Tony Conrad interview by Chris Hill (transcribed by Nell Lundy; unedited)
March 17, 1995

Chris: There are two broad areas I would like you to address, one is this area
which would address the intersection of ideas concerning film, music and video
and electronic imaging, architecture and electronic tools as the projects of the
early 70Õs and late 60Õs would converge in these different technologies and
would play themselves out at the beginning of the discourse around video. I
also interested, and it seems to me, that this early period maybe 1969 and 1973
was particularly fertile and it seems that there was a lot of....I donÕt want to
use the term interdisciplinary, its seems in retrospect it seems
interdisciplinary, but at the time people really saw it as pursuing agendas
that... people were using different materials, people were searching for
fundamental vocabularies...IÕm not so sure that these different materials were
seen as exclusively different areas of discourse. But it seems like a
particularly fertile time not only for ideas but also for people combining into
different types of groups, establishing different places where work could be
seen and talked about. Those are broadly the two areas IÕm interested in having
you talk about.

Tony: What were the two? That sounded like one.

Chris: The one area deals more specifically with the ideas that have to do with
coming up with a vocabulary that was perhaps common to film, music, sound video
and the other is the scene that might have generated the discourse. The third
thing which is part of the second is to get at what the relationship was, of
course there are many relationships, but if you could talk about ideas you might
have had about the relationship between presentation of work and audience. I
think this issue of the relationship between the audience and the work
is...whether the audience was more intimate more knowledgeable, whether they
were less knowledgeable, whether...how much did this have to do with a working
core of people, those are some of the other issues IÕm interested in having you
to talk about.

Tony: Going all the way back to Black Mountain College and John CageÕs
collaboration with Merce Cunningham and Robert Rauschenberg and the early 50Õs,
there was a willing awareness of a concern with a location of the work. In
exploring that, at that time I think there was less focused attention to the
social, or more specifically the political armature, and yet just as today you
have a function of the government interaction with the arts that manifests
itself in these assaults on Andres Serrano and so forth, at the same time in the
50Õs there was also what appeared to be a tangential interaction between
government and the arts in that abstract expressionism could rapidly become an
official state art. And although these things may have the appearance of a
later time, of being an afterthought or an after the fact discovery they
certainly had an impact at the time. Generally within the arts there was a more
hermetic sense, I feel, of a western tradition at that moment, so that, as much
as artists may have looked at a jazz culture or a 3rd world culture they
probably cast about and found the influence of Dada and earlier movements.
Holsenback was in NY, Duchamp...

Chris: Holsenbeck?

Tony: A Dada artist. The first time I had any contact with Lamonte Young in
which he asked my opinion, or asked me what I thought about anything in writing
was a letter I received when I was living in Denmark in 1960 which included some
of his neo-dada pieces. Like about lighting a fire and listening to the fire or

the piece is as long as the fire. This sort of piece has been lodged in the
public imaginary as a stylistic form. Its identified with Yoko Ono. Although
my response at that time was to say that I was also interested in listening to
fires...in other words, as always IÕve been concerned with the position of the
audience in some respects and was responsive to the idea that the composer, in
some sense, should be absent. As I was in other situations, where borrowing
popular music and recording insects and natural sounds and so forth. It was
clear in the correspondence that LamonteÕs concern was more with the formal
disruption of categories. Indeed this was the direction that had been taken in
some of his other pieces, and came to characterize the ferment of the whole
Fluxus movement. This may have been happening in other areas as well but there
was an idiomatic awareness of a scene in the Fluxus environment that enmeshed
the work of poets and composers and performers and dancers, sculptors, painters.
Asian participants were of course involved with art from another perspective.
Macunias, who formalized Fluxus as an entity, was certainly involved with the
elements of social disruption and reconfiguration that it entailed. But,
running through the whole thing was, and which is frequently commented upon, was
an aberrant sense of humor that was very important. A kind of caustic humor.
Sometimes raucous, sometimes even destructive but always ironic and taking great
delight in fragmenting expectations and breaking down the normative conditions
for art making, the normative cultural boundaries.
So, when Nam June Paik arrived on this scene in NY, when he arrived in NY, he
was preceded by some awareness of the sensational pieces he had done organized
around sexual themes, which introduced a new element. Explicit sexual terms
hadnÕt been exploited in this environment. In some respects because many of the
people who were involved were, somehow, I would say, fundamentally repressed and
characteristically, at the same time broke through these repressive boundaries
of character in constructive ways. These were people who were using the
confining conditions of personality and culture in short as constructive tools.
So, in short, Paik now was sort of off the wall from the first and mixed remote
identities. When he started to do work with TVÕs this could be seen in some
respects as a kind of visual electronic music. Particularly as he worked with
engineers and adopted many of the conceptual tools and ironic approaches that
had been nascent in the environment at that point anyway, like how funny it
would be to have the TV green, or upside-down. Funny, not somehow, funny all by
itself, but funny in an important way which had to do with fractured
expectations. Much like a Dick Higgins piece where you boil the telephone. I
mean was that a networking piece? Perhaps. As the time went by there were
involvements with television of course, which Paik and others exploited in
establishing an intersection with communications environment. There were events
which could be seen as assuming value or stature simply because of the way in
which they represented a networking situation. That was primarily during the
70Õs and you had the emergence of slow scan interactions and using phone wires,
intercontinental broadcast via satellite, for example, as was done as an
exercise from Documenta 6, etc etc.
 But in terms of the direct linkage of video with other areas of work, right
from the beginning I would suggest there was a kind of accessible interface
which was amplified, in the case of the musical situation, by the fact that
there was also activity going on almost autonomous of the scene involving Fluxus
and based in a quite different milieu. There was a scene going on which had to
do with underground artists, and IÕm talking about The Fugs and underground film
and the drug culture in another incarnation, although the Fluxus culture was not
completely isolated from the drug culture, there was much greater hostility to
drugs in that environment than there was in the underground culture.

Chris: Hostility to drugs from which culture?

Tony: Well, like John Cage spoke out against drugs at a certain point, when he realized that certain elements were involved with drug using. (laughs) In the context of the underground what happened was, I could just use my own biographic experience as an example, that I found that there was room for a composer or a musician to work with a filmmaker. Filmmakers needed audio experience and they needed audio technology. They needed to work with audio people. In film, as in theater, you have an already overlapping forms and intersecting forms. Of course, out of this potpourri, there began to emerge other terms of this crossover having to do with the imbrication of high culture with the low culture, s that already in the Velvet Underground you have the Exploding Plastic Inevitable shows at the Fillmore East or at the Dom where Gerard Melanga theatrically wielded a whip on stage, the band played pop music and there would be a light show. A lot of the synchrotism of different elements was abetted by the taste for that kind of overlapping and totalizing experience on the part of the drug culture.
These were people whose bias was not toward minimalizing expression but more toward a totalizing expression. It was odd that there were two things going on at the same time, as sort of dialogical forces. One of which was the minimalizing and one was the totalizing. In some respects these werenÕt so remote from one another as they appeared to be, other than as functions of temperament. The totalizing drug culture of course was not as repressive, characteristically. The individuals were less repressive, characteristically. There were people who were mixtures, like Andy Warhol, who is in a way the exception that proves the rule in both cases.
The discovery of minimal culture arose out of three different things. One was the serious discovery on the part of the artists that by confining their tools and concerns more narrowly than had ever been proposed, that they could achieve wider understandings and more profound circumstances for the reception of their work. Almost a perception encapsulated in the maxim: Less is more. The second thing that went in the hopper was that it was a route to irony and humor. That is, there was both the possibility of disturbing bourgeois, but more generally in taking advantage of the expectations that were to be found in the environment of high culture, so for example, MaciunasÕ concerts were frequently staged as high culture events, but then deviated radically from the forms of high culture, much as the futurist Syntasi (?) had done 50 years earlier. The spirit that motivated this was one which had a lot to do with having fun. The third element in all of this I think was the fact that the gallery scene found it possible to cash in on these developments. That there was a ready-made ideology and set of circumstances which resulted in a high level of salability. There was an excellent revolution that was produced that was engineered by artists very close to these movements. In this respect, for example, the humor of Walter de MariaÕs work succeeded less effectively than the machinations of Robert MorrisÕ work in a related territory, using, that is, boxes. Here then was a situation where there were advantages to be found in relation to the gallery system, and in relation to pop performance, and a lot of things in between, and many of these elements were overlapping, and had to do, at their foundation with intersections among all these different artists and their work and in their practices. It could be that there is a particular flavor to the interactional environment of the late 60Õs and early 70Õs. Its also possible that this has been going on for quite some time. If you looked at the Surrealist movement you would find a similar kind of thing happening. Certainly the same kind of thing happened in the Futurist movement with you know who knows when all of this got started? (laughs)
When you bring video specifically on board with Paik, for one, and then secondly with the people of Radical Software and others who took a more lifestyle approach to video and what it was going to do, and third with artistÕs video, you are dipping into this pot very specifically because you have these same

communities at work. I canÕt speak as clearly for the people who began right off to make documentaries or who, for that matter I canÕt speak as clearly for people like the Videofreex and all of them because I wasnÕt really in touch with them, although because of the emphasis that they brought from a totalizing perspective, the philosophical writings of Radical Software, which tended to be joyous and uncritical, were inclusive in their nature and not so much narrow, logical investigations, as much as they tended to be elegiac of the terms of the media. Now, I would just want to go into my own sort of position in relation to a lot of these things and to suggest that before I get to the audience question to say that my entry onto the scene as an individual artist came with Flicker. And that arose, that film arose as a bridging between the two scenes in which I had been involved, one was the underground film and the other was the development of minimal musical form. In connection with the music I had become aware of the way in which a narrowing and a shifting of attention from traditional harmonic and melodic forms could re-enrich the musical environment through the introduction of new kinds of listening, an awareness of different sorts of tools and elements of sound, and a different sort of approach to the control of the musical environment generally. As a young scientist, or an aberrant young scientist rather at the time, and maybe not so totally remote from the pains and practices of PaikÕs in that respect, it was apparent to me that some of what was involved in the reorientation of music had to do with an understanding of the internal structures of the wave form and its relation to perception. I became fascinated by the ideas that there might be analogs in the visual realm which would lead to new ways of seeing and new ways of redirecting visual attentiveness. At the same time I had been exploring using flashing lights in connection with drag queens and costume jewelry and fantasy universes. I felt that the combination of flashing lights technology with narrative environment held great promise. But I didnÕtÕ have the tools or the money, being as poor as a church mouse at that time, to achieve anything in the way of show biz or film approach. So I decided to purify the tool and present that as a film. In that sense the flicker was both minimal art within a familiar conceptual framework; also an exploration of possibilities for fantasy and narrative within a movie framework. It was also linked to ideas about visual perception which were unfortunately mawkishly short-circuited by the emergence of OpArt. In fact I would say that OpArt took the so-called structural film and put it off the artistic map, conveniently so because the film didnÕt fit the gallery situation except as a door opener. But the reason I bring all of this forward was that there was a cross-over between musical and visual terms of investigation for me that solidified in that film, and I think that other filmmakers, not all or many but other filmmakers had experiences like that as well. So it was quite natural for me to look to film and performance and sound and, as a natural extension, video as well, as tools that could be exploited synchrontisitically, since experience bore this out and technologically adventurous performers like Laurie Anderson of course who opened a pocketbook to project a film on the ceiling during an early performance of hers, exemplified that kind of synchrontism. Laurie Anderson was first a violinist, a conceptual violinist and filmmaker before she really began to do the better known pieces. [extraneous discussion]

A space like the Kitchen where I found Woody and Rhys Chatham, Dimitri Devyatkin and Steina and the gang, was different from a gallery performance space, they were not really doing Body Art, and the relation between performance as body art and video is another history that youÕll find amply carried forth in other contexts.

Chris: Acconci?

Tony: Yea, like Nauman. There were a bunch of early people doing things like that. Also Charlemagne Palestine whoÕs basically performing video as a musician. But I wanted to go back to the Kitchen. The Kitchen environment was set up to sort of overlap between video, technical work with video, work that was concerned particularly with a technological engagement, a build-it-yourself ethos, a dirty hands ethos in the approach to video, which was the way to really get started but also you might say a dirty-brain approach, but I donÕt mean that. There was a lot of enthusiasm which underlay the establishment of a place like the Kitchen, as often it depended exogenic influence, like the fact that the founders of the Kitchen came from Czechoslovakia and Iceland isnÕt that different from the fact that the whole punk film movement 10 years later originated with makers from Israel, South Africa, England, etc, etc. People who found that NY was, not only a fertile environment for action, but that it represented something on an ideological plane of engagement. This was important I think to have in the city. All of what IÕm talking about is NY based, except for the fact that one of the reasons I was less in touch with the Videofreex and these groups is that they tended to circulate in a more hippie environment, and they were all over the place geographically. Whereas I didnÕt even know how to drive. When I went to work with, (end side 1) when I was invited to do a piece at the Kitchen, in 1971, I was interested in doing a piece with film loops, a minimal film piece that was a contructivist exercise using just positive and negative loop images of stripes, that flickered and then the images could be overlapped. I wanted to suggest a subjectivist and spiritual reading of this environment, that is to encourage, in the terms of that time, a meditative approach to the exercise. Encouraging the audience in a meditative direction was a way of creating a kind of atmosphere of sacred expectations that was achieved in the gallery or museum through the imposition of the white cube and the silent treatment. The need for a reflection was important, and the way reflection could be understood and made legible in that day was to carry over audience expectations based on the drug experience and on meditational experiences. Although today we tend to look back and discount some of these sort of seemingly ÒspiritualÓ elements as artistic chafe, in effect, thatÕs a discrimination which is made unevenly, is allowed to apply to some things but not to others, is allowed to condemn the idealism of a New Age thinking but not of the Civil Rights Movement, and is allowed to condemn the hubris of the anti-war movement but not of the gallery or museum. I found that it was natural for me to create an overdetermination of these elements using musical resources. In this piece which is called 10 years alive on the infinite plane I used Rhys' and Laurie Speigel as performers. SheÕs an electronics whiz in electronic music these days. They were unfamiliar with the minimal music tradition at that time, although Rhys, for his part had been exposed to a lot of music and way a very smart student of Indian music and diverse influences which gave him a powerful base for developing somewhat thereafter, his wall of sound of minimal guitar band.

Chris: It was called a wall of sound?

Tony: Quotes, Òwall of sound,Ó I donÕt know. [extraneous noise] I think that although Rhys wasnÕt that well know in this country, he worked with a number of guitar players, including Glen Branca, who became noted for the same sound Rhys' band was producing, and Lee Renaldo of Sonic Youth, among others.
Back to Woody and the video. At the Kitchen it way my desire to explore algorithmic intersections of these stripped minimal materials and I wanted in particular to implement a binary logic algorithm corresponding to the logical connective, exclusive/or. Which would be defined in this way: that if you combined say a white area in image A with a white area in image B the result would be black, or, a black area in A with a black area in B would be black.

But if the two images where different in any area then the resultant image would be white in that area. This is a dyadic approach to image construction and high contrast logic. I was interested in doing that because I wanted to see what it would be like. (laughs)

Chris: So you wanted to see what it would be like? Was there any other value that you attached to that, or that logical connection?

Tony: Yes, at the level of some detail, in this respect: that I had been working with the idea ever since of implementing some kind of connection between narrative and pattern. IÕm using the term pattern generally to allude to the flicker or some other kind of image which might be consequential when combined with a narrative idea.

Chris: Would you call this a structuring device?

Tony: Yea, as a structuring device for imagery. Precisely. A familiar analog to this idea of narrative structuring device would be one which would be some readers would be the early images of Sherry Levine in which she used silhouette patterns imposed on other images. But, I was interested in exploring the workings of these sort of image components in a moving image environment. In order to do that I had developed my own facility for doing bi-pack printing of films.

Chris: Bi or By?

Tony: Bi-pack. Its a technique in which two strands of film are printed together. Sort of like mounting two slides in the same slide frame and then see what the image is like.

CHRIS: Is was bi-pack film? What would you call it?

Tony: Bi-pack film printing, bi-pack printing. Its a way of copying two films by laying one on top of the other so you actually are seeing the image that you see through the two films. Now, thatÕs not the same as a double exposure. This is where I became kind of interested in the whole logic of this, because it turns out that a double exposure, of course, simply comes out different. You can give an example of this: suppose you have two images and one is very dark. Say a night image and a day image. If you bi-pack them the image will be dark. If you double expose them the image will come out light. You can already see that thereÕs a kind of analog here to some of the logic I was articulating earlier in connection with the either/or algorithm. These two algorithms correspond to and/or.

Chris: So the double expose is...?

Tony: The double is exposure is like ÒandÓ and bi-pack is like or, in a logical sense. I had some very lengthy conversations a several years later with the German filmmaker Klaus Weborn about the idea of logic of film densities. But in any case, thereÕs a way of constructing an either/or. Because, of course, if you can use bi-pack you can also use superimposition, just by double exposing. What I found what that with my bi-pack printer that I could create any logical combination by using a suitable sequence of bi-packing and double exposing. The problem with working this way in film was that it was extremely time consuming and painfully elaborate to realize, expensive and very very difficult. The idea of being able to realize some of these objective in real time using video tools was quite seductive. In effect thatÕs the seduction of video, is that one

realizes image, contact with image and contact with image processes, in real time, for the first time. I think thereÕs almost nothing thatÕs been done with video that doesnÕt depend upon that allure. From there its very clear that the ethos of materialism which, had been, although, in the 70Õs was linked in a backdoor way with Marxist conception of the apparatus of production, although as I say it had been linked in that way, it in effect derived from a 1960s Greenbergian conception,É that materialism, when applied to video, although this practice was never substantially realized in either respect, tended in two directions: one was toward a preoccupation with the process of essentializing the medium, of looking to what was inherently characteristic of the materials and processes within the medium itself; and the other was a recognition of the inherent character of the medium as an instantaneous framing device. The people who became involved in networking innovations and in interactive communicational structures, including incidentally, feedback, neighborhood media and many social innovations, in some respects derived from this essentializing tendency. But also there were the very very few people who turned their attention toward the electronic essentials, that is the internal essentials of the medium. As it happened, Woody was conspicuously one of these. In turn this led him to be interested in the implication, which even in the mid 70s was available, that video was becoming and would be a digital medium. The other part of this thatÕs interesting is the people who worked with apparatus: Sandin, Jones, a host of others.

Chris: Seigel [?}?

Tony: Yea. I canÕt be an apologist for those people because I didnÕt Õt like their work at the time, for the most part, and was not enthused at the direction of their efforts. For me this had to do largely with the consequences of my own futile work with electronics.

Chris: Futile?

Tony: Futile, futile, I worked with electronics. In a way, the effort that I had been involved in for a decade to access the wave form of sound, had of course suggested to me that it would be important to use electronic tools in order to have control over the wave form, since electronics appears to be the only mechanism which affords humans an interactive contact with control processes of that philosophy. So I spent several years in the late 60s playing with electronic devices and building circuits. And one day, (laughs) I realized that I couldnÕt make a piece that I liked out of all of that and that I could make a lot of good music by playing on my violin. (laughs) And I stopped. So when I looked at electronic video pieces my prejudice was to say, well, did they make a good piece or should they have been playing with the camera? (laughs) And, by and large, registered against the economy of my own willingness to invest my time, I found that it was a bad bet. What was very distinctive about the Valsulkas and their efforts was the particular way in which they turned their attention, at least in part, away from Òthe cool things that you could do and see,Ó and toward the question of whether some sort of inherent or extended structures might be accessible through the tools that they brought to focus on the medium. I think their results were pretty good. Not everywhere convincing, but sometimes redeemed on the other side by the fact that their images were conceptually justifiable for other reasons or essentially completely seductive.

Chris: Essentially seductive?

Tony: I donÕt mean that really.

Chris: You donÕt mean essentially...

Tony: ThereÕs no such thing as essentially seductive.

Chris: You just meant seductive.

Tony: Yeah. I got to know more about the Vasulkas when I moved to Buffalo in the 70s. We were both working downtown here in the city. They had a student assistant, Arnold Dreyblatt, that they worked with. He worked with the Vasulkas. Subsequently, Arnold became interested in audio, moved to NY and worked as an assistant with Lamonte Young. When he came back to visit the Vasulkas I ran into him, or he came back to visit and they reported that Arnold had told them I had invented the music (laughs) Arnold had had privileged access to the archives. He told them that I had invented the music, that is, the theater of eternal music.

Chris: Because he had access to LamonteÕs archives?

Tony: He had privileged access to the archives of recordings and conceptual materials from the early 60s.
Now, you brought up another question altogether which is the question of the role of audience in all of this. I think its interesting to take that up. I have a funny feeling that the audience has been a missing factor in the 20th century critical approach to the arts, just in the same way that analysts of TV and mass culture write about advertising in a mode of discovery, as though they have figured out what is happening and thereby, in the very execution of this critical practice, leave one with the rather uneasy feeling that someone in the advertising field must have known about this all along, or in a complementary vision of things, that there must have been a Darwinistic process with consequences that were as powerful as theory and anticipated this theory in effect. So I say, just in the same way that it seems like the analysis of advertising has some kind of problematic about it, it seems that audiences could be understood by impresarios; audiences could be understood at the level of rock&roll promotion; audiences could be understood in the light of questions of making money: who would come. But larger social views of the audience that would have a bearing on the arts seem much harder to focus. The second thing that I think is odd, to bring into that, is something that I mentioned much earlier having to do with Fluxus, there is a kind of equate de bourgeois [French phrase] shocking the bourgeois, there is a French expression, if you try to spell it IÕll probably get it wrong, but there is an idea about shocking the expectations that arise within a set of receptive premises as a function of cultural presentation. So I was just going to say that within this environment of shocking the audience that is based on a long-standing model of authoritarian structure, the Church and the State in the west where you have an entertainment by experts and that the activity of the performers is better than the activity of the audience. The dialectics of this set of expectations is clearly articulated in the controversies during the 19th century about Church music in the US where during and after the Baptist revivals of the 1830s there was a spirit of hetero-phony in Church music that was strongly articulated throughout the south particularly and the west which is now the Midwest.

Chris: Hetero-phony is different kinds of music?

Tony: Like meaning that everybody sings together but they all do their own thing. Then there was a strong reaction, and as I say a dialogical conflict with this that arose out of the Germanic cultural leadership that was exercised by Boston through DwightÕs Musical Journal and so forth which made attempts to

repress heterophony in favor of professional and higher entertainers who would supplant and replace the participatory activities of the congregation with a professional choir. And so, it would be very interesting to find out how that relates to Greek theater and the Greek chorus because of the role of democracy in Greece. This is actually something I am working on at the moment, this is something I am working on in relation to PythoragasÕ influence in music.

Chris: You know Julia was a Greek major, a classics majorÉ

Tony: She reads Greek? And Latin?

Chris: Yeah, she was a classics major, she said she read all the stuff in Greek

Tony: In Greek? ThatÕs interesting although most of it is available in translation. I was look[more discussion of Julia, Yale Library etc.]

Anyway, letÕs see, the thing is, the German audience tradition from high culture is the one that pertains in classical music concert going to this day. The expectations and formalisms of that situation just invite trouble and fun. So I couldnÕt say that the 60s artists were inured to audience concerns as in effect there was a substantial motivating principle for artists in working with the tradition of the audience as a stimulus in and of itself. And what I wanted to do was to contrast that with a completely different kind of audience awareness that derived from the theater and the rock&roll experience. In other words, where you had mob influences, that is group dynamics, fashion, and here-say advertising and other promotional machinery in place as a function of the sets of expectations that the audience brought. Curiously in the midst of all this, there is another elements, which somehow to fails completely to bridge between these two
(end side 2)

Chris: You were saying that there is another elementÉ

Tony: Yeah, there is another element which really doesnÕt bridge between these at all, and that is an idealization of artistic activity that neglects the audience or ignores the audience all together and really doesnÕt take the audience into account at all. Even though Greenbergian aesthetics pretends to accounts for the audience the blind eye that it turns to politics and to a broader psychological basis really indicates otherwise and similarly in music, although there is maudlin talk of emotions and so forth as in literature, the position of the audience member is gone, has existed largely in a state of darkness. I think it is only in the last decade or so that there has been any kind of openings in that whole, offered in that whole set of investigations. Like, particularly because of networking, there is a virtual discourse and I am using that term now as a pun because it is both a virtual discourse and a discourse of the virtual, which has to do with the audience development, changes in and around the audience that have to do directly with their engagement with a cultural object. And there is a tangent discourse in anthropological and cultural studies, which concerns the work of culture in relation to the society. Third, there is an effort to develop views regarding the reader in critical theory, which have been a little disappointing but maybe serve to put some breaks on tendencies which would otherwise go unchecked against any [mythology?] with the audience as an active ingredient within the cultural proscenium.
But I would say this is a way to look at the role of audience in the video of the late 60s and 70s. One that is to see the audience as an institution which one can play off of, in the idealized circumstance of the white box, the white cube. So that the artistÕs video of that time functioned largely as a cross-over

between an audience phenomenon in some ways and principally as a moving painting in another way. I think that there was a, youÕll find that some of the artistÕs works insist on a closed form of some sort, that is they have a beginning middle and end and other donÕt. Even in the ones which do, there is frequently another kind of explanation all together than that they were intended to be viewed as theatrical expressions. For example, I only very very recently understood that Vertical Roll, Joan JonasÕ tape Vertical Roll was created in a performance, in a live performance situation. So that even in the context of the gallery ethos there is a cross-over to a kind of theatrical audience, to a theater audience set of expectations and modalities. And, on the other hand, I think that the filmmakers tended to bridge more directly between an idealistic set of expectations, that is, in that their work was done within an environment where film distribution was in effect closed. Professional film as a theatrical expression was foreclosed to independent makers. So many filmmakers I think saw their work as made for themselves or for a virtual audience or as self-justified within some ideological framework, or as being constructed for a small complicitous audience. I think that al lot of video work followed suit. Although, with video, because of its immediacy, there was less tendency for the makers to become involved in that kind of closeted activity that filmmakers participate in and for that matter it must be said artists, in which they can be obsessively committed to their work in an antiseptic environment. So that in some respect I think that the networking and performance modalities tended to exercise the greatest appeal, or the greatest impact on videomakers. Now I talked about networking, when I use the word networking I am using it in a very broad sense alluding to the impact of work as co-extensive with its creation and re-generation, that is that the work is, the tape itself, it part of a larger cultural object, which includes the production and viewing situation, and that the object itself can not be sensibly taken out of context as an object of contemplation in and of itself. That it is simply incomplete or fragmentary without regard to its functioning as a consequence of the circumstance of its generation and the audience impact. Some installation video intersects with this sort of audience networking ideology and efforts have been made to formalize these sorts of networking contextualizations by speaking of the space, the space before the camera, the space of the image, the space on the screen and so forth. Barbara Lattanzi has done in her recent presentation of a, I wouldnÕt want to mention Barbara in here, I would rather say as in the case of Stan Brakhage in his films and for that matter in the discussion of proto-cinema, pro-cinematic space and so forth, there is frequent Ñ I havenÕt even touched on this whole issue of the gaze and the viewer and so forth which are elliptical for broader social settings and are a little different in their thrust than some of the concerns for audience that I have been trying to touch on, I mean I am not trying to exclude those discourses at all, I just think they are covered elsewhere, and they are dealt with by, they are highly evolved discourse that are important and have to do with a mainstream of concern in the 80sÑ so I am just trying to stick to the 70s here a little bitÑIs this enough? Really I am just blabbing about all this stuff and I am not sure if I am getting anywhere of not. Is any of this helpful?

Chris: Yes, itÕs very good. The one area that I thought you might want to say something about is that, you touched on your logic as a film printer but you didnÕt really tie it in, you suggested that there were people building tools, that had, I donÕt know I you said specifically that some of these people had relationships to what you were doing. Maybe you could just say something more about the music-film-digital-video vocabulary. You got to the point where you talked about the flicker evolved this vocabulary that you were interested in. Maybe you could just broaden it. Also this discussion about harmonic, I know in the past but maybe you donÕt want to get into it.

Tony: Yeah, I touched on that and itÕs more personal and doesnÕt really deal with larger elements in the video scene although perhaps in music little more.

Chris: It has to do with wave forms doesnÕt it?

Tony: Yeah, definitely. But one of the things that maybe I wanted to just emphasizes is just that there has been a kind of longer effort to apply electronics of course to sound and music making and some elements of that have to do with the phonograph and records, but another whole track belongs to the evolution of electronic musical instruments. And then in a related but really quite different vein there is the history of music con [foreign word?] and electronic music. And the reason for putting music con {foreign word?] in the same breadth with electronic music is that the difference between the two sort of helps expose the idealistic pretensions of electronic music. That is, music con [foreign word?] which started as you might guess in France, was compiled music, made out of prior recordings. Whereas the Germans set about making electronic music, which would be music made up out of whole cloth [?], ab ovo, absolute music that would not depend on anything else. So there was a pretension to absolutism, and to the Mondrian mysticism of, Malevich mysticism of the absolutely clean source for the art. And so, it was then quite a speed-bump in this history when Moog and Buchla introduced synthesizers in the late 60s, mid 60s I guess, these were instruments that bridge between electronic music on the one hand and the tradition of electronic music instruments on the other, with the latter having been a much more pragmatic tradition including the Hammond organ, and the Vibraphone and the electric guitar (laughs). And, so there is still if you will, several different directions involved her, the one that has come to dominate is the one whereby musicians realize traditional objectives using electronic control mechanisms. That is what you do with a synthesizer. You characteristically simulate existing instruments and attacks and rhythms and so forth. The other is a approach in which you create an electronic structure in order to implement some acoustic form which effort is usually driven by the impulse that as the German electronic composers of the 50s were want to express, to make sounds that could never have been heard before and moreover could make any sound imaginable in the universe (laughs). So, there are reasons why it is much simpler to do electronics in audio than in video. The simple consequence is that there has been an awful lot more exploration of audio synthesis and electronic music than there has been video synthesis and electronic video. Nevertheless and as you might expect a lot of the structures carry over from one to the other so that you have studio, audio tools and you have studio video tools. In audio you have, expanders and limiters and exciters, compressors and limiters and exciters and so forth, and equalizers and in video you have, color correction, and mixers and keying and enhancers and so forth. And then also in audio you can buy a magazine that will tell you how to put together your own oscillators or tone generators and so forth and in video, although it takes a bit more chutzpah (laughs) you can in video also put together your own mechanism to modify or even create a video signal. And that is where PaikÕs work started and his remarkable success in taking his work into a professional environment in WGBH was an inspiration to many people who were doing that kind of stuff. Who would have imagined that you could take these garbagey images and put them on TV and then people would actually take you seriously? Who could have imagined it? Well, of course the one place that you can imagine that they could imagine that would be at AmericaÕs most focused tech heaven, MIT. And so you have the Media Lab which inherits work by you know, whatÕs his nameÉEric

Chris: Seigel.

Tony: Seigel. There was another guyÕs name begins with R

Chris: Rutt-Etra?

Tony: No No no. Some other guy. There are a bunch of people who worked at MIT and so forth who adhered to that ideology of an absolute techno, of basically a technologically determinist conception of culture. I think that the work of those people right now, it is easy to put that aside, but the reason not to is probably, it probably has a lot to do with the fact that that work was not really made for, to fulfill the same ideological criteria that are being applied to the work now, but to do something quite different and itÕs to the understanding of what is the place of those criteria really are that we might need that work and to understand what actually happened and what people were actually doing.

Chris: One of the things is that your piece, Cycles of 3s and 7s is going to be included in the program.

Tony: Oh I see, so I should say something about that

Chris: I have seen some things that tie (end of side 3)

Tony: Éhave been circulated broadly is simply that itÕs a quite specialized piece at its foundation, addressing quite specialized interests and in order to unpack the piece at large IÕd go back to Pythagoras and his discovery or recognition that the intervals of music are made up of, can be associated with number ratios. And the way that we express that today, is that the ratios of frequencies that are associated with consonant harmonic intervals, like you hear in the background right now, are composed of small number fractions. The basic intervals of music in other words correspond to simple ratios of frequencies, so let me give an example. The octave which is the simplest of all musical relationship other than the unison, corresponds to a multiplying of the frequency by a factor of two, two to one is the ratio corresponding to an octave. Also the next simplest interval which corresponds to the third partial in the harmonic series is the perfect fifth. And that corresponds to a ratio of three to two, three to two, three to one or three to two depending upon whether the octave is involved. Now if you want to add intervals or subtract intervals, they function sort of like logarithms, that is to say that you need to multiple ratios of intervals, like if you have, a familiar combination is music is where you have a chord built on a fourth, like 5 of 5, which is the dominant chord. I mean, no, like a chord built on 5, which is the dominant chord which would then be include the major second D, in the key of c for example you have say the chords C, E G, and then you have a chord built on G which is GBD. That is basic Western harmony. Well that D you see is a perfect fifth above the G and that D correspond to a number, a frequency ratio obtained not by adding 3/2 plus 3/2, but multiplying 3/2 by 3/2 which means that you get, 3 x 3 over 2 x 2 that is 9/4 and 9/4 is the ratio that corresponds to that D in relation to C, or if you transpose by an octave, which always means multiplying by 2 you can call that interval 9/8. Or 9/1 or 9/4 or, so you see, octaves are achieved by multiplying by 2 or dividing by 2. Fifths are achieved by multiplying or dividing by 3. Well you can say, okay, we now understand how to make an interval of an interval, what other intervals are there? There is a hell of a good interval comes along when you start looking at some of the other ratios. Hey, by the way, how many ratios are there? Well, as it turns out, between any two ratios there is always another ratio. This is what is known in mathematics as that they are dense, so there is an infinite number of ratios. But music in general only

uses the very simplest. What are the very simplest ratios? Well, you take the low numbers and you form fractions out of them and you get simple ratios. 2, 1, 2, 3, 4, 5, 6. Is that enough? Well, you see, as long as you know that combining intervals corresponds to multiplying ratios, you can see that 4 being 2 x 2 is basically a 2 octave, a double octave, that is nothing new, musically it is nothing new, it doesnÕt add anything new, itÕs 2 x 2. And 6 is 2 x 3, 8 is 2 x 2 x 2. So basically, because multiplying becomes a rather transparent process. if you want to have new materials is your repertoire, you look at the prime numbers. Those are the ones that go into making the other numbers as multiples. So, if you look at primes, at low prime numbers, you start with 1, 2, 3, 5. Okay, 5 is enough. WhatÕs 5? ThatÕs far out, letÕs look at that one. I mean you can do all of Western music with just using 1 and 2 and 3. but if you put in 5 you get this other attractive interval which we recognize when we hear it as being the major third. How can it be tat the major third correspond to the interval 5/4 or 5/2 or 5/1 or 5/8? How can that be? It just is. ThatÕs the way it is, 5, major third. 3 perfect fifth. So why then does our scale have twelve tones in it? Any musician can tell you how that happens if you keep adding perfect fifths, one on top of the other and if you go through twelve of them, you come back to the beginning, that is three to the 12th power is an octave, or approximately an octave because, that would mean that 3 to the 12th power equals 2 to the something power, because the octave are 2 to the some power and fifths are 3 to some power. In fact the number that is the ratio of 3 to the 12th over 2 to the 17th is called the Pythagorean comma.

Chris: It is the ratio of 3 to the 12th over 2 to the 17th?

Tony: Yeah. It is the error that you get by going up perfect fifth, perfect fifth, perfect fifth, perfect fifth twelve times and then you donÕt really come out to the octave if you do it careful, you will come out a little off. (Laugh)

Chris: It is called a Pythagorean comma?

Tony: Comma, yeah. That comment on logarithms you see that wasnÕt an accident, in fact, if you take those exponents and you compare them, 17/12, letÕs see youÕll getÉsee IÕm trying to figure out how many octaves that actually is. LetÕs just stop this while I figure this out (stops tape)

2 to the 19th, so like I was saying so 3 to the 12th equals about 2 to the 19th. now skip the part about the logarithms because I just donÕt want to go into that, but logarithms are nothing more than arithmetic. LetÕs take one other case here, one other problem to look at and that has to do with the major third which is an interesting interval because on the piano you see you get the major third by, you couldnÕt get the major third by the cycle of fifths, as every musician knows you go, from C to G to D to A to E. 1, 2, 3, 4 perfect fifths and you come out to E. So what does that mean about the ratio for the perfect fifth, I mean for the major third. What it means is that you can calculate the ratio value of that interval by multiplying 3 x 3 x 3 x 3 , 3 to the fourth is 81. 81. So that is the basically number that you have to associate with that major third but I said that the fifth harmonic, the fifth partial, 5 the ratio 5/4 corresponds to the major third, how are we to rationalize these two pieces of information. No pun intended. Well, actually what we can do is examine how far apart these two intervals are, in other words, how far away is the fifth harmonic from the E that would be described by the circle of fifths. If you want to find out how far apart they are, you just examine the ratio between them. And the way you do that is by dividing, divide 81 by 5. Well l of course, you realize that we are going to leave out the octaves here. Instead of using 5 we can look at an octave of 5 like 10 or letÕs get it closer to 81, say 10. 5 is

the same note as 10, you know like by octaves, is the same note as 20 is the same note as 40 which is the same note as 80, holy smoke. It turns out the ratio between these two notes is 81/80. This is called a comma in music. It is a small interval which is the amount by which the well-tuned, approximately taking the Pythagorean comma into account, by which the cycle of fifthsÕ major third differs from the major third which is the fifth harmonic in the overtone series. Very small interval corresponding to the ratio 81/80. I any case after looking at these two example you can see that what we are dealing with here is a system in which the Western scale has been constructed using multiples, multiplier interactions of small number ratios. And when you start to talk about arithmetic most peoples minds go blank (Laughs). So, Instead of thinking arithmetic, they think Òit must be mathÉshit.Ó And yet this is a very very simple kind of arithmetic which has nothing to do with mathematics, and has been known for thousands of years and it is as easy as pie.

So when, I started working with harmonic structures as a tool for manipulating the perception of tone, and relating it to the harmonic traditions of Western music, and when I was doing this in the context of a group improvisation with John Cale, Lamonte Young and Marion Zazeela and Angus MacLeish, one idea that presented itself to us and that we adopted was to build our music on a different choice of primes, from the one that was adopted in the West. And you can see that the structure of dodecaphonic music, as it has been systematized since the time of BachÕs equal tempered clavier [repeats in foreign phrase] has incorporated a confusion around the identity of 81 with 80. However, it happens that there is no such easy confusion where it comes to the harmonic seventh. what I am trying to say is that you can go on multiplying 3 x 3 x 3 as long as you want and you really wonÕt come out to anything that is terribly close to a multiple of, an octave above 7. I showed how you could multiply 3 x 3 x 3 x 3, that is four time and come out to an octave above the 5. But it just doesnÕt happen with 7. The musical way you describe that situation is to say that the seventh harmonic is a third of a tone flat. (laughs) Approximately. So, if you decide that you want to base a musical system on seven, or certain other low prime numbers, you throw the identities that are covered up in the Western well-tempered scale into confusion. [talk about order]
As it turns out the next prime which is 11, falls on a quarter tone or all intents and purposes. So, you can see that if one had devoted a considerable amount of time to the pragmatics implications of these 3 calculations as I had by the time of the mid 60s that one thing that you would wonder about would be how these approximations work. Like the approximation of 80 to 81, and although it probably not a part of mathematics at all, because it doesnÕt have to do with equality, there is a musical question here that has to do with almost equality, which makes it a kind of funny question to answer. That is, are there other approximations that are formed using simple frequency ratios in combination and which might make musical sense in a way.

)Okay, now I want to return to the project of Cycles of 3s and 7s., which in fact is based entirely around this problem that I have outlined here, because it occurred to me that this kind of idea of developing a roster if you will of interesting approximations to the power of 2, this was a problem that had not really been tackled as a theoretical problem because it doesnÕt have much theoretical significance. (laughs) Not being, as I say, properly a part of equalitarian mathematics and yet a problem that had some virtual musical interest. So I decided to find a way to demonstrate some approximations that fit a lot better than one that had popped up so far in music. These approximations would be hard to demonstrate using tones because it would take some awfully fancy oscillators to do that carefully enough, however it was the number ratios that seemed to be the most interesting in any case here and I

realized that the performance that I could do using a musical instrument was one that I might better realize using a calculator. This fit and in glove with another set of problems that occupied me at this time, having to do with questions of the legitimacy or the effectiveness of the computer music, computer art, and the utility of the computer as a tool in artistic applications. Concerning which, I was at a point of considerable skepticism. In fact I was at such a point of skepticism that I felt that it would be interesting to do computer art using a computer much simpler than the kinds of computers that were being fetishized at the time, because the tendency at that point in terms of techno-culture, was for the artist to access the most lavishly endowed computer possible. It was almost erotically driven fantasy of control and sophistication. Which I wanted to debunk. So I decided that I would do some computer art but instead of using an advanced macro-computer, that I would use a hand calculator which would be quite quite adequate measured against the conceptual needs of my project. More than that there is the question for me as to how the computer properly should find a place for itself in relation to artistic practice, and as a tool I found that I wanted to underscore the function of the computer in relation to performance rather than results. I basically did not see the computer as a means for arriving at an artistic solutions so much as implementing an artistic process. and I decided that the way to display this conclusion was to use the computer as a performance tool. So I shot Cycles of 3s and 7s as a series of increasingly elaborate computations involving multiplications of simple frequency ratios (end side 4)

Each of these calculations tending toward a predetermined result approximately equal to 1 and the closer the better, according to the aesthetic criteria of the program. So, here what becomes interesting is that the end results of the calculations are not unknown, in fact, using logarithms the end results could be calculated quite quickly, or in fact using a

Chris: Slide rule?

Tony: No not a slide rule but a more sophisticated calculator with exponential functions the result could be achieved very quickly. But the iteration of the calculation then corresponded to the articulation of the musical intervals, and it wouldnÕt do to leave any of them out. Moreover, it seemed like all of the fun in music has to do not with getting to the end of the piece but playing as you go along and has to do with rhythm and the moments of pleasure that can be observed along the way (laughs). So, I organized the calculations to reflect familiar musical structure of verse and chorus, and coda and intro. And to tell you the truth I think they sound pretty good (laughs.)
Now, this, that piece is made in a way which addresses a fairly esoteric audience because it presumes an acquaintance with a set of disciplines which though implicitly familiar to most viewers, has very likely never really become a part of their articulate vocabulary approach to any kind of visual material. So, IÕm being quite presumptive in suggestion that there would be any interest at all in a piece like this and yet I guess that of the different types of approach that IÕve outlined, I would fall into one in which I would be the type of person who as an artist enjoys making the sort of work that I would like to be able to enjoy precisely because it hasnÕt been done before or yet or isnÕt available to me otherwise, so I have to make it myself. Good grief there is plenty oÕ stuff to do. Why bother to do it yourself if you donÕt have to? (Laughs)

Chris: So maybe let me ask just one more question, because I think this is getting to a logical conclusion. You talked about approaching video from film and from logic systems, and you talked about approaching what has come to be

called video, from another position which had to do with music and it seems that in fact you are using video by the end of the 70s or the early 80s, it had to do with actually some of these other elements having to do with audience and performance, also bringing in, playing with some of these structures in narratives that we talked about before. So maybe is it possible to making make a bridge to that work, maybe that is somethingÉ

Tony: Well, for me there was a kind of disjunction there and some elements, I did some pieces that were deliberately intended by me at least to kind of try to short-circuit what I saw as a formalist elaboration of pre-existing tendencies. Like I had a piece called Bowed Film that I did in Ô75, about 1975. It was performance piece that comprised a loop of film material that I stretched around my head and bowed on and I would watch the kaleidoscopic reflection of the film material in itself in the Y of the loop and vibrate that Y with the bow. When I had the film looped around my ears, it made a heck of a racket when I bowed on it, in stereo, and it was quite something to play. (laughs) It was made formally coherent by encoding images of the bow on the strip of movie film indicating as it were how one might bow the film. But the most pointed component of the piece for me was the way that it problematized the role of the audience by making the piece essentially private because it was positioned for me to watch and hear and I didnÕt really want other people to do it. So, in this and other piece from the middle 70s, I was interested as I say problematizing the formal developments that had been indicated through the emergence of structural film and conceptual art as I understood it at that point, in order to hasten the rapid drawing to a close of the whole period of the elaboration of these formalistic tendencies. Then, (laughs) having as it were emptied out all of this territory I wondered what to do next (laughs). So, I went through a period of really casting about myself in the middle 70s and then in Buffalo late in the 70s, there were three different kinds of things that impinged upon my development that were important: one was to understand what had been taking place in performance, in particularly the work of women artists in the early 70s in developing ideas about subject position as a basis for occupying a position antagonistic to formal art making; another was the activity in Buffalo among younger artists who also focused a tri-partite connection among Buffalo, NY and Cal Art, so that some new thinking about the way that images could function in relation to desire, in relation to mass media and in relation to heroic or anthropomorphized role for the art work itself; and these things intersected for me with the third thing which was growing recognition on my part, or a growing interest on my part in using the voice, in using artistic expression as a mechanism for critical commentary and engaging directly with schools of critical thought, or elaborating alternative critical positions in the work itself as opposed to putting the work forward a as gesture that would be an object of contemplation for critical reflection or refraction. That is to merge and occupy the positions of critic and artist. And so all three of these elements for me very much redefined the territory in which it would be possible to make video and I think that my position was quite particular in two respects at lest: one was geographically and generational in respect to the pictures artists as they might have been called at that time; another [extraneous comment] was that

Chris: You mean that you felt you were a generation older than the pictures artists?

Tony: No that I was, I mean, in other words that this was a generational thing that I felt that I did relate to, but I think that it had a certain specificity in terms of this time. I think that artists in other places, and artists who didnÕt lock into this activity of this younger group, found themselves in a different position. I am not saying that I was apart of this group

generationally I am saying that I related to this and that some people who were older didnÕt and some people who were younger didnÕt. ThatÕs all.

Chris: Are you saying that you encountered this these artists because of this tri-partite Buffalo-NY-Cal Arts connection or also because some of those people came out here.

Tony: Well, they were here, a bunch of those people were here, and they brought their friends in, and there were a lot of connections among people who were active in creating a kind of new approach to pictures.

Chris: Like you said your position was particular for two reasons, geographical and generational.

Tony: Yeah, another was I think that I had sort of come into academia during the 70s and had been abruptly drawn into an engagement with much critical thinking in a way that was enthusiastic at first but which finally resulted in my recoiling as I began to understand that the machinery of the professional criticism was operating with in a social, was driven by a social system that I wasnÕt a part of, and that my being a reader and an artist, was not the same as being a reader and a writer. (laughs) And was not accepted as the same, a parity with that. And that third that there was a level of presumption within the critical community that was hard to countenance. Moreover, that the strategies of critical writers, when they reflected artistÕs strategies often went unrecognized. And when they didnÕt often represented sins of omission. (laughs) That is to say that as Ray Peterman [sp?] said when I told him that I was reading in deconstruction he said, [in funny voice] ÒAh, deconstruction, I have been doing that for a long time.Ó (laughs) So, there were peculiarities in my relation to criticism that maybe make my approach peculiar and particular. Well that is enough ainÕt it?
(end side 5)

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