smaller short-term projects

within the same space keeps things fluid. In our case, the *EventScope* project has fairly stable funding sources, while *Project Club* is relatively low budget. *Project Club* does not use any *EventScope* resources, but it can use the lab freely as long as it does not interfere with *EventScope* business. Over time *Project Club* and other experiments like it may become larger projects. The risk of a low-budget experiment is low enough that it can be extremely creative. It can take risks that a larger project can't.



A screen shot of Project Club

Having large projects share space, and in some cases team members, with smaller ones provides support for the small project and inspiration for the large one. The experiments and lessons learned on the small project often become a part of the larger project. XXXXX

Peter Coppin, Principal Investigator, *The EventScope Project, Remote Experience Lab, STUDIO for Creative Inquiry*/ Robotics Institute Carnegie Mellon University.

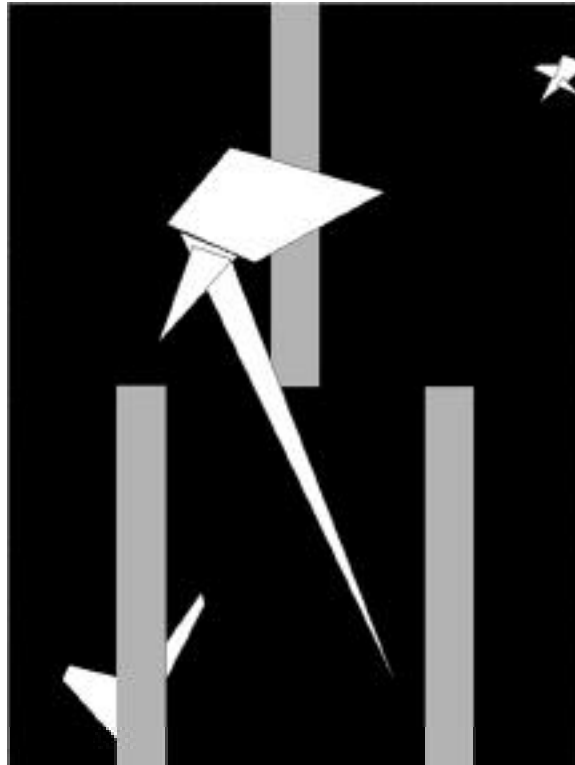
(continued from page 6)

images and sounds in Thailand which might be incorporated along with other such materials from previous trips to Japan. The resultant work will function symbolically, so any obvious references to the original sounds and footage will be obscured by transformational processes and digital manipulations. The audio and video streams are not "interactive" in the sense of either one being algorithmically-generated in real-time directly in response to one another, since this work is intended to be presented as an installation, and not as a performance, per se. Our work is therefore collaborative in the studio production phase, where composed musical passages are generated partially in response to draft versions of the video, as well as the existing proportional scheme, the reverse is also true. It is important to us to maintain a balance between the liminal and the subliminal.

Being in the initial phase of the project, we face unknown and unexplored territory ahead; this is bound to have an impact on the precise manner in which the content of *Dancing Cranes* will reflect more universal concerns. My own interest in visual perception and its relationship to society is always fundamental to the work I create. To varying degrees both my digital and encaustic works address situations where cognition conditions conceptualization, and where a priori concepts influence the accuracy of one's cognition. I am interested in the social and philosophical implications that exist when one realizes that "seeing is not believing". Ultimately, I intend the social impact of my work to be felt through its induction of destabilizing or stabilizing our perceptual complacency, since it is within the boundaries of our perceptual framework that we interpret and act within the world. While working collaboratively will not alter my principle concerns, it will extend them into the world of sound. Although Jay says that he typically does not address these points in his independent work, he feels that our project will provide an opportunity for him to also explore these issues in a sonic dimension. We are hoping that the result will be a piece that is accessible to a broader portion of the community than either of our individual works might be. Part of the gift of collaborating is having several sets of creative ideas, plus the vitality that occurs when two or more people are working together. As this project develops, our personal identities are gradually absorbed into a partnership; from former collaborative experiences we can say that a sense of the

group has to override that of the individual. Naturally, this shift in priorities must take place to have a successful outcome and this is an area that requires attention if communication is not operating optimally. The emphasis on developing better societal skills is important and can be directly mapped onto the ability to contribute and function effectively within one's larger community. XXXXX

Marlena Novak (and Jay Alan Yim)



Dancing Cranes, 2000.

(continued from page 1)

complex productive systems (a.k.a. contemporary collaboratives) in order to create them.

In this issue, Andrea Polli and Sabrina Raaf of *sine::apsis experiments* write about their experiences in an evolving collaborative structure and the influence it has on the art being made. Steve Kurtz writes about the organizational structures that have worked for *Critical Art Ensemble*; including the cellular-structure and the "floating hierarchy." Peter Coppin of *The Remote Experience Lab*, discusses the productive, creative and funding benefits of working within a collaborative lab setting. Marlena Novak and Jay Alan Yim, examine the processes of two artists entering into collaboration. And, *HaHa* describes their collaborative projects, as well as the notion that the meaning in art is a broader collaboration - one that includes the exhibiting institutions and the participant/viewers. ~~XXXXX~~

1 Jack Burnham, *Beyond Modern Sculpture*, 1968.

Sabrina Raaf and Amy Youngs are both founding members of the group *sine::apsis experiments*, and creators of new media and sculptural art work exhibited nationally.

(continued from page 3)

an effective collaborative structure was time-consuming at first. Rather than imposing a "known" collaborative structure, we agreed to commit the time necessary to develop a structure through evolution. All members committed to the belief that a lasting infrastructure should be evolved rather than imposed, like the evolving technological systems that are our artistic focus.

One of our biggest challenges has been in forming a common language. As technological artists, we come from dramatically different artistic, educational, and experiential backgrounds. Each member has worked in refining a medium appropriate to their individual goals, interests, and personal working styles. Each of us has a basic level of technological literacy (i.e. computer and/or electronics literacy), but there are few standards in the more advanced areas of members' technological expertise that ranges from robotics and electronics to database programming and biotechnology. Like many technological artists of today, some *sine::apsis experiments* members have been involved in outside efforts to create standardized tools. However, since the Fluidia project involves the cutting edge of technology, such tools are not always appropriate.

As such, *sine::apsis experiments* requires each artist to undergo an expansion of technical expertise for greater group interaction. A programming language, hardware, or software that an individual member may choose in creating his or her own work might not be appropriate for the group project because it is unknown within the group or incompatible with other aspects of the project.

In addition to each member expanding their skills to other areas, *sine::apsis experiments* has expanded membership

over time, finding and inviting artists with similar artistic and philosophical leanings and the technical expertise demanded by the current direction of the project. As projects develop, we also invite the participation of scientists and engineers as members or consultants.

sine::apsis experiments is an evolving process, and like a large city, it will change its identity and face over time to respond to changing conditions. This vibrant and exciting process keeps the collaboration alive and vital. We have created a multi-dimensional state space which has an unpredictable aspect yet has a shape which can be conceptualized. Through setting the system in motion, we hope to create a state change in both physical and virtual space.

Other projects by have included the exhibition, *in::FORMATION*. For catalog essay and images, please visit www.uturn.org/synopsis. More information on the group and it's members can be found at www.sine.org. ~~XXXXX~~

Andrea Polli is a digital media installation and performance artist living in Chicago, Illinois; She received an Master of Fine Arts in Time Arts from the School of the Art Institute of Chicago and is currently a member of the faculty of Columbia College Chicago and an adjunct faculty member of the School of the Art Institute of Chicago. She has exhibited and lectured nationally and internationally.

Sabrina Raaf is co-founder and past Director (1998-2000) of the *sine::apsis experiments* group. She is a Chicago-based artist who works in experimental sculptural media and digital imaging and is also a faculty member at the School of the Art Institute of Chicago and at Columbia College. Her work was exhibited recently at the Art Institute's Betty Rymer Gallery, the Corcoran Gallery of Art (1999), the Chicago Cultural Center (1999), and the David Adamson Gallery (Washington, DC, 1998).



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*n., pronounced eye-lum,
1. a Greek word for the
exploding mass from
which the universe
emerged.*

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