

Composing the Output Interface

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The presentation of computer music raises a host of interesting issues concerning the social and cultural context for music-presentation in general: What exactly is a performance? Why are concerts structured the way they are? What is the contemporary relationship between a composer/performer and an audience? Consideration of these issues is particularly pointed for computer music practitioners because the traditional "concert hall" paradigm is often at odds with new structures and musical functions embraced by computer musicians. This paper will discuss several approaches to musical presentation we have tried at Columbia during the past few years, and will explore some speculations about future contexts for music in our culture.

Imagine the worst of a concert. Think about the audience: Physically constrained by social convention, they must sit passively (usually uncomfortably) in semi-darkness while awaiting cultural enlightenment. Think about the performers: The psychological distance between them and the audience is made manifest by an actual separation; an isolation of space which turns serious musical art into a spectator sport. Think about the composer: His or her vision dictates unequivocally the flow of the evening. The composer's voice becomes the oracle through which the unwashed and unenlightened listeners receive absolution. The evening often becomes a battle of wills -- the composer's intentions vs. the performer's interpretations, the technical skill of the performer vs. the technical difficulty of the performance. Ancient athletic gladiator games seem a valid simile, with the major difference being the inability of the concert audience to cheer at the appropriate places.

Consider the social structures surrounding a concert. The class/caste system is still very much the norm for "mainstream" concerts. The best seats go to those with the most economic or social power. At more egalitarian concerts, social hierarchies are defined by attendance at the "right" concerts and through social grouping activities at the concerts attended. Consider the model of political power embodied by the entire concert scenario -- the pyramidal hierarchy of human interaction, the unidirectional "top-down" flow of musical information, the Darwinistic struggle necessary for composers and performers to even land a concert engagement. This is not the best of possible worlds.

Computer music often makes explicit these reprehensible aspects of the traditional concert paradigm. The form of the traditional concert emerged primarily to meet specific utilitarian needs. As society became increasingly specialized, the concert arose in order

to give more people access to music. However, because new media technologies are dramatically changing the ways in which music reaches the public, and because much computer music has effectively eliminated the specialized performer, the traditional concert does not serve as the locus for dissemination of computer music. Instead, a "traditional" computer music concert becomes a series of sounds pasted onto a decaying shell of unpleasant socio-political conventions.

Can a modern concert perform a valid and vital function? We believe that it can, but composers must be willing to view the entire musical experience -- aspects of presentation most certainly included -- as part of the composition. Simply adopting the traditional concert paradigm often creates a context which effectively counteracts the musical intentions of the composer. The challenge is to create a presentation context designed to work with the music, not against it.

The "Living Room" Concerts

Much of the computer music we have done at Columbia is for tape playback only (no live performers). When we began to think about the format for putting this music before an audience, it occurred to us that a model already existed for the congenial presentation of tape music. It is a very natural and common activity for most of us to invite a few friends over to our house and spend the evening playing tapes. Generally these tape-playing sessions present our music in what appears to be one of the best possible environments -- relaxed, informal, and nicely focussed on the sounds we play. We decided to recreate the feeling of this "living room" environment for our Spring computer music concerts.

The concerts are held in a spacious lounge, complete with overstuffed chairs and couches. We try to give the impression of a large living room by arranging the furniture in an informal manner, by bringing in a variety of plants and knick-knacks from our homes, and by using regular floor and table lamps as lighting. This physical environment encourages a relaxed approach to our tape-playing. We augment this by engaging in talk and discussion about our music throughout the concert. We also try to have some on-going music or activities happening in the room to blur the starting and ending points of the "official" program; again done to enhance the relaxed listening mode we want to produce.

By treating our listeners as friends instead of as an "audience", we are attempting to create a more circular model of social interaction through these concerts, replacing the hierarchical pyramid of the traditional concert. The "living room" approach has been quite successful -- people often remain long after the end of the program to talk and play more music. For composers involved, these concerts tend to build a good feeling of community rather than the strong feeling of competition usually surrounding a contemporary music concert.

The "Permanent and Disposable" Concert

In another extension of the idea of a complementary presentation context, we decided to try a concert involving visual elements that would enhance the music. We rented a large

dance studio with a view of the city. Most of the composers had ideas for visual components to their pieces. These included people practicing Tai Chi Chuan, a slow dance-like martial art form (accompanying a slow timbral piece), an actress and a shakuhachi player, and a video display of the signals coming from the mixer. The reason for this "visual" approach is obvious: in a tape music performance, watching the speakers alone can be tedious. In a traditional concert, the performer provides a focus as the conveyor of the music, and some of our experience of the piece will necessarily be shaped by that perception. However, music created by computer composers is often designed to divorce itself from a specific focal point for the emanation of sound. The music may move anywhere in a conceptual space, and is not even limited to the room in which it is heard. The location modulation is part of the music, and not dependent on the positioning of performers. To provide an encompassing context for non-localized sounds requires some thought -- we did not want to fall back onto the status quo "lights-out" approach. The visual elements created for this concert were specifically designed by the composers to enhance particular aspects of each piece; thus providing a richer experience of the music.

For this particular concert, another concern was the relationship between the various compositions. We structured the evening to be a continuous body of music, rather than a haphazard collection of pieces. However, some of us were working on relatively focussed pieces that were designed to be heard as separate entities. We defined different levels of focus of different musics by having some pieces in the traditional sense, in that they had clearly defined beginnings and endings, and other ambient music that would connect these pieces. We also planned intermediate forms of music that would emerge from the ambience and then fade back into it. We created the ambient music by placing tape recorders around the space, and then turning tapes of different sounds louder and softer during the "ambient" periods. This whole structure was intended to bring the music and the evening together into a related experience. Composers may feel that their work would be modified or compromised by this connection to other music, but we realized that the experience of the piece is going to be undeniably influenced by the rest of the concert anyway. We put this influence under control of the composer, the flow of the event was controlled by specifying how this ambient sound would relate to particular pieces being presented.

Because of the incorporation of different types of music, the concert was called "Permanent and Disposable Music". Permanent music is perfect, static and unresponsive to the present situation. Disposable music is generated when needed and subsequently trashed. We were interested in presenting the craft in permanent music, with the immediacy of disposable music.

Software Synthesis Improvisation

Improvisation has been of interest for many of the composers at Columbia. With the development of a real time CMIX mixing program, *RT*, by Paul Lansky at Princeton, improvisation with software-processed sounds became possible. We wrote an interface to the program called *Piece Now* to make sound generation faster and more spontaneous

during a live performance. We used this interface in one of our recent concerts -- there were seven performers playing various acoustic instruments and processors, and a computer doing mixing and some processing of sounds recorded both during the concert and during the improvisation. The piece was created in the same environment that it was heard, which captured some of the direct "bi-directional" communication between creator and listener which is absent in pure tape-music presentations.

Indeterminacy/Determinacy

Many of these situations require the composer to let go of a certain amount of control in a performance situation, or to gain control in a different area than what is customary. However, in considering the visual and aural contexts of each piece (as when using ambient music between highly structured pieces), there is clearly more control than in a traditional concert, where the program may often contain several unrelated pieces from the repertoire. There are many implications of this approach for performance. The relationship between composer, performer and audience has changed tremendously. Not only has the composer become the performer, and the performance is separated into a creation time and absorption time, as with much electro-acoustic music performance, but also the composer/performer has stepped down from the raised stage and become a human being who interacts on a personal level with the audience. The flavor of that interaction is central to the experience of the music itself. In contrast to the idea of listening to computer music being a cold "staring at the speakers" experience, the audience can actually experience the person's work in the best possible form. The theatrical or visual elements come from many parts of the person's life, Tai Chi - a meditative exercise, a technically interesting view of the actual sound waves on a screen being experienced, children gone clamming on the beach, or even live musicians playing soon-to-be-altered sounds. This experimentation with areas of control is a part of today's performance art and may say more about the piece conceptually than the notes or rhythms used. Whether or not these areas are "extramusical" is immaterial. A piece of music must exist in some performance context to be experienced. A composer may leave this area as indeterminate, or define it. Defining it may well produce a richer experience for the audience.

We also hope that defining and working with these "extramusical" materials will give us access to social and cultural norms previously taken for granted or thought of as axiomatic for musical presentation. One of the powers of artistic expression is the ability to recontextualize modes of behavior and recast them into something new and different. Computer music concerts, being the strange hybrid of old conventions and new technology that they are, provide an open door for experimentation with the social interface of music. It seems only logical that composers, desiring the best possible communication with an audience, begin thinking of the total presentation of music as all part of the composition. Why limit ourselves to a presentation paradigm which is ill-suited for the music we produce? With a bit of creativity, a whole world of possible musics is available; unlimited by the darkened image of the concert hall.