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Back Cover Photo

"The 'Pot Steelers' Steel Band filming a commercial for the Virgin Islands Board of Tourism." Charlotte Amalie, St. Thomas, U.S. Virgin Islands 1967. Photo courtesy of G. Allan O'Connor.

An Interview With Herbert Brün

by Thomas Siwe

THOMAS SIWE: What need brought you to include Percussion in your music?
HERBERT BRÜN: Percussion and I, we met when I was eight years old, in Berlin, in my father's study which he had converted into a workshop for his experiments with a crazy new idea: Radio. Although he was, by profession, an engineer, he was a soft-spoken, mild-mannered, radically-thinking dreamer, who really believed that with the help of Radio it would be at last feasible to inform all the people in the world of the enormous potentials of the human mind, to kindly and gradually liberate all the people in the world of their errors, superstitions, inherited and obsolete creeds, their beliefs in more or less than human powers, demons and divinities, and, last but not least, to free them of their self-enslaving obedience to what they had been told by crooks to be laws of human nature, to be laws of justice, to be laws of economy according to the merits of criminally-induced scarcity. So he dedicated his evenings to the idea of a popular, widely accessible radio network. Occasionally he invited me to lend him a hand or two hands, literally to grab, hold, and not let go, dozens of loose ends of thin antenna-wire, which, connected somewhere in the room to something with a spool and a few tubes, and extending criss-cross under the ceiling and down the walls, still had to be connected to some metal rod at the window. Valiantly I stood and held and did not let go unless told to relinquish my grasp. Just as I feel today, sixty-five years old,

I felt then the incomparable delight in being needed for something of which I know, whether I understand it or not, that it is important, necessary, and by someone very much wanted. Also, today, I assert that Radio can effectively implement my father's dream and that all he wanted has become at last feasible.

Only it wasn't and isn't done.

So I stood on a Sunday morning in the study clutching two wires, when the receiver, then called "detector," caught some music: "What's *that?*" I asked. "Rossini, *The Thieving Magpie!*" came the answer. "No, no," I said, "What *is* it?" A moment of silence, and then it came: "Snare drums." This soberly-uttered informative reply has remained, to this day, an active member of the set: "The Best Liked Answers I Was Given."

My compositions, I hope, demonstrate it.

Among the stages of my relationship with percussion, this one I call "Simple, direct delight."

TS: What else falls under "Simple, direct delight"?

HB: Well, one experience that has nothing directly to do with percussion was my listening for the first time to the Prelude of *The Meistersinger* by Wagner. I think I was twelve years old when I heard the main themes of the piece get together in the last section, all played at the same time and thus forming the climax of the composition. I did not understand, I could not analyze, had no terminology; certainly, I was just a good listener. The experience itself caught my attention. I asked innumerable

questions about the piece: who wrote that? what did that? who made that? who played that? – this I also call "Simple, direct delight."

These are experiences that can only be points of departure. They are no arguments for anything. They cannot be goals. We cannot magically conjure them up. We have to be aware only when they happen, and then store them somewhere where they might become fruitful. Often people tell me about their infatuation with a particular sound or instrument or a particular structure or something like that. I'm willing to listen to that provided it is not used as an argument in a logical chain of reasoning. Infatuation doesn't argue for anything. It is almost sacred, but it is there to be fruitful, not there to be argued with. Were I now to start a piece with snare drum, just like *The Thieving Magpie,* I would insult my experience and Rossini. Imitation is always an insult, mainly to the imitated.

This is one reason for new music.

TS: You were born in Berlin and stayed there until...?

HB: 1936. The last good moment to leave.

TS: Before you left Berlin and moved to Israel, what other musical experiences do you remember?

HB: In Berlin I started learning to play the piano. We had a piano at home, a baby grand, which at those times was a rarity in middle-class bourgeois homes. It had all the properties of a grand piano: I could lie underneath and listen to the reverberation, play with the pedals, and explore the sounds of wood. After a while, I got bored. But I had an uncle with a good memory who could play the piano. He was the bachelor amongst my uncles. So he went to the musicals in Berlin of which there were many. It was a great time for Lehar, Kalman, Strauss, Straus and the like. He used to go there on Saturday nights, and come on Sunday mornings for a second-breakfast coffee to my home and would sit at the piano and play the tunes he heard the night before, which impressed me very much. This was one of the productive inputs to my education. I wanted to be able to do that, too. He was very nice to me. He allowed me to sit next to him and showed me with one finger how one plays a tune, when it is a tune, why it is a tune, etc. This was encouraging. My father's sister, Aunt Trude, gave me my first piano lessons. That was also very helpful and I was not bad. I practiced, indeed, at least in the beginning. Later I became moody.

I might mention an event, a non-percussion event, which remained with me as a percussion event: the Scherzo Pizzicato Ostinato in Tchaikowsky's Fourth Symphony. I was nine or ten and taken to a concert. I got indescribably excited and counted it for a long time to my percussion experiences. *This was percussion!* I had to learn a lot in order to change that probably quite correct opinion to a more accurate but worse opinion.

TS: Let's skip to 1936 and Israel. You arrived and started taking composition lessons from Stefan Wolpe.

HB: Wolpe came later. At first I just took piano lessons from a piano teacher who knew all about playing Chopin but not much else. This didn't work. I became rebellious. Not out of resistance against Chopin but against the teaching of music focused on a composer, or a style. During this time I began what I call a two-channel experience: one channel for income, the other for learning. It was a time wherein experience seemed more important than productivity. I did not compose yet; I was very cautious. I wanted to do things; and in order to do things I needed to get acquainted with doing things. So I had to practice pieces, even pieces that I did not mean to play yet. Also, I began working in night clubs as a pianist. I played for fifteen years every night, and sometimes in the afternoons. There was still in evidence the heritage of the European metropolis, the "Five-o'clock Tea," where we played semi-classical arrangements; then after a break from seven until eight, we started to play for dance. A set usually began with a waltz, followed by a tango, and ended with a foxtrot. Soon this changed rapidly. The influx of American jazz became immense. It already had invaded the European scene in the twenties but was still controversial and had not yet become the everyday entertainment. By the end of the thirties, however, it was established. Also in Jerusalem. Benny Goodman,

Count Basie, Duke Ellington, Jimmy Lunceford, and Artie Shaw, all that began to happen at that time, and we listened to the BBC overseas service which, after the outbreak of the war, was the only source of music we had. So I sat there in Jerusalem, Tel Aviv, Haifa, listening for the latest tune. Soldiers who had come from everywhere and who were stationed in Israel wanted to hear the tunes from home. We were the musicians, but they were always ahead of us and could ask for songs we never heard. That was good training and I became a good memorizer and successful improviser. In neither field did I lack success, applause, and a career as a rather highly paid, searched-for pianist in Israel. And it was at this time, during these activities, that I met percussion again.

TS: In the band?

HB: Yes. In the band, I played for years together with a young fellow, Freddy Dura, who today is a famous entertainer in Israel and who frequently tours Europe. At that time, he played percussion and sang. He possessed and nursed his "own" drum set and, of course, could talk endlessly about things before and after he bought them, a new cymbal, for instance, or a new drum. I mean, it filled his day, and it filled my day, too. But, even if I mock it occasionally, I could not stop the information. And so I entered the second stage of my relations with percussion, which I call "Getting Acquainted." By observation rather than action I found out what makes a percussionist happy, what makes him sour, where he might throw a tantrum and where he would become "molto expressivo" in a positive way. In the most unsystematic, yes, chaotic adolescence of awareness I stumbled towards some understanding of the percussionist's nervous system, and thus hit on many of the notions and concepts which now, forty-five years later, have been assembled at last and described in the systematic and stimulating representations written by Michael Udow, Malcolm Goldstein, and others. I soon discovered that it is one thing to know what I'm listening to and quite something else to find out what you are listening for. And that I finally gained some very respectable friends in the percussion world was because I found out what they're listening to and for. It does not yet mean that I write "good" music; but my scores for percussion are, at least, sensitive to the performer. Distinguishing between challenge and routine I learned how to anticipate where the player can relax, where he has to be tight, and how often I must allow the release of tension. I also have great fun in imagining the rehearsals already while I'm writing the piece.

This was the "Getting Acquainted" period, and it is still, in some channel, going on, because things have changed and new things are coming up; there are new mixtures of sound in the world, some of them desirable.

TS: "Simple direct, delight" was first. Then you added "Getting Acquainted." What next?

HB: Next came the very long and complicated period which I like to call "Challenge and Theatre." Both words in this label refer to my now beginning activity as a composer. The word "Challenge" is to tell that I wanted to compose new music. And the word "Theatre" means that I also, at the same time, had to write functional music. From 1948 to 1963 I did both in parallel.

TS: For this I wish you would give an explanation and, maybe, a few illustrating examples.

HB: "Challenge and Theatre" are juxtaposed in the following ways: "Challenge" means to write music that doesn't exist yet, therefore, also, music that I don't like yet, because I cannot possibly like music that doesn't exist yet. Note, however, the importance of the word "yet." A composer writes music that he doesn't like yet just because it doesn't exist yet. It is foolish to say: "I write a piece I like." That piece is not needed. The piece I like someone else probably wrote already. In "Theatre," it's different. I'm asked to use my skills, my experience, my affection for all musical periods, in conjuring up some traces of past musics, with a bit of proprotional shrinkage, so that it may fit into the moments for which it is used. It should not take over, nor should it be mere trivial background. All this holds true only if I have a theatre director with brains.

Back in Munich, after my return to Europe in 1955, writing theatre music made my in-

come, and I had a ingenious director. I was very, very lucky. During the six years, 1956 until 1962, I made fourteen plays with him.

TS: What was his name?

HB: Fritz Kortner. He was a famous actor in the "glorious twenties" in Germany, then emigrated, even earlier than I, and finally came to the U.S. to Los Angeles, where he worked in Hollywood as an actor and writer. In 1948, he returned to Germany, but as a director. He still also acted, but put more and more weight toward directing plays.

TS: Who was your audience during the fifties?

HB: It was a young audience that was tired of the continuous desire to make up for their parents' sins; on the other hand, who didn't consider those crimes a subject of controversy. Of course it had been terrible and it was terrible and they had not been taught anything. They had been mistreated and things of great value had been withheld from them. So they came and sat and said "give me, give me." They demanded a high level of controversial and thoughtful theatre. The German theatre is state supported. There's a state theatre and a state opera in many cities. The actors are employed by these institutes for seasons and for years. If a theatre decides to do a play by Brecht, then it does get its 35 or 50 subscription performances, no matter what the reviewers write about it. Thus, depending on the mental level of the theatre bosses, the administration and the artistic directors, and the dramaturgist and the hired personnel, you may get either lousy performance or high level experimentation and aggressive artistic offerings; both will be protected and supported and performed.

With no one else but Kortner, for instance, and only under such circumstances, could it have come to the first electronic music being used in the German theatre. Kortner had undertaken to direct one of the most respected plays of the German cultural establishment: *Faust* by Goethe. At that time I was his composer (1956). We were to rehearse for four months. At one of the first rehearsals, I told him about a concert of electronic music I had attended a few days before. It was the first electronic music concert in the official concert hall of Munich, the Herkules Saal. The program contained the first harvest of the electronic music studio in Köln, pieces by Stockhausen, Koenig, Pousseur, and others. I reported how impressed I was, and asked Kortner whether he would have time to listen to some of that music. He said yes and asked why. I told him that we should at least discuss whether that kind of music might not be suitable for some of the metaphysicial scenes of the play; in particular, since in those scenes Goethe hides his most aggressive criticism of his time's philosophy and literature. I thought that he, Kortner, should at least know of this kind of music, and that I, of course, would be very interested if the theatre could find its way to finance my trip to Köln and the production there of some music for Faust. So the next day Kortner heard the *Gesang der Jünglinge* by Stockhausen and *Klangfiguren* by Koenig. He was impressed and only asked whether I could integrate this music in such a way that it not be labelled a gimmick. It happened.

Kortner was also a theatre director who knew, when he ordered a march, that he wanted a march that was not just any old march, but rather a self-reflective, even self-conscious march, a march that demonstrates its awareness of its strutting macho ridiculousness.

TS: Did you still play piano in these productions?

HB: I played piano once in a piece by Max Frisch, a Swiss politically-radical writer. One theme of the play was the gradual transformation of a folk song into a national anthem, slowly, by variations, according to its function in society. On its way from the cozily folkish to the murderously patriotic, it once also appeared disguised as a popular swing hit in a nightclub scene, and there I played the pianist.

TS: You wrote usually for small theatre orchestra?

HB: Once I had a whole symphony orchestra, but usually the budget only permitted ensembles of up to ten people. One percussionist. No marimba. Sometimes we had a xylophone, occasionally a pretty clumsy kind of vibraphone, and lots of drums. The German musicians were

good on drums. They knew how to deal with drums and timpani. With cymbals they had problems. Too much noise, too little nuance.

TS: And what happened in 1962?

HB: In 1962 I took a trip through the United States, about which I've talked in *Perspectives of New Music.** And then, in 1963, I was invited to a position at the University of Illinois. Thus began radical experimentation. At that time, to compose with computers was radical experimentation. I had given myself the assignment to write a computer program that would contain in its logic and probabilities some idiosyncracies related to previous idiosyncracies of my compositional style. This resulted in *Sonoriferous Loops* (1964) and *Non-Sequitor VI* (1966). In both pieces I think you can detect typical little turns that remind you of the way I would write a string quartet or trio, for instance. That doesn't mean that I'm stuck to a style. All I wanted to prove is that I can program it. Thus any composer could retort to an accusation from the press, could retort justifiably, that what the press hears in a computer composition is just as much the composer's private decision-making as it would have been had he used a quill! Those two pieces document that satisfactorily. The fact that both pieces contain multiple percussion is a trace of the coincidence, at that time in the University of Illinois, of very advanced computers with one of the most outstanding percussion departments around. It's worth mentioning that the World's first computer composition with live musicians, Lejaren Hiller's *Computer Cantata,* was conducted at its first performance by Jack McKenzie, then head of the University of Illinois' percussion department. In such an environment, experimentation simply included computers as well as percussionists.

At this time, I had my first inkling that it is advantageous to work on new music with young students rather than with members of the faculty. This was, for the faculty, more radical than experimental. For the students it was more experimental than radical. I have maintained that over the years, and in all the programs I have offered – now over a hundred – the performers are ninety percent students. Occasionally I had extraordinary support from the faculty and that was delightful. But I did not always have the problem of asking very busy people to have time for a rehearsal or two. And I also didn't have to deal with the jokes of the profession and the status – vulnerabilities. With students, I have other problems, but they are educational problems which can be dealt with, such as: "Aha! Here we have that case where..." Try to do this with a faculty member.

TS: Of course some of those students you have worked with then, now are successful performers: Mike Udow, Al Otte, Al O'Connor, to name just a few of the percussionists.

HB: And Bill Youhass. I think I have all those friends in the field because they participated in my pieces, not only in the performance, but also by answering my innumerable questions while I was still writing the score.

TS: This brings us, I think, to the three solo percussion pieces, *Plot, Touch and Go, Stalks and Trees and Drops and Clouds.*

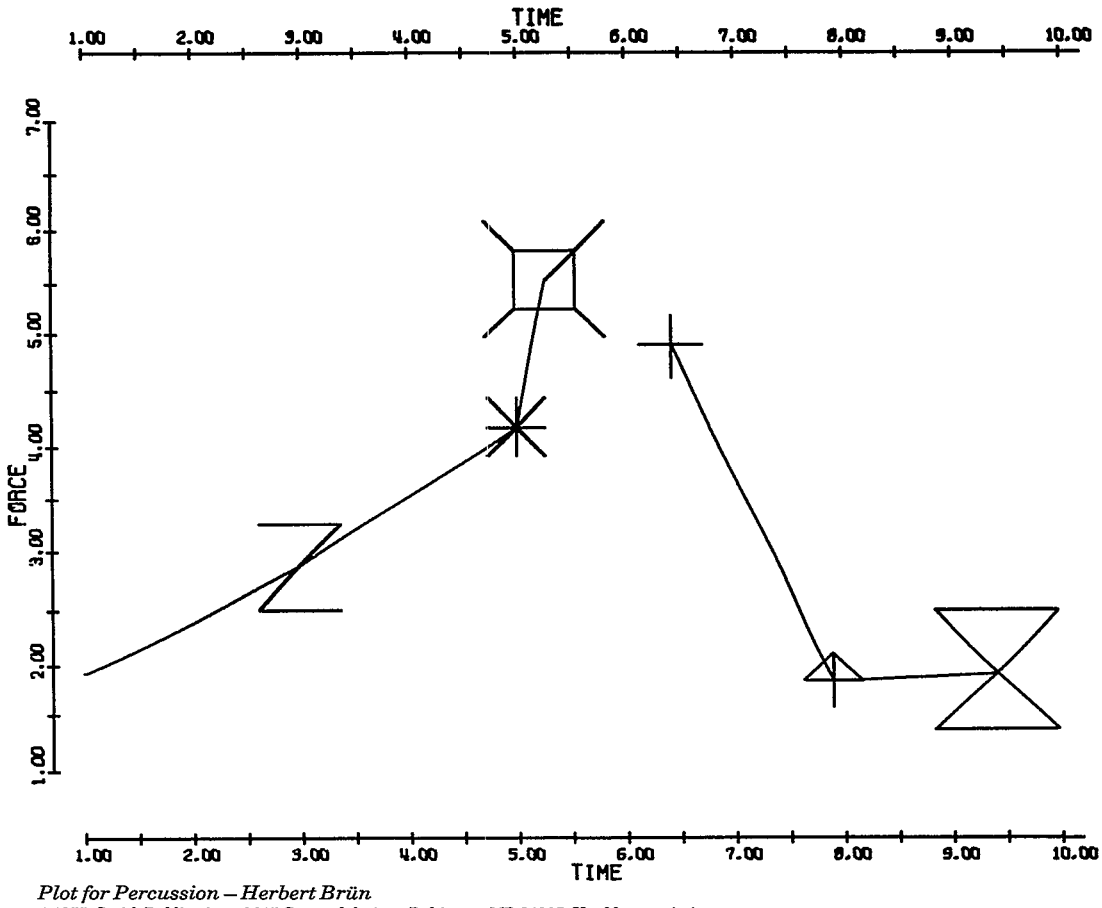
HB: Yes, indeed. For convenience I call the three pieces *Plot, TAG,* and *SATADAC.* Let me explain all three pieces as a set of three different propositions of my getting "behind" the percussionist instead of staying "in front" of him. Usually I am the receiver. That is, I write a piece, go to a concert or to a rehearsal, and there he is and gives it back to me and there I am, in front of him. I sit there facing the percussionist doing his or her thing to some score, or to me, or to whatever. I say, "thank you very much," or "that was very nice," or "you did a really great job," or make any of those kinds of remarks. They are nice, these remarks, but dull and indistinct. They never really say what I find I would like them to say. So I decided, instead of paying compliments after the performance, I'll make any compliments before the performance by writing these three pieces, that can only be played by percussion, and in which there would be no musical considerations except those intimately connected to the life and thought of the percussionist, and would deal with existing problems as if they had been invented right now, for the first time.

I had my image of a percussionist's develop-

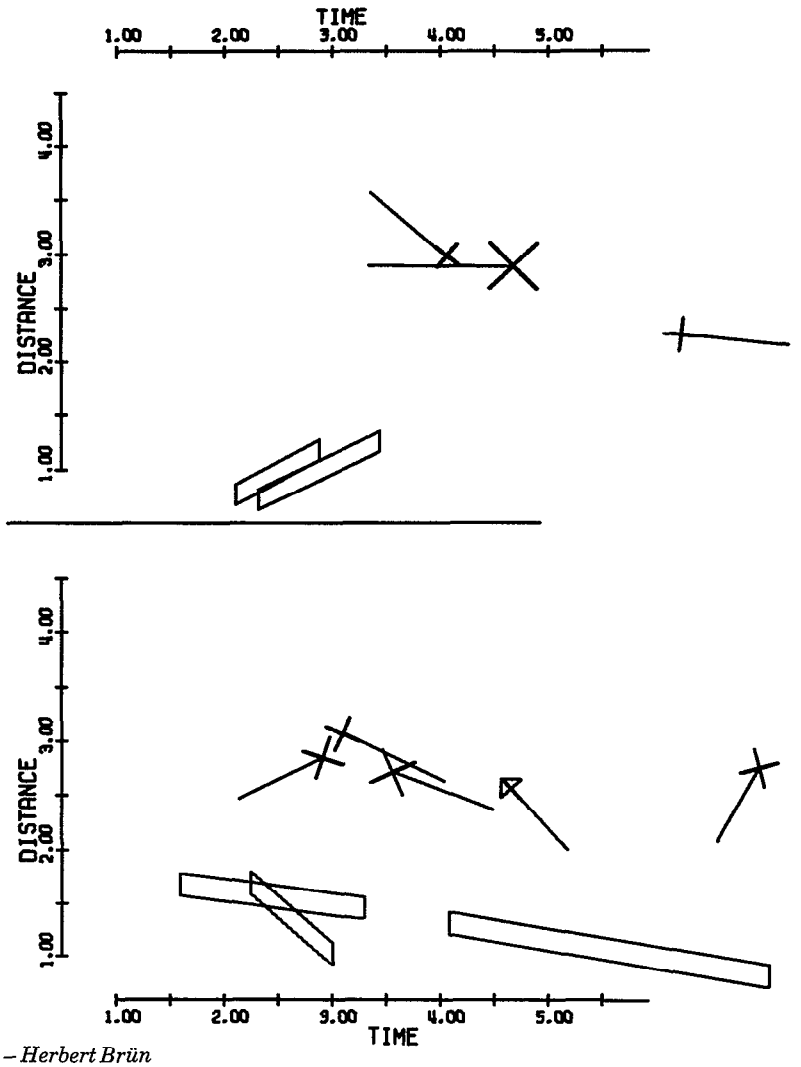
*"A Portrait of Herbert Brün," *Perspectives of New Music,* Spring-Summer 1979.

ment and growth, and thought I could write three pieces in which three aspects of that life and thought could be the subject matter of composition. The three main items were: Connections, Tools, Timbres. *Plot* is about connections. About a person who confronts lots of kitchen ware, an arsenal of discrete surfaces that all, with a very few exceptions, have to be attacked, and who still would like to produce, for instance, a legato. *Plot* plays with this particular aspect. *Plot* stands and falls with the ingenuity of the performer, in addressing himself to this particular problem: how to get from here to there without leaping, with a minimum of contrast and a maximum of transformation: Thus, the requirement of *Plot* is an understanding between the performer and myself, a conspiracy: we two will now make appear, to our audience, the impression that the percussion instruments are built inside one another, so that we can get from one to another by creeping inside, although in real space they may still be standing widely apart. What can be done to generate this make-believe, this prestidigitatorial trick, so that the listener sits in the presence of connections, intended continuities? The piece therefore shows various degrees of difficulty: there are several combinations that seem rather easy, to be suddenly followed by a practically impossible requirement.

Indispensible is a sense of humor of the higher kind. In the above mentioned conspiratorial understanding between composer and performer, this higher sense of humor is



Plot for Percussion – Herbert Brün



Touch And Go – Herbert Brün

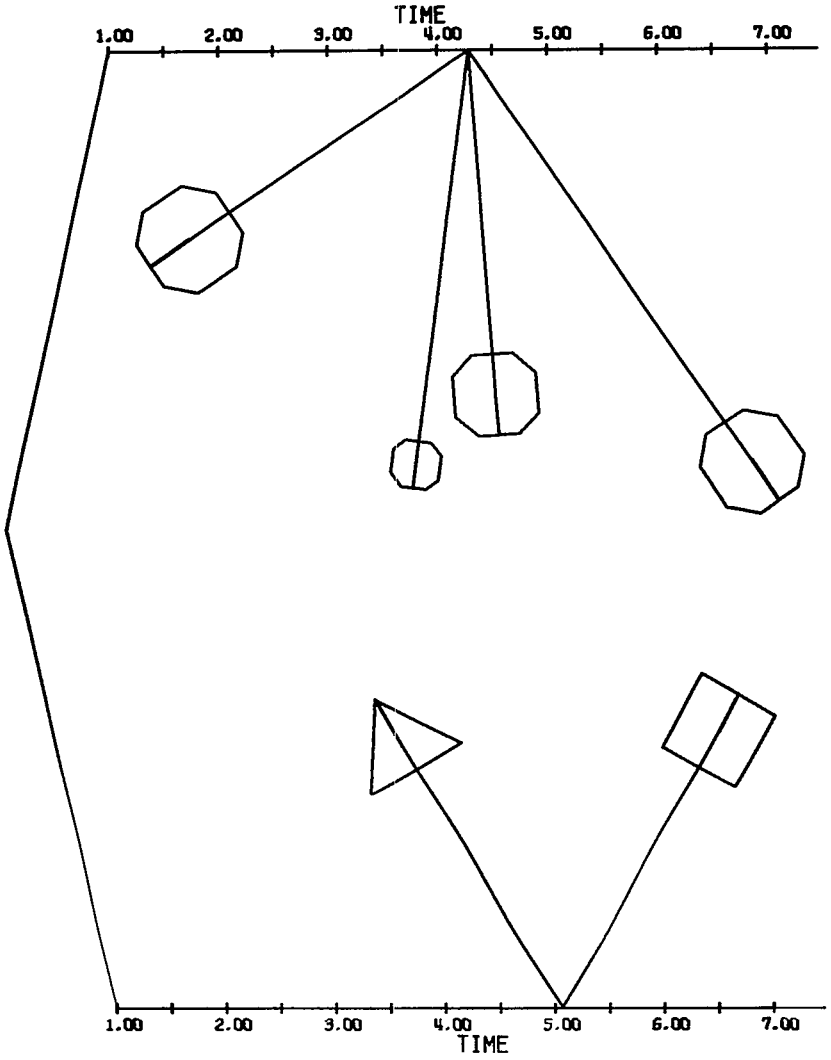
the furthest away from mockery or cynicism. "Conspiratorial" means that we all get together and celebrate a temporary make-believe. This level of sense of humor, I have to warn you, is not easily achieved and often not permitted. We are usually caught short even before we get there. With percussionists, however, I never had that problem: after the first moments of initiation they caught on and I didn't have any further worries. That was *Plot,* written for and first understood by Michael Ranta.

With *Touch and Go,* I planned another game. That is where Al O'Connor was so influential. He patiently and carefully opened my eyes and ears to a lot of things: he demonstrated to me that it is not a trivial nuance to decide whether one uses the wrist in playing, or the whole arm, or even more, the whole body, or whether one throws something. And how all that can be composed and very carefully executed. He helped me to the observation of how surfaces really are only one universe. That the

beaters, the mallets, the sticks, the activators are a wholly different universe which speaks its particular language and mixes its language with the languages of the surfaces. Consequently, it occurred to me to write a piece for determined activators but anonymous surfaces floating freely in space; and that became *TAG*.

TS: I've worked with several students on *TAG* and am inclined to conceive of it also as a kind of theatre piece. Did you intend that?

HB: You are accurate and correct in your observation. If what you, the percussionist, have in your hands is the "speaking" part of the piece, then this may well turn *TAG* into a "theatre piece." You seem guided and pulled by the things in your hands. It doesn't look any longer as if you play on one or the other instrument. What you have in your hands, the "speaking" part lure you to move now over there, now over here, and here and there you may even have conflicts of conscience because, according to



Stalks And Trees And Drops And Clouds – Herbert Brün

your professional training, you are compelled to use sticks you shouldn't on this surface found here. But the composer said so and you agreed to play the piece: there you stand uncouthly wielding your timpani beater toward a triangle! That could be ridiculous. However, if it is performed, not just tolerated or suffered, if the performer grandly takes his big timpani beater to the triangle and treats his motion with intent, then, or course, it turns into a visual event mixing itself with the sound, the result, now, of this movement. That was the idea for *TAG*. Al O'Connor performed it first for me in the big ballroom of the Illini Union building. Along the width of the wide space he arranged everything he could think of and needed. We, the audience, were sitting fairly far from him and saw and heard him dancing along his architecture, carefully aiming or widely throwing things, elegantly performing the floating of the sticks, the mallets, and the various devices he had in his hands, sometimes six at a time, over the instruments and – most seductively – through and across the silences. I was delighted.

The third piece was written for Bill Youhass. I called it *Stalks and Trees and Drops and Clouds (SATADAC)*. The four words in this title are, for me, a long poem reduced to its indispensible minimum, and are, furthermore, matched by the symbols I had the computer command the plotter to draw. The experiment of this composition shows some analogy to the experiment of *Plot*. Just as I try, in *Plot*, to juxtapose natural discreteness with artificial continuity, so I try in *SATADAC* to juxtapose natural dryness and natural reverberation with artificial dryness and artificial reverberation. In my earlier pieces, *Sonoriferous Loops* and *Non Sequitor VI*, I still obediently heeded the natural self-descriptions of the instruments. After that, and under the influence of increasing knowledge about percussion, I became interested in non-trivial contradiction and in explicit invitations to performers as creative problem solvers. This interest and these invitations I have made most explicit in the prefaces to *Plot*, *TAG*, and *SATADAC*. Each of these scores comes accompanied by a letter to the performer where in I tell what *I* mean, what *it* is supposed to mean, and *why* I wish for impractical connections, for mallet-oriented aerobatics, for "reverberating" wood and "dry" bells, and on what grounds I dare to assume that the "problems" which I composed have a highly respectful relevance to ongoing concerns of the percussionist in his life and thought.

TS: From where did you get the idea that increased requirements, increased difficulties, and practically unsolvable problems would be taken as compliments by percussionist? And how did this idea fare when you first showed the pieces around, before they looked so nice in the later publication?

HB: When I had this idea I felt neither impish nor malicious. I want percussion to be just sophisticated enough to at least meet one requirement: it must bounce against the not yet feasible and not just be comfortably efficient, coasting with the feasible. That was the idea; that's what I meant earlier: that instead of being in front of the percussionist I wanted to be behind him, not leading him on, but backing him on. I wanted to support the percussionist in a role that is even greater, more important, than the role given him at the moment. I am quite satisfied I did that and I can talk about it. I see some friends in the profession who will know that this is a great compliment to them, even if I can't get everybody to know that. The proof is, whoever played the pieces has remained my friend.

TS: The difficulty of the pieces filters out all those players who don't understand your idea and thus would refuse to put in the time needed to prepare a reasonable performance of the works. You might, however, attract some who would use your score pages as charts for improvisation, even though you made it clear in your instructions that you do not want this.

HB: Yes, I do not want any vandalism. I did not write prefaces and letters just as performing notes. They are affectionally meant to be personal letters.

TS: *'at loose ends:* is one of your most successful percussion works, for percussion quartet (written for the Blackearth Percus-

sion Group) and piano. Can you tell me something about it?

HB: The title gives a hint. Even today (and here we come slowly into the nearness of socio-political considerations that you know I am interested in), even today percussion is used in our social context widely and broadly and most openly, either as a drug with the help of "the beat," or, with the help of incessantly peaking "voices," as a mindless pseudo-turn-on for climaxes. This has to be understood as a general statement where only the multitude of examples justifies my speaking. Would there be less evidence I would be exaggerating. But there isn't. That I said "even today" expresses my hope in the percussion world, where many know better than to subscribe voluntarily to rotten ideas. However, for the sake of income, social function, for either believed in or erroneously adopted political convictions, many talented and quite able percussionists have to spend their lives as servants of the drug beat and the pseudo-climax. And I am not talking about chemicals. I also, just as many others, would like the world to look different, but, everytime I open my mouth to describe a better society, I get stuck in the language of the rotten, the only language, unfortunately, that sells. In writing *'at loose ends:*, I intended, instead of complaining, to compose my cheerful admission of being stuck and at loose ends, in preference to trying frantically to conform to the best spot in an undesirable society. I only say that such thinking and behavior would be desirable; I do not claim that I'm always on the right side. I am not modest and I do commit errors and sometimes am very proud of them when they are imaginative enough. The point was to write a piece in which, just as in daily life, every idea I bring forth is endangered: if it is endangered by being an old idea, I did not elaborate on it; if it is a clever gimmick, I had it drastically deteriorate; if it is a study in new sound or new sounds, I made it last too long, let it creep in sponsored by our beautiful little celesta, our glockenspiel, until it multiplied like rabbits, until the too-long lasting new sound curtain rose over a colony of rabbits, mainly glockenspiel-rabbits. I also have a catchy folk dance in the piece, which is, of course, not a catchy folk dance and it has all the makings of something popular, and it is *very* catchy. But then I immediately show that it fails under any serious treatment and only becomes an exercise. In *'at loose ends:*, of course, all that I called its failures are my triumphs of having been able to bring off what I wanted. So it is not to be construed as a piece of bad trips and bad places. It is, rather, my reflection on the powerlessness of the "stuck," against a system which is, to the best knowledge of practically everybody, undesirable for humans.

TS: Early on in the century, in the 1930s, Varèse, Chavez, Cage and others wrote, with anticipation, about the coming of the electronic age. I remember going to electronic music concerts in the early '60s where we sat and looked at two speakers. It seemed that the most successful works for the listening audience were those few electronic pieces which included a live performer or more than one musician, with tape playback. *More Dust with Percussion* is for three percussionists and tape, and is presently on tour with the Cincinnati Percussion Group. Do you feel it is more successful in that form rather than just tape, as in *More Dust,* alone? Why do you think we have not had a deluge of works for tape and live performers over the past 25 years?

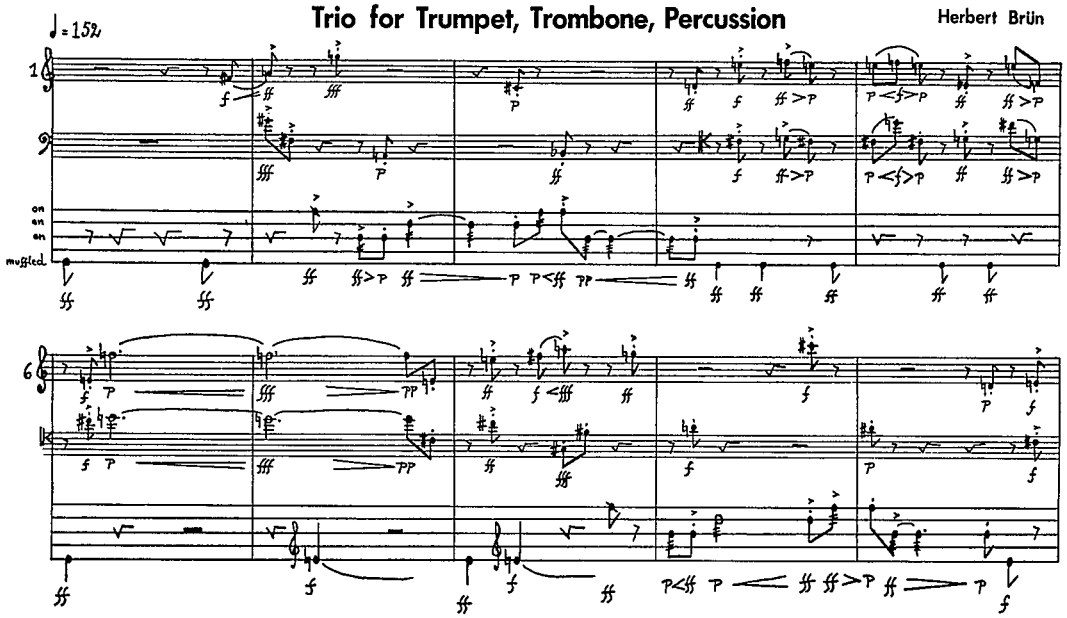
HB: This is a provocative question, and brings out the worst in me: here I let drop all modesty. To write a piece in which a reasonably well-made computer composition joins a reasonably well-made percussion composition is difficult; the conditions are forbidding. You have to know how to do it. It requires more than just the idea of doing it. You also have to have a couple of musical ideas. What I'm trying to say is so banal: you have to be a good composer. I am a good composer. I brought off *More Dust with Percussion* because I have been thoughful and shy of sacrificing a computer piece to a mere idea of launching it. Far more vain and thoughtful than quite a number of composers who are far more ambitious than I am. This done and said, I can again retreat meekly into

civilized behavior. There are probably more pieces in the world, where live performers mix their talents with electronics of every kind, than you think. Only that the results, too often, were disappointing. Partly, the pieces were ill-devised.

The whole proposition would change immediately if an instrumental group would form itself having among its members at least one composer competent with computer and electronic studio techniques, and a technical director who knows all about how music is to function in spaces, be it with speakers, visuals, films, or slides, etc. We are still waiting for the technological musician and the musical technologist.

Herbert Brün's Percussion Music

Opus	*Title*	*Year*	*Published/Available*
8	*Overture*	1948	Composer or Israel Music Publication
15	Musical: *Queen of Sheba*	1951	Composer
22	*Diverse Music for Theatre*	1956-1963	Composer
26	*Mobile for Orchestra*	1958	Tonos Edition Darmstadt
31	*Gestures for Eleven*	1964	Smith Publications
32	*Sonoriferous Loops*	1964	Composer
33	*Trio for Flute, Double-Bass, Percussion*	1964	Smith Publications
35	*Non Sequitor VI*	1966	Composer
36	*Trio for Trumpet, Trombone, Percussion*	1966	Smith Publications
37	*No. 1 Plot*	1967	Smith Publications
	No. 2 Touch and Go		
	No. 3 Stalks and Trees and Drops and Clouds		
38	*Infraudibles*	1968	Composer
40	*Nonet*	1969	Composer
43	*'at loose ends:*	1974	Smith Publications
44	*In and...and out*	1974	Composer
46	*More Dust with Percussion*	1977	Lingua Press



The Impact of Technology on Musical Time

Jonathan D. Kramer, Professor and Director of Electronic Music at the University of Cincinnati, is also Program Annotator of the Cincinnati Symphony. His Music for Piano, Number 5 *(recorded on Orion) won the 1983 International Rostrum of Composers competition; his* Moments in and out of Time *(published by G. Schirmer) was recently performed by the Cincinnati Symphony, conducted by Michael Gielen, in New York and broadcast live from Cincinnati via satellite to most European countries;* Renascence *for clarinet and electronics (recorded on Grenadilla and published by G. Schirmer) was one of only three American pieces performed at the 1980 ISCM World Music Days in Israel; his percussion works are* The Canons of Blackearth *and* Five Studies on Six Notes *(both recorded on Opus One). This article forms part of his book-in-progress,* Time and the Meanings of Music.

The impact of technology on music has been two-sided. The earlier and more obvious influence was on the materials of music—on, in other words, what constitutes viable musical sound—but the influence on musical time has been more subtle. Composers have readily applied electronic technology to sound because sonorities are concrete entities, readily subjected to manipulation, expansion, and experimentation. Musical sounds do unfold in time, of course, but time itself is elusive, subjective, and abstract. Although technology's impact on musical time was not consciously acknowledged by composers as early or as pervasively as its influence on sound, the influence was nonetheless real and considerable.

Traditional concepts of musical sound and time were challenged by the development of recordings. Thomas Edison invented a crude cylinder phonograph in 1877, and, by the turn of the century, companies in the United States and England were manufacturing disc recordings of music. The possibility of preserving musical continua via recording utterly changed the social and even artistic meanings of music, although scholars and musicians were slow to realize the degree of impact. The invention of the tape recorder a half century later made sonorities not only reproducible but also alterable. The resulting techniques allowed recorded sounds to be fragmented, combined, distorted, etc. Such manipulations could affect not only sound qualities but also temporal spans.

Photo by Sandy Underwood

The Percussion Group/Cincinnati rehearsing Five Studios on Six Notes *by Jonathan D. Kramer.*

By changing recording speeds, for example, a composer of *musique concrète* could make a word last an hour or compress the Beethoven symphonies into a single second.[1].

Today, because of electronic technology, we listen to unaltered music only rarely. The sounds we hear have been not only performed by musicians but also interpreted by audio engineers, who have reinforced the acoustics of concert halls, spliced together note-perfect recorded performances, created artificially reverberant performance spaces, projected sounds across the world via satellite broadcast, greatly amplified rock concerts, and created temporal continuities that never existed "live." The audio engineer is as highly trained as the concert performer, and he can be just as sensitive an artist.

Recording technology has forced us to redefine what a piece of music is. It is unreasonable to claim that the printed score represents the musical sounds: the score usually gives no indication of how the audio engineer should manipulate his variables. We might think conservatively of recordings as means to preserve performances, but records are far more than that. They are art works themselves, not simply reproductions. Thus people who buy records rightly speak of owning the music.[2] "Vivaldi's Mandolin Concerto is yours for only $1.00," says a recent advertisement.

Here are several examples that demonstrate the extent to which audio engineering can create (rather than simply preserve) musical continuities: (1) According to Walter Everett,[3] when the Beatles recorded their song *"Strawberry Fields Forever:"*

Two versions were done. It was originally scored for the Beatles and flutes, and recorded in A at about ♩ = 92. After listening to the lacquers, [composer John] Lennon decided it sounded 'too heavy' and wanted it rescored and performed faster. A second version, with trumpets and cellos, was recorded in B-flat at about ♩ = 102. Lennon liked the beginning of the first version and the ending of the second, and asked Martin to splice them together. When the speeds of both tapes were adjusted to match the pitch, the tempi of both were fortuitously the same at ♩ = 96. The two portions were edited together in the middle of measure 24...This procedure gives Lennon's vocals an unreal, dreamlike timbre, especially in the second, slowed-down, portion of the song.

(2) I have been told of a rock record made by the following unusual procedure: first the solo musicians were recorded as they improvised; then an arranger studied the taped improvisations and composed an instrumental accompaniment, which contained direct references to the recorded music. Interestingly, this material appears in the accompaniment *before* it does in the improvised solos. We listen to a paradox: the soloists seem to improvise spontaneously music that we have just heard! Furthermore, the record consists of a composed accompaniment that fits the improvised solos too well to have taken place in live performance.[4]

(3) A recording was released a few years ago of George Gershwin's *Rhapsody in Blue*.[5] The composer is piano soloist and Michael Tilson Thomas conducts the orchestra. What is odd is that Thomas was born four years after Gershwin died! Gershwin had recorded the piano solo, and Thomas conducted the jazz band to coordinate exactly with the recording, which he monitored through headphones. The performance is somewhat strained, since the soloist never reacts to the ensemble, but the aesthetic behind the recording is fascinating. Technology has created a collaboration between two artists who could never have known each other.

(4) I know of another rock record in which one track – containing the snare drum – is played backward. The typical clichéd sound of backwards taping is not heard, because all of the other tracks were recorded and played back normally. The total sound is intriguing, as is the idea of a performance one part of which is in reverse order.[6]

(5) The late pianist Glenn Gould retired from the concert stage at a young age in order to work exclusively in the recording studio. He was reputed to spend only about 10% of his studio time at the keyboard. The remaining time he listened, edited, supervised splicing, etc. His editing was as creative an activity as his playing, and the results indicate that he

was after more than note-perfect performances. His recordings have an integrity and a drive that one might not have thought possible to create "artificially." These recordings are Gould's legacy, just as surely as Bach's manuscripts are that composer's testament.

These examples show that recording does more than preserve. In each case a temporal continuum is created that could exist only by recording. Thus records and tapes prove what critic Walter Benjamin realized back in the 1930s – that large-scale mechanical reproduction inevitably changes the nature of art:[7]

For the first time in world history, mechanical reproduction emancipates a work of art from its parasitical dependence on ritual. To an ever greater degree, the work of art reproduced becomes the work of art designed for reproducibility. From a photographic negative, for example, one can make any number of prints; to ask for the "authentic" print makes no sense. But the instant the criterion of authenticity ceases to be applicable to artistic production, the total function of art is reversed.

Recording and broadcasting remove music from the concert ritual. Today there are many viable places to hear music besides the concert hall – lounging in the living room, driving in the car, jogging in the park, or picnicking at the beach. Ambient sounds mingle freely with those emanating from the transistor radio, to the apparent delight of the auditors. Many composers may still create progressions that define a movement through time from the beginning to the end of a piece of music, but listeners are no longer slaves to a concert ritual that perpetuates closure. Everyone spins the dial. Technology has liberated listeners from the completeness of musical form. Is it any surprise that other recent composers have cultivated an aesthetic that denies closure? In many contemporary works, it literally does not matter whether or not the entire performance is heard. Even in pieces that seem on paper to deal with definite beginnings and endings, there is often no overall progression through time that defines the musical entity. The mosaic-like temporal logic in much contemporary music is consonant with listeners' abilities to choose for themselves the boundaries of their listening spans. Composers who continue to ignore this fact are as far behind their times as are the aptly-named conservatories of music that train performers without educating them about the recording techniques with which they will inevitably have to deal.

* * * * *

Even before audio technology became a sophisticated art, it had a profound impact on musical time. It is no coincidence that at the same time that music began to be recorded, composers began drastically to reduce the redundancy in their works. Pre-twentieth-century music is filled with repetitions and returns. The intensity in much early twentieth century music comes from the lack of repetition. It is as if composers realized subconsciously that their music would be recorded and thus available to listeners for repeated hearings. As R. Murray Schafer explains, "The recapitulation was on the disc."[8] In addition, music early in this century became considerably more complex than it had ever been before, and the trend towards ever greater complexities has continued to the present day (with notable exceptions, of course). The density of information in music has increased exponentially. Gestures have been composed that are so compressed that they can be apprehended only after many hearings, and repeated listenings are possible once the music is recorded.

There has been a reaction to the tyranny of repeated hearings. Many composers structure their works so that each performance is different. This multiplicity of temporal form celebrates what recording seeks to destroy – the uniqueness of every moment in time. Of course, individual realizations of open-form compositions do get recorded, in apparent contradiction of their very meaning, and thus they are inevitably heard again and again. Karlheinz Stockhausen compared the recording of one version of an open form to a photograph of a bird in flight – we understand the picture as showing but one of a multitude of shapes the bird may take.[9] But which is the art work – the bird or the photograph? And which is the music we are hearing – the abstract open form that we might

intuit with the aid of score or program notes, or the fixed, carefully engineered recording?

Not only did tape recording bring to the audio engineer the ability to splice together artificial continuities, but it also brought to *musique concrète* and synthesizer composers the possibility of working directly with sound materials. From the simple act of putting razor blade to tape come the most powerful musical discontinuities as well as the most unexpected kinds of continuities. A composition can move instantaneously from one sound-world to another. Just when a splice might occur can be as unpredictable as the nature of the new context into which the listener is thrust.

The aesthetic potential of the splice had been well known from the film medium many years before the invention of tape recording, of course. Montage techniques originated in Russian and American films in the second decade of this century. By 1922, the Soviet filmmaker Lev Kuleshov was conducting careful experiments into the rhythmic effects of film splicing.[10] He studied the potentials of discontinuity and implied continuity in both fast cutting (influenced by the American films of D. W. Griffith and others) and slow cutting (with which Russian filmmakers had been working). Kuleshov's experiments and theories had a direct impact on Sergei Eisenstein, whose first film, *Strike* (1924), contains many splices. The power of slow cutting – juxtaposing standstills, flashbacks, flashforwards, successive simultaneities, double exposures[11] – scrambles the hitherto orderly and inviolable succession of time. Time is thus redefined as a malleable present, as an arbitrary succession of moments. This new concept, born of technology, reverberates in all art of the twentieth century.

As further technologies and new aesthetic extremes developed in subsequent decades, newer degrees and types of discontinuity became available, not only in film and music but also in drama, literature, and popular culture. Discontinuity affected the temporal texture of everyone's life. Consider one example: broadcasting. Radio stations present montages of advertisements, announcements, news, weather, sports, features, and music. Television can be equally discontinuous. In a flash, viewers are transported from an animated fantasy world to on-the-spot coverage of a real war in a distant land, or from the artificial (but does that term mean anything now?) world of a quiz game to the laundry room of the Typical American Housewife. And think of the children who grow up watching 15,000 hours of television between the ages of two and eleven.[12] Consider the program "Sesame Street" – a major formative influence on young children in the United States: extreme discontinuities, as one short scene leads without apparent logic to a totally different short scene. Watching "Sesame Street" is not unlike listening to the most heavily spliced tape music.

Not all tape music avails itself of the potency of extreme discontinuity, any more than all broadcasts are excessively montaged. But the possibility is there to be used or ignored. It is significant that Stockhausen wrote his most discontinuous music shortly after a period spent working intensively in the early *musique concrète* studio in Paris. Today, scarcely thirty years after tape technology first became available to composers, musical discontinuities are commonplace (as are, in inevitable reaction, long and undifferentiated continuities). Composers of tape music carry this aesthetic back into their instrumental writing, and composers with no overt interest in electronics have been struck by the power of spliced discontinuity. The resulting discontinuous compositions have been called "moment forms." A moment form *does not really begin; rather, it simply starts, as if it has been going on all along and we happened to tune in on it...A moment form ceases rather than ends. At its close we have the impression of having heard a series of minimally connected sections – called moments – that are a segment of an eternal continuum. The moments may be* related *– motivically, for example – but not* connected *by transition. The crucial attribute of moments is their self-containment. If a moment is defined by a process, that process must reach its goal, must be completed, within the confines of the moment...Moments are often defined by stasis rather than process: a moment, for example, may consist of a single extended harmony. Since*

there is no linear logic that connects moments, their order of succession seems *arbitrary. Actually, the order may or may not* be *arbitrary, but it must seem so on the surface if the piece is to be heard in moment time. The extreme of moment time is "mobile form," in which sections of the piece may be put together in any number of possible orderings from one performance to the next, perhaps within certain constraints.*[13]

It is impossible to pinpoint the historical origins of temporal discontinuities in music. While there are hints in Debussy (most notably in the ballet *Jeux*[14] of 1912) and Mahler (particularly in the finale of the Seventh Symphony of 1905), Ives and Stravinsky explored the world of discontinuity more fully. The latter's Three Pieces for String Quartet (1914) contain two movements that are sufficiently discontinuous to suggest moment form. The second movement almost sounds spliced together. Later Messiaen and Webern experimented with discontinuous musical time, and the Darmstadt school of the 1950s – Stockhausen (who first articulated the concept of moment form[15]), Luigi Nono, Bernd Alois Zimmerman, György Ligeti, and several others – carried the aesthetic to its extreme.

* * * * *

In discontinuous music, temporal proportions are crucial to formal coherence. There is contextual evidence in the discontinuous works of Stravinsky that he was extremely sensitive to the proportional lengths of sections.[16] Later, Darmstadt composers actually calculated proportional balances, often as a first act of precomposition. Such control of absolute temporal proportions exemplifies a spatialization of time common in much recent music.

Tape recording technology spatializes time in a literal way: 7½ inches of tape equals one second of sound. It does not matter how much or little activity that second contains nor whether it seems to be a long or a short second. Its literal duration is measurable along a spatial dimension. Thus, splicing techniques not only affect continuity but also allow for the compostion of absolute durations independent of the music that fills them. Even in the absence of splices, technology favors certain absolute durations. Familiar to tape music composers is the time interval created by "tape head echo" – the amount of time it takes for the tape to move from the record head to the playback head. This duration (which is somewhat variable, given the variety in recording speeds) is an integral part of such a work as Terry Riley's *A Rainbow in Curved Air* (1970). A similar but longer effect comes from the use of tape loops, as in Steve Reich's *Come Out* (1966).

The emphasis on absolute rather than experiential time in electronic music might strike a traditional musician as odd or even dehumanized. But music born of technology demands its own vocabulary and syntax. It demands methods and results appropriate to its equipment, not two-dimensional imitations of performance practices.

Composer Charles Wuorinen, writing about his electronic work *Time's Encomium* (1968-69), states:

In performed music, rhythm is largely a qualitative, or accentual, matter. Lengths of events are not the only determinants of their significance; the cultivated performer interprets the structure to find out its significance; then he stresses events he judges important. Thus, for good or ill, every performance involves qualitative additions to what the composer has specified; and all composers, aware or unaware, assume these inflections as a resource for making their works sound coherent.

But in a purely electronic work like Time's Encomium, *these resources are absent. What could take their place? In my view, only the precise temporal control that, perhaps beyond anything else, characterizes the electronic medium. By composing with a view to the proportions among absolute lengths of events – be they small (note-to-note distances) or large (overall form) – rather than to their relative "weights," one's attitude toward the meaning of musical events alters and (I believe) begins to conform to the basic nature of a medium in which sound is always reproduced, never performed. This is what I mean by the "absolute, not the seeming, length of events."*[17]

Wuorinen is quite right that there is a temporality peculiar to the electronic medium, in

terms of not only formal proportions but also surface rhythms. In electronic compositions rhythms are either played on a keyboard attached to the synthesizer or else programmed by means of a device such as a sequencer or computer.[18] A sequencer, in its simplest application, allows for endless repeats of exactly the same regular rhythms. Sequencers understandably have given rise to clichés, but imaginative composers working with powerful sequencers and/or computers have created rhythmic sequences of great complexity and beauty.

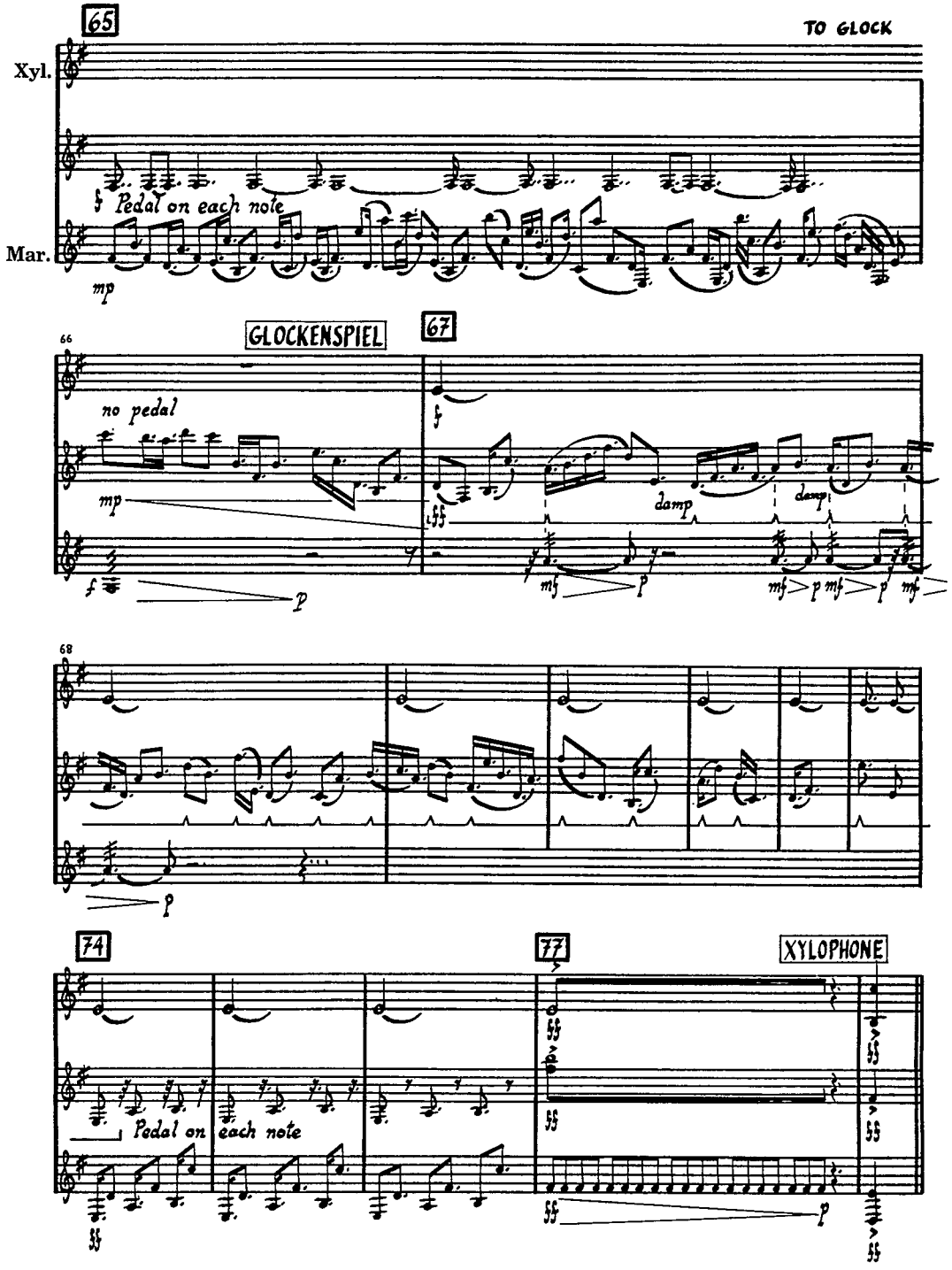
The sequencer produces electronically generated rhythms, while the keyboard is a means to incorporate the nuance of traditional performance into the electronic medium. Performers necessarily introduce slight irregularities into the rhythms they play. With a sensitive performer, these irregularities become the expression of a finely conceived interpretation. Sequencers, on the other hand, produce coldly regular rhythms, far more precise than any human could perform. The result can be lifeless. Compare, for example, two electronic realizations of Gustav Holst's *The Planets,* one made by Isao Tomita,[19] the other by Patrick Gleeson.[20] Tomita performs on the keyboard of a Moog synthesizer, while Gleeson often uses several sequencer-like memory units of an Emu synthesizer. The difference is instructive. Tomita's work, despite its electronic medium, has the warmth of human interpretation. Parts of Gleeson's realization are utterly precise, utterly cold. Holst's music demands to be performed, but Gleeson often bypasses the performer. Setting aside the intriguing question of the artistic worth of an electronic realization of a dazzling orchestral score, we can appreciate the difference between rhythms performed by a human and rhythms generated by precise machinery. This difference is subtle, but the implications are enormous.

Do these comparisons condemn electronically generated rhythms as impersonal or boring? Only when the rhythms are from compositions conceived for human performers. A versatile sequencer can perform rhythms of great complexity with no greater effort than it expends on the simple rhythms of Holst. The "precise temporal control" that Wuorinen calls for to replace the lost nuance of performance is readily realizable in rhythms too complex to be performed by a person. Such rhythms can live and sing, although their song is not of human performers. These are rhythms born of and appropriate only to electronic technology. They are rhythms that celebrate the total – not relative – uniformity of the sequencer. They produce a music that is a true expression of the electronic age.[21]

Performers get better and better all the time, and yesterday's rhythmic impossibilities are routinely mastered by today's performers. Even when and if the complex rhythms of some computer compositions become playable by humans, there will remain a crucial difference. "Humans must expend more effort and energy to accomplish what a machine, effortlessly, does mechanically."[22] The intense struggle of the performer to play the rhythms correctly is inevitably heard. The sequencer performs the same rhythms with total ease.

This difference between human and machine rhythms was once demonstrated to me dramatically. I had composed a work for percussion trio entitled *Five Studies on Six Notes.* The second study contains in its entirety only three different durations (from one attack to the next): ♪., ♪, and ♪.. These rhythms are in the ratio 6:4:3. The basic "pulse" – the common denominator – is 𝅘𝅥𝅯, which moves at a rate of 1120 beats per minute. This pulse rate is too fast to be counted or even to be felt for longer than a few seconds – its frequency of 18.7 cps is at approximately the threshold of pitch. Thus the performers had to use some means other than traditional counting to master the rhythms, particularly in a passage such as mm. 65-73, the only place in the movement where all three durational values are freely intermixed (see example).

In order to help performers learn this passage, I made a computer realization of it on tape. I made no attempt to imitate percussion timbres, but I was able readily to render the difficult rhythms precisely. The idea was to ask the performers to learn the taped rhythms



Example. *Five Studies on Six Notes* by Jonathan D. Kramer, end of second movement.

by ear, not by counting. The work was written for The Percussion Group of Cincinnati – Allen Otte, James Culley, and William Youhass (who recorded it on Opus One 80/81). These three extraordinary musicians were eventually able to master the rhythms – there are few performers I would trust to play such music – but their task was certainly not easy. By comparing their virtually perfect performance of this passage to the computer tape, I realized an important fact. The notes and rhythms in the performance are identical to those on the computer tape, yet the musical effect is different. The Percussion Group's very human and successful struggle to master an incredibly difficult task is utterly unlike the superhuman ease with which a programmed machine played the passage. The computer's effortlessness in the face of complexity is the essence of technological musical rhythms.

This comparison also shows, incidentally, that difficult-to-perform rhythms may not be difficult to hear. The excerpt, despite its complexity, does not sound forbidding. The rhythms strike the listener as irregular but nonetheless approachable and engaging. It may not be possible to tap one's foot to this music, but its rhythmic language does not come across as pulseless chaos.

* * * * *

There is one further aspect of musical time that has been greatly influenced by technology. That is the "turnaround time" (a term borrowed from computer jargon) between composition and performance. As music became more and more complex and difficult to perform in the late nineteenth and early twentieth centuries, composers had to wait longer and longer to hear their works. Charles Ives is the most extreme case; he did not hear much of his music until years after he had stopped composing; other pieces he never heard. That Donald Martino had to wait a decade to hear his Cello Concerto is quite typical.

Electronic technology, however, has cut turnaround time to zero (at least for *musique concrète* and synthesizer music – early computer composition often entailed a frustrating wait of several days while a digital computer tape was translated into an analog sound tape, a situation that has now virtually disappeared, given the advent of aptly-named "realtime" hardware and software). Composers working in electronic music studios hear exactly what they are composing – not a piano reduction, not a sight-reading, not a reproduction, but the potentially finished product. They can study at once and as often as they wish the aural result of their possibly complex compositional ideas. Electronic composition thus can have an immediacy akin to that of jazz improvisation. In the best electronic music this immediacy is transferred into the compositions, whatever the degree of complexity in the compositional process. Listeners are engaged by composers' excitement of discovery that comes from working directly with sounds in time. Electronic composers hear exactly what they are creating before they choose to preserve, edit, or destroy. Thus it is no surprise that many composers, despite vastly increased possibilities for mathematical control in the compositional process, have opted instead for the immediacy of electronic improvisation. Stockhausen, for example, is supposed to have rendered irrelevant all the precompositional timbral calculations that went into one of his early tape works when he spontaneously added the reverberations of a basement to the otherwise dry sounds.

* * * * *

Thus technology has expanded the composer's relationship to musical time in three different ways. It has increased his power to regulate temporal proportions, it has enabled him to compose rhythms of a complexity commensurate with the potential of his equipment, and it has opened the compositional process up to an immediacy that comes only when there is no delay between the conception and the realization of a segment of musical time.

Non-technologically oriented composers may well emulate the complexity, control, or immediacy of the electronic temporal continuum, but only through the use of technology are extremes of rhythmic intricacy, formal control, and sonic immediacy possible. But they are achieved with the incurance of an obligation – to make a music that is born of and

appropriate to the technological mentality. This is no small responsibility, and composers are only beginning to find artistically viable solutions. Technology really has changed the essence of music. It has not, of course, destroyed the performance tradition of vocal and instrumental music, but it has created a fundamentally new aesthetic of musical time, an aesthetic that has begun to produce beautiful and exciting music.

Footnotes

[1]Because of the nature of the tape recorder, changing recording speed necessarily affected timbre. Only recently have digital recording capabilities made it possible effectively to alter speed without affecting pitch and timbre.

[2]Christopher Small, *Music, Education, Society* (New York, 1977), p. 174.

[3]Walter Everett, "Phantastic Remembrance in John Lennon's 'Strawberry Fields Forever' and 'Julia,'" forthcoming in *Musical Quarterly*.

[4]I am indebted to Martin Sweidel for telling me about this intriguing recording.

[5]Columbia M-34205.

[6]I am indebted to Jerry Studenka for playing this recording for me.

[7]Walter Benjamin, "The Work of Art in the Age of Mechanical Reproduction," trans. Harry Zohn, in *Illuminations* (New York, 1969), p. 224.

[8]R. Murray Schafer, *The Tuning of the World* (New York, 1977), p. 114.

[9]In a private conversation, San Francisco, 1967.

[10]Jay Leyda, *Kino: A History of the Russian and Soviet Film* (New York, 1960), pp. 170-74.

[11]Arnold Hauser, *The Social History of Art*, Vol. IV (New York, 1958), trans. Stanley Godman, p. 241.

[12]Marie Winn, *The Plug-In Drug* (New York, 1977), pp. 3-11.

[13]Jonathan D. Kramer, "New Temporalities in Music," *Critical Inquiry* Vol. VII, no. 3 (Spring, 1981), p. 547.

[14]Jann Pasler, "Debussy's *Jeux:* Playing with Time and Form," *Nineteenth Century Music* Vol. VI, no. 1 (1982), pp. 60-75. I am indebted to Professor Pasler for reading and criticizing an earlier version of this article.

[15]Karlheinz Stockhausen, "Momentform," in *Texte zur elektronischen und instrumentalen Musik*, Vol. I (Cologne, 1963), pp. 189-210. See also Kramer, "Moment Form in Twentieth Century Music," *Musical Quarterly* Vol. LXIV, no. 2 (April, 1978), pp. 179-182.

[16]Kramer, "Discontinuity and Proportion in the Music of Stravinsky," forthcoming in the proceedings of the International Stravinsky Symposium, ed. Jann Pasler, University of California Press (1984).

[17]Charles Wuorinen, notes to recording of *Time's Encomium*, Nonesuch H-71225.

[18]The contrast between the digital computer (dealing with *discrete* numbers) and the analog synthesizer (using *continuously variable* voltages) is a telling metaphor for fundamentally different types of mental processes. I am indebted to Robert S. Moore for this observation.

[19]RCA ARL 1-1919.

[20]"Beyond the Sun," Mercury SRI-80000. I am indebted to Charles Brown for bringing this recording to my attention.

[21]Such rhythms can be found in, for example, Morton Subotnick's *Touch*, recorded on Columbia MS-7316.

[22]Elmer Schönberger and Louis Andriessen, "The Apollonian Clockwork," trans. Jeff Hamburg, *Tempo* No. 141 (June, 1982), p. 5.

The Percussion Music of John J. Becker

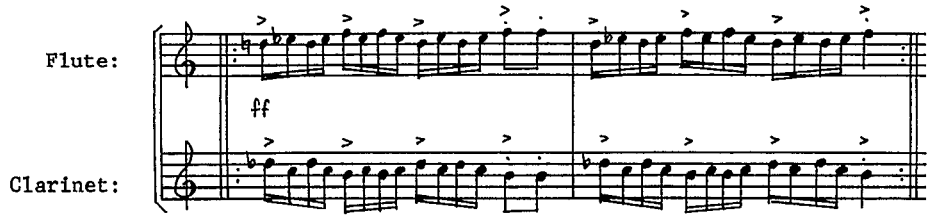
Kyle Gann is a composer and free-lance writer on the arts who lives in Chicago where his reviews often appear in the Reader *newspaper. He studied composition with Peter Gena, Randolph Coleman, and Gregory Proctor, and computer music with Gary Kendall. In 1981-82 he served as administrative assistant for the* New Music America *festival. Dr. Gann is a collector of American Indian musical instruments, and is presently writing a concerto for his Taos Indian drum. His* Cherokee Songs, *for voice and percussion, will soon be performed in Portugal and Brazil by Martha Herr and John Boudler.*

If the present trend continues, John J. Becker will soon no longer be the least well-known of that group of composers now called the "American Five." Close friend and spiritual kin to Charles Ives, Carl Ruggles, Henry Cowell, and Wallingford Riegger, Becker was the only member of the group whose fierce crusade for ultra-modern trends in music was carried out in that relative cultural desert (at least in the 1930s), the American Midwest. Between 1929 and his death in 1961, Becker was a teacher, critic, and conductor in the St. Paul and Chicago areas, known for his enthusiasm, his intransigence, his disputatiousness, and his devotion to a cause that he perceived to be of utmost importance to American culture. He was arguably the most literary of the American Five, and the only one to complete several large multi-media works. One of these, *Marriage with Space* (1933-5), uses solo and mass recitation, solo dancer, dance group, and colored lighting, as well as a large orchestra. Very few of his large works have been performed, and the neglect of his work has been an American tragedy, although interest has been growing slowly but steadily in recent years.

Becker's mature music is often based on a strongly dualistic conception; not the balanced and ultimately integrated dualism of Romantic music, but an often violent juxtaposition of irreconcilable opposites. Characteristically, soft, lyrical (though highly dissonant) chorales alternate with passages of savage, angular

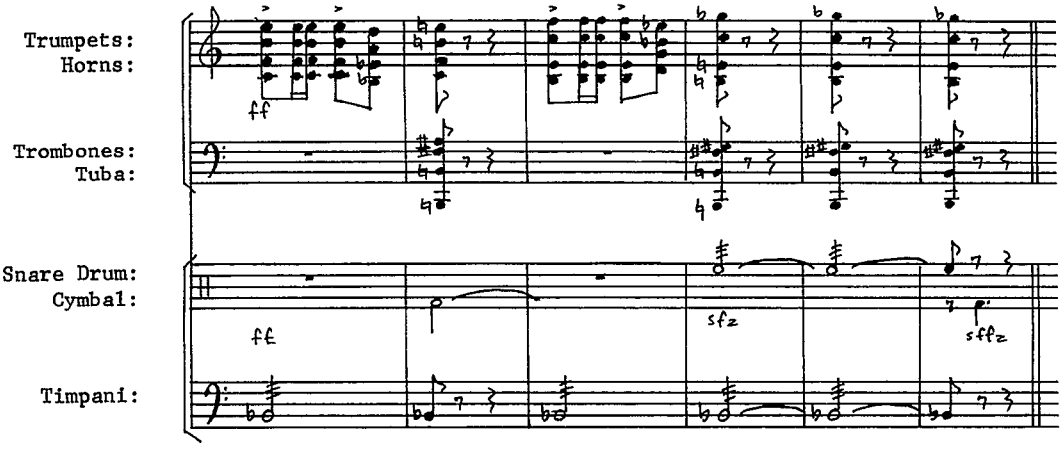
ferocity, which express anything from cynical satire to moral outrage. This opposition without resolution – inharmoniousness at a formal level – makes Becker's music ultimately percussive in conception.

As well suited as his musical conception seems for percussion, Becker's primary concern was not rhythm, but pitch, and this fact curtailed his use of percussion instruments. The music's internal opposition frequently takes the form of a juxtaposition of white notes against black, or of two conflicting pentatonic scales. More importantly, Becker was trying to achieve a neo-Renaissance polyphony, as technically elegant as that of Palestrina, but using intervals previously regarded as dissonant.[1] The same instruments that at one moment play virtuosic, highly rhythmic fireworks will break into a slow, equal-voiced four-part chorale the next. As a result, even in the music's most violent aspects, many of the most rhythmic and percussive effects are entrusted to brass, woodwinds, or strings:



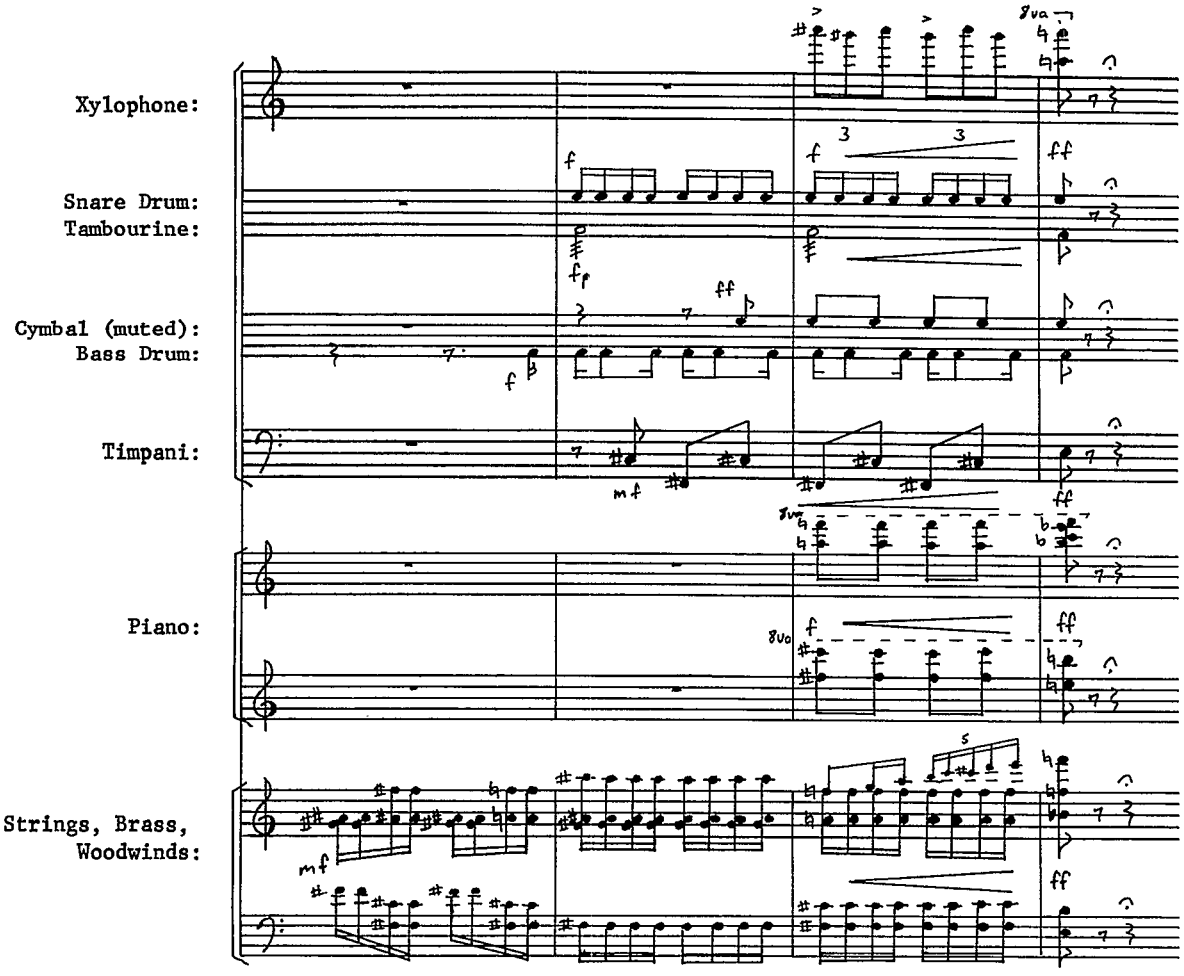
Example 1
Soundpiece No. 6: (1942)

In Becker's orchestral music, percussion is rarely used for its own sake, but rather to color and intensify what is going on in the other instruments. It is frequently associated with marches or brass fanfares of a military nature:



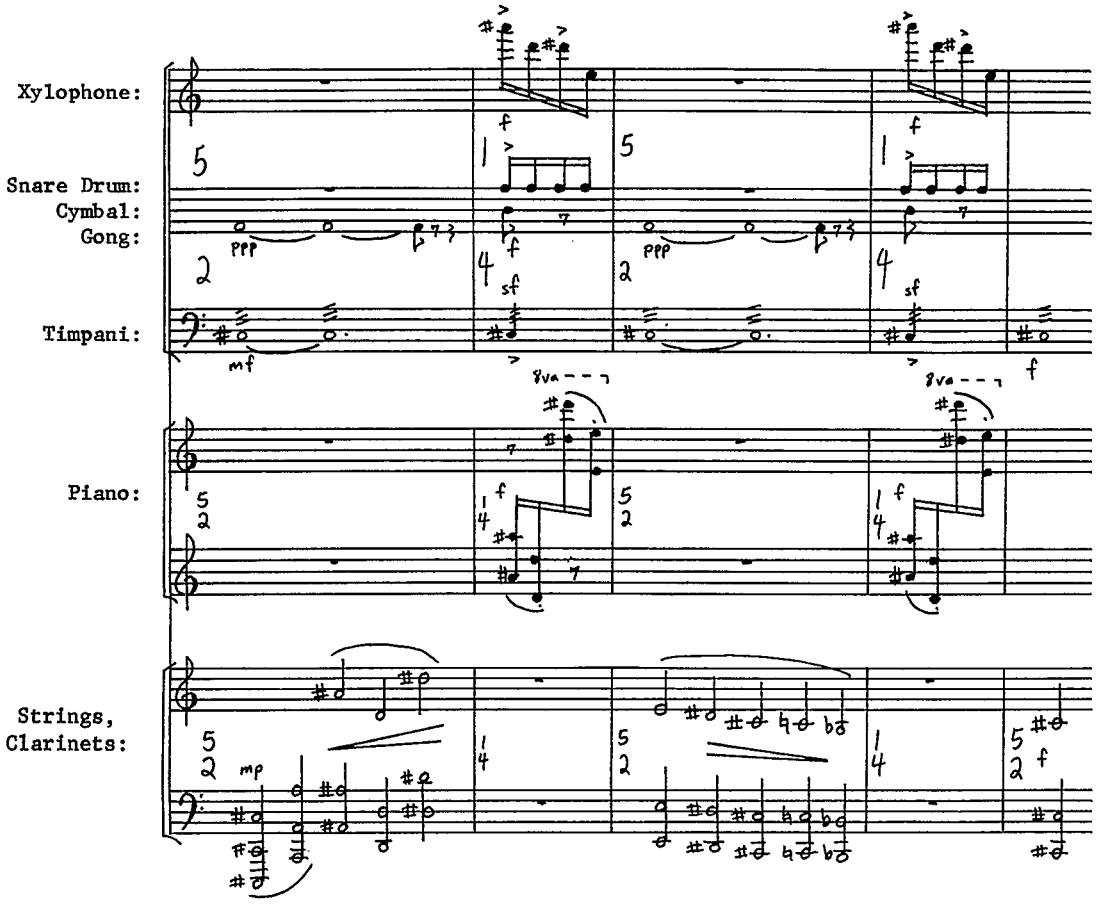
Example 2
Music for Julius Caesar: (art-film; 1949)

In his stagework, *Rain Down Death* (1939), Becker asks that a snare drum roll continue throughout the work for dramatic effect, and suggests an occasional change of drummer. At times, percussion is used as a brilliant highlight for orchestral tutti:



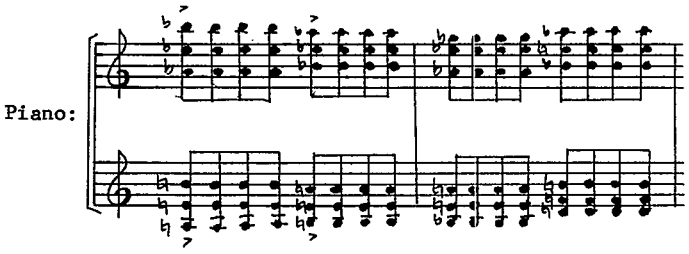
Example 3
Symphonia Brevis: (1929)

and occasionally it is pitted against the rest of the orchestra as an interruption:



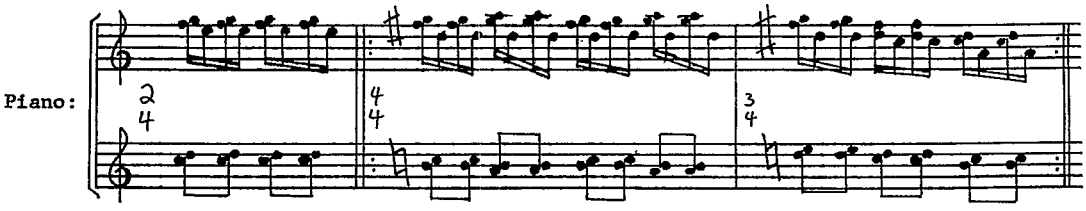
Example 4
Symphonia Brevis: (1929)

In a 1950 article, "Finding a Personal Orchestral Idiom,"[2] Becker adamantly insisted that the piano be viewed as a percussion instrument, and outlined suggestions for its orchestral use. Many of his scores contain a notation at the beginning of the piano part such as the following: "Piano strike always as percussion unless designated otherwise" (Soundpiece No. 1). Sometimes the piano technique involved makes this caveat almost superfluous:



Example 5
Soundpiece No. 1: (1932)

Theoretically, then, a discussion of Becker's percussion music could be opened up to include several of his mature piano works, but this lies outside the scope of the present article. His major work for solo piano, the Soundpiece No. 5 (1937) does, however, deserve mention in this regard. When properly played ("as fast as possible"), the piece creates a strange timbral buzz which enters the realm of non-pitched sound and leaves the conventional idea of piano technique far behind:



Example 6
Soundpiece No. 5: (1937)

Even as his piano music left conventional technique far behind, his innovative percussion writing opened new doors in form, content and orchestration.

The Abongo

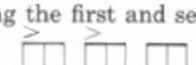
John Becker wrote only two works for percussion ensemble, lasting less than fifteen minutes between them, each significant historically and in its own right. Each was written specifically for the dance, as if he were reluctant to base a work primarily on rhythm without some accompanying purpose or program. The first, *The Abongo* (1933), was inspired by a discussion of music among the Abongo tribe of Africa in *Primitive Music*, by Richard Wallaschek, published in 1893. The relevant passage is worth citing for its relation to the technique of the work: *The Abongo people, a race of dwarfs in West Africa, have no musical instruments, and con-*

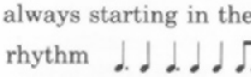
tent themselves by striking two pieces of wood together while they improvise songs which consist of nothing but lengthy repetitions of words describing certain circumstances...[3]

This idea of repetition at great length obviously sparked Becker's imagination. The story of the dance comes from the next paragraph:

If a Kafir or negro is unable to keep his wives in order, a festival is held to settle the quarrel, and all the inhabitants of the village are invited to take part. At midnight there is a sudden stillness during which Mumbo Jumbo (sic!) appears bearing a club as his insignia of office, seizes the quarrelsome wife, who is naked, binds her to a stake, and amid the shouts of laughter of the audience, gives her a sound drubbing.[4]

From time to time throughout the score, indications are given for the actions that take place: "Signal for tribe to assemble – natives begin to straggle in...," "by this time...they should begin to be hysterically noisy," "Husband appears with big stick" (sudden rest with fermata), and at the end, "great laughter."

The Abongo is a striking anomaly among Becker's works. Scored for two small drums, large and medium drums, two tin pans, two barrels, six timpani (three players), two tam-tams, snare drum, bass drum, gong, and three cymbals (the total playable by twelve people), accompanied by the hand clapping and singing of the dancers, the work is a linear crescendo of repetitive rhythmic patterns, with few interruptions or inconsistencies. The core of the work resides in the timpani and water drum, the latter is an African instrument consisting of a turtle (or other) shell placed on the surface of a tub of water. The water drum was probably suggested to Becker by Cowell.[5] Except for a few brief pauses, the second and third sets of timpani play triplet eighth-notes throughout, accenting the first and second beats of the ¾ meter:  . The water drum and the first set of timpani play entirely in whole notes and half notes across the barline. As a result, the polyrhythm  runs as an undercurrent throughout the piece.

This grouping is complicated by the pitches of the timpani. Timpani I plays a four-note melody, doubled at the fourth, which groups its phrases into a 16-beat pattern. The remaining timpani, also doubled at the fourth, alternate between two sets of pitches, creating a smaller-level repetitive unit of 2/9 of a measure. Most of the smaller instruments, added to this core one by one, cover it with repetitions of either the pattern  and slight variations of it, or the pattern  Frequently the gong, large cymbal, and bass drum reinforce the four-beat organization of the water drum. (On the accompanying structural chart, patterns emphasizing groupings of four beats are shaded). At three points near the beginning a small rhythmic canon takes place, always starting in the snare drum, using the rhythm  etc. A few additional irregularities occur as well, but once the piece is well under way (by measure 86), it rolls inevitably towards the final climax with only

John J. Becker

the basic patterns and their variations. Don Gillespie's excellent dictum, "consistency must not be expected in a Becker score,"[6] is inapplicable in this one instance.

Becker's assumption that *The Abongo* would never be performed was reasonable given the paucity of performances of his less radical music, but nevertheless wrong. The piece enjoyed a kind of underground notoriety during the 1930s, and eventually made its way into the hands of John Cage who wrote to Becker, "this is an aspect of percussion music of which we have not yet had examples."[7] (This was c. 1939, after Cage had written his Trio and Quartet for percussion, and the same year he began his *Construction* series.) It wasn't until 16 months after Becker's death that *The Abongo* received a concert premier at the hands of Paul Price and the Manhattan Percussion Ensemble in New York City, on May 16, 1963. An additional 16 years elapsed before the work's first performance with dance, by the Zodiaque Dance Company, directed by Linda Swiniuch, with Donald Knaack conducting the University of Buffalo Percussion Ensemble, March 31, 1976. This production, the only one to date to attempt to utilize the composer's intentions, was problematic, marked by a strong conceptual disagreement between the choreographer and Mrs. Evelyn Becker, the composer's widow. The latter disapproved of both the costumes (long ruffled gowns in bright colors similar to those found in African designs) and the number of dancers, and as a result new dancers were added and the choreography altered at the last possible moment.[8]

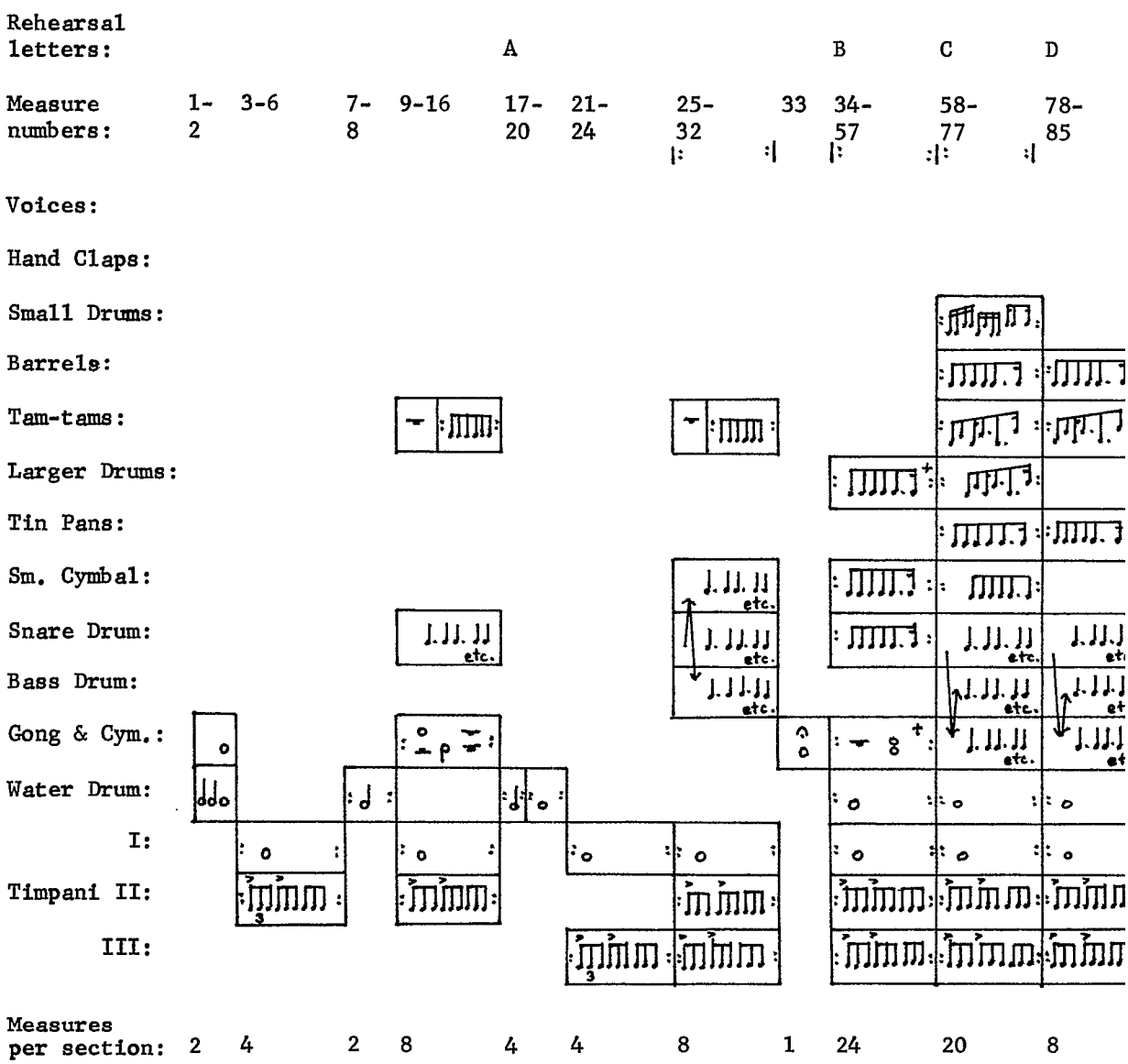
Those interested in performing *The Abongo* should be warned that the published score (Autofax Editions) is slightly incomplete, especially in the area of dynamics. An excerpt published as an example in Becker's orchestration article [9] clearly shows crescendi and *ff's* that do not appear in the published score. This suggests that the dynamic of *pp* throughout is obviously inappropriate. As far as interpretation goes, it seems essential that the elements that create the most rhythmic ambiguity and variety be clearly brought out, especially the pervasive 3 against 4, and the 16-beat groupings of Timpani I. The canons near the opening provide an interesting formal irregularity which can easily be overwhelmed by the rest of the texture. From the perspective of the 1980s, *The Abongo* is somewhat a pre-Minimalist exercise in Minimalism, and like most Minimalist music, great attention must be paid to subtle irregularities if the piece is not to lapse into monotony.

Dancer Diana Huebert

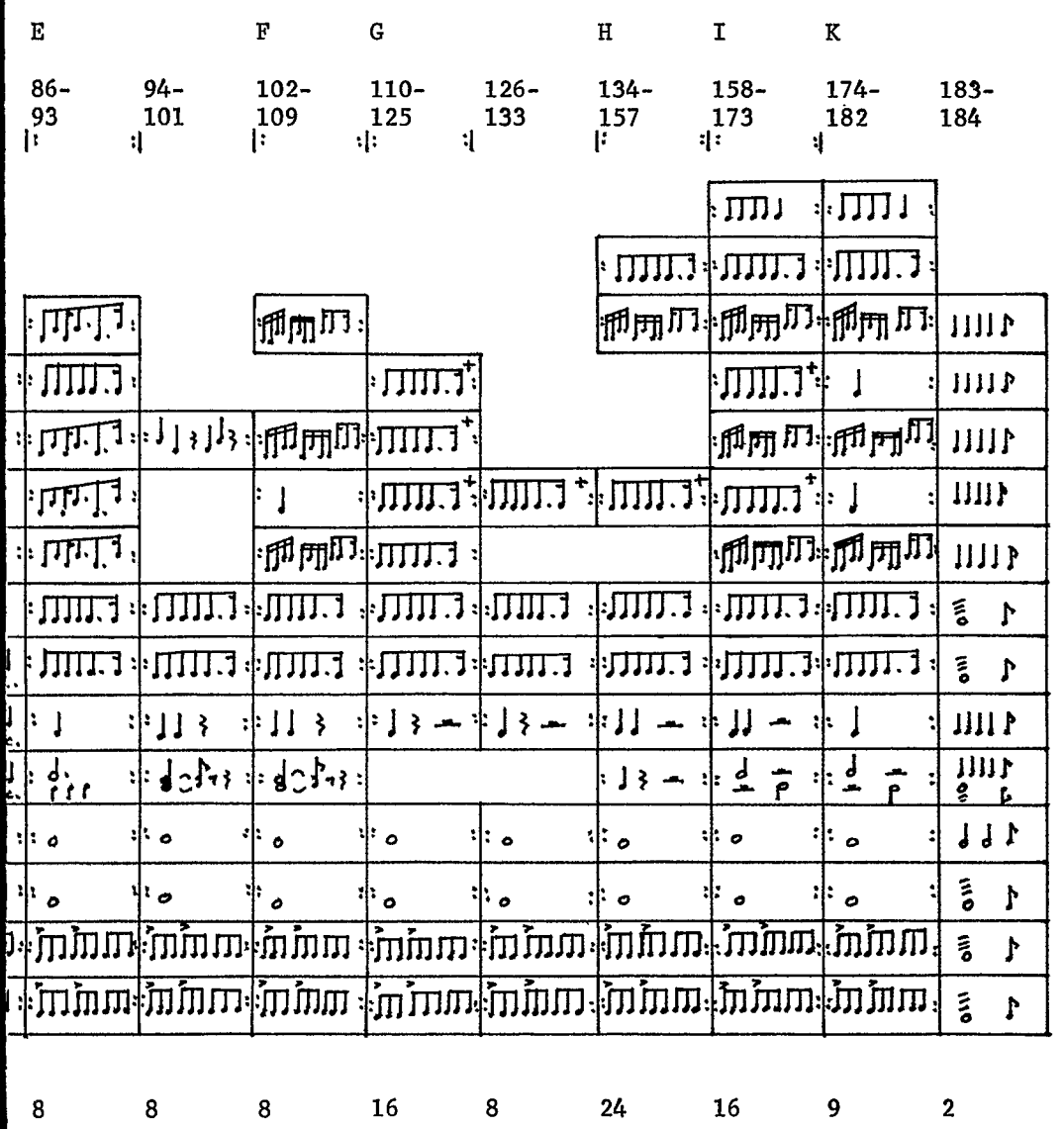
Vigilante 1938

In 1935 Becker was appointed State Director of the Works Program Administration's Federal Music Project for Minnesota. Here he met the dancer Diana Huebert, who took an interest in his music and asked him to write her a piece. The pre-war atmosphere of 1938 determined the subject matter of the piece, which was inspired (according to an advance newspaper notice) "at the time of the dramatic days of the recent German conferences when world peace was at stake."[10] The dance concert that Diana Huebert organized centered around rebellion, and the story line of her choreography for

THE ABONGO: Rhythmic Structure



Shaded areas indicate patterns that emphasize groupings of four, eight, or sixteen
Arrows denote canonic entrances at the rhythmic interval of four beats.
+ denotes variations on the basic pattern given.


E
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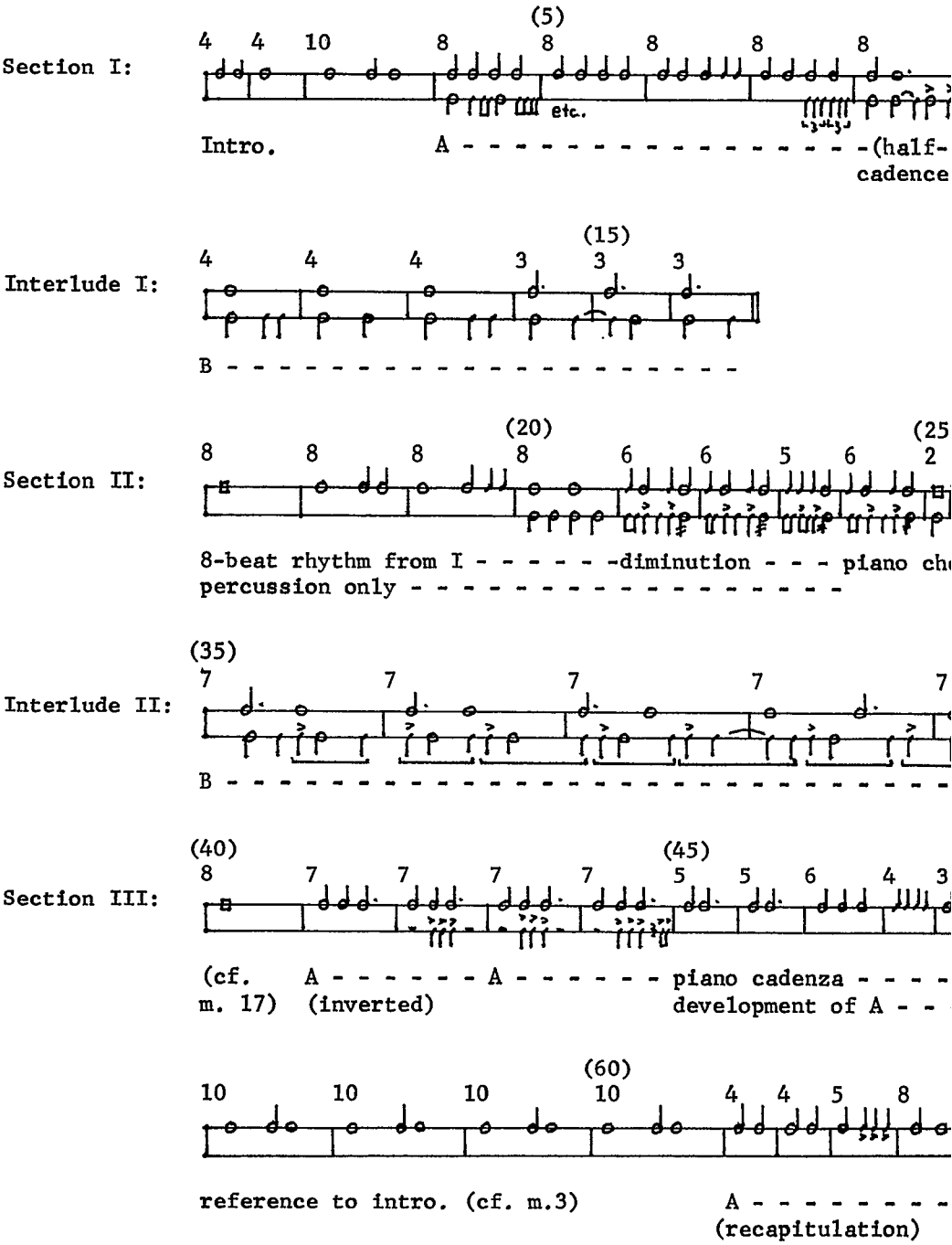
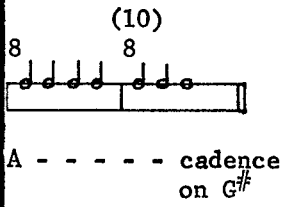
2

eats.

VIGILANTE 1938: Rhythmic Structure

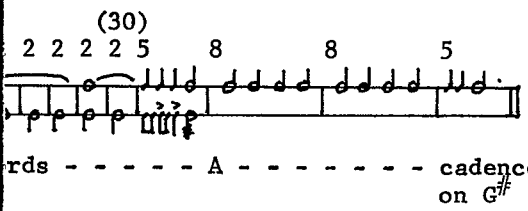


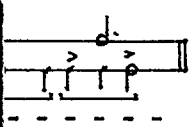


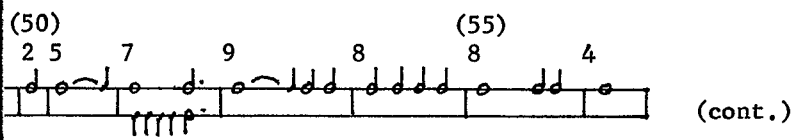
Key:

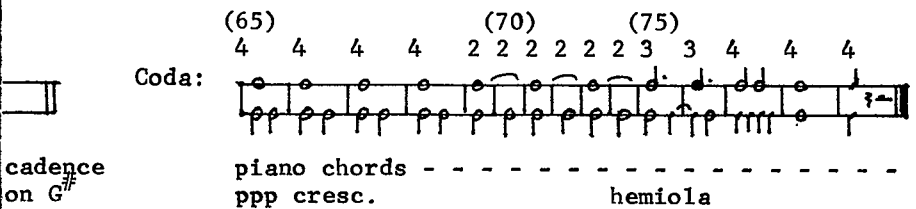
Measure number
Meter (x/4)
Large-scale rhythm
Subsidiary rhythm
Description

(The interludes are printed proportionately twice as long as the sections because they are twice as slow: ♪ = 100 vs. ♩ = 100)





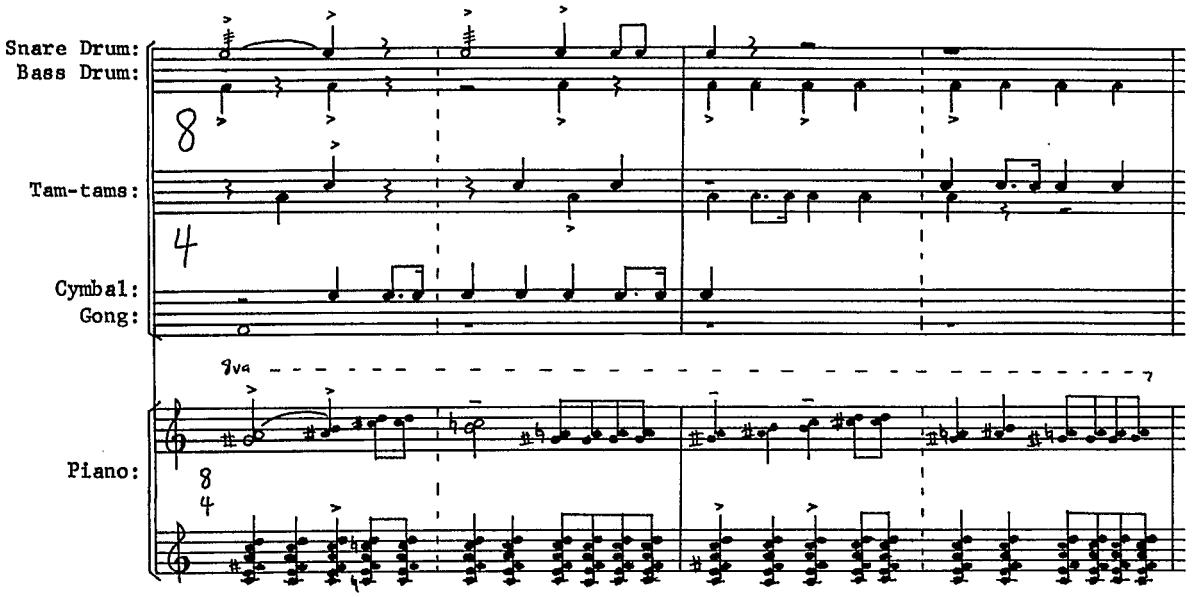




Becker's work abstractly reflected her concern for the Spanish Civil War. It was a true collaboration – Becker altered the rhythms to accommodate her dance steps [11] – and the piece, *Vigilante 1938: A Dance*, turned out to be the only paid commission of Becker's career; he received $60.[12]

Vigilante 1938 is very similar in sound and instrumentation to the *Three Dance Movements* (1933) of William Russell, whom Becker had met in New York City. Cowell published *Three Dance Movements* in his New Music Editions in 1936, the same year that Becker was named an Associate Editor of the publications, so it is almost certain that Becker was familiar with the work. Russell's pieces, though, while quite charming, are simple dances, each based on the same rhythm throughout; neither as complex nor as ambitious as *Vigilante 1938*.

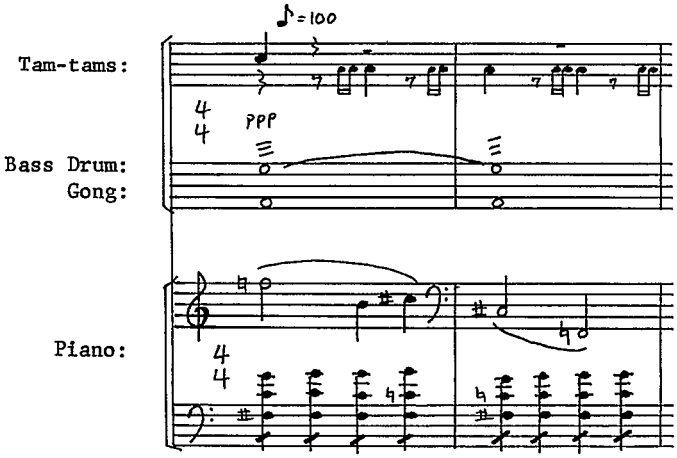
Scored for snare drum, tam-tam, bass drum, cymbal, gong, and piano (six players in all), *Vigilante 1938* is much more typical of Becker's violently dualistic musical conception than *The Abongo*. Externally, it consists of three parallel sections separated by two contrasting interludes – ABABA with coda – but it is actually a typically Beckerian sonata-allegro form, similar to that of the *Concerto Arabesque* though on a much smaller scale. The interludes together act as a second theme which, in this abbreviated treatment, does not return after the development. In a Romantic sonata-allegro movement, the first and second themes would be contrasting aspects of the same tonal material, and would eventually be integrated and revealed as such in the course of the work. Here, the two themes are radically different and, typically for Becker, no attempt at a reconciliation is made. The first subject, representing the satirical/militaristic side of Becker's dichotomy, is stated in parallel minor seconds, a technique that pits black notes against white, and of which he was particularly fond[13]:



Example 7
Vigilante 1938

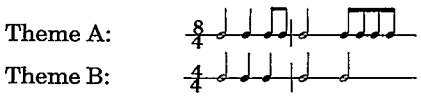
As usual, the piano is indicated "to be played as a percussion instrument," and these clusters can hardly be played any other way. The percussion parts accompanying this theme emphasize the military squareness of the 8/4 meter, dividing measures in halves and fourths with only an occasional cadential syncopation.

The second subject (interlude) represents Becker's lyrical/tender side, and is accompanied by repeated, slowly changing dissonant chords:



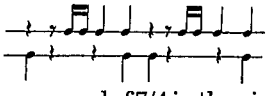
Example 8
Vigilante 1938

(A similar example can be found in the *Symphonia Brevis*, first movement.) (It is an effect worth noting that the combined tempo and harmonic background invariably make me hear the falling C♯ to F as a perfect fifth, no matter how hard I try to hear it as augmented.) One harmonized with clusters, the other with chords of fourths and fifths, these two subjects are related only by the squareness of their rhythmic contours:



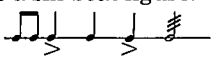
Both themes receive parallel treatments in later statements. Theme B appears in 7/4 meter in the second interlude, as does theme A in Section III. This deviation from the rhythmic norm serves to heighten tension towards the middle of the piece, but the tension is never really resolved.

In both interludes the percussion creates a subtle background of rhythmic ambiguity. In the first interlude this takes the form of the rhythm ♩ 𝄾 ♫ ♩ 𝄾 ♫ ♩ in the tam-tam, which repeats and continues across the barline after the meter has changed to 3/4. In the second interlude the ambiguity is more striking, as the two tam-tams play the repeated rhythm:

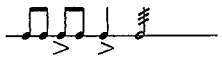


against a foreground of 7/4 in the piano, cymbal, and gong. This is virtually the only attempt at polyrhythm in this militaristic piece. It lends a certain poignancy and pliability to the interludes which the rest of the work lacks totally, and should be carefully brought out in performance.

As the structural chart indicates, Section II does not begin with theme A but, instead, using only percussion, develops the eight-beat rhythm which accompanies the theme in Section I, telescoping it into a six-beat figure:

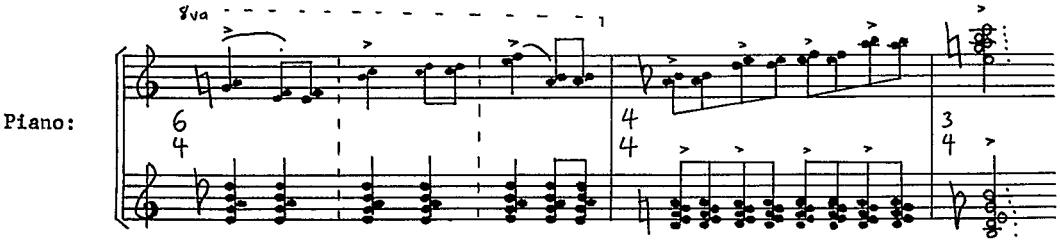


and further shortening this into five beats:



This gradual shortening of rhythm and meter is the basic means for creating tension in the piece, as a glance across the rows of the structural chart will quickly show. It leads, in this case, to a series of repeated piano chords consisting of pentatonic clusters, black notes in the left hand against white notes in the right. This type of chord is a quintessential Becker sound: each register in itself is relatively consonant, like the higher overtones of a single note, but together they are dissonant in the extreme. This dissonance across registers Becker often likened to a hovering "play of light."[14] This driving pattern leads to a much abbreviated statement of theme A in an otherwise little-changed form.

Section III can be considered the beginning of the development proper. After eight square beats in the snare drum that refer to the earlier rhythmic organization, theme A returns in 7/4, but with a classic developmental difference: the accompanying clusters are now in the right hand, above the theme. Reference is made to the original square rhythms by the percussion, which, by accenting beats 3, 4, and 5 in each measure, emphasizes the asymmetry of the 7/4. The development continues and intensifies in a "cadenza" for piano alone. Theme A is broken up into its smallest particles in the manner of any good middle Beethoven sonata:



Example 9
Vigilante 1938

and climaxes in a series of black-against-white chords of varying durations. This treatment exhausted, the percussion enters and reestablishes the square 8/4 rhythmic organization, followed by a series of 10/4 measures each divided 𝅗𝅥 𝅘𝅥 in reference to the 10/4 measure which opened the work. Once again theme A returns briefly in its original 8/4 form, though quickly diminuting into a 5/4 cadence.

The coda, which begins *ppp* and crescendos linearly throughout, is as rhythmically square as possible, another feature characteristic of the Classical sonata-allegro. Half-note white-against-black chords in the piano (in fifths this time, perhaps a last reference to the interludes) are accompanied by running eighth- and then quarter-notes in the percussion. Just before the final climax, a single rhythmic ambiguity occurs: a hemiola across two measures of 3/4, the triple division marked only by accents on the rolls in the snare drum and cymbal. Great care should be taken to bring out these accents in performance, lest the momentary ambiguity go completely unnoticed.

In both audition and analysis, one is struck by the abruptness of *Vigilante 1938*, the almost total absence of transition. The interludes, which begin so charmingly, die away quickly

with sinking chromatic lines as if they saw as futile any attempt to come to fruition. The brief recapitulation, while it restores the military rhythmic regularity, concludes with a symmetry-wrenching 5/4 measure, and does not really resolve anything. It is easy to read into this ultimate lack of integration or resolution a deficient compositional technique, but to do so is merely to interpret the work on an inappropriate basis. As an unresolved dialectical movement, *Vigilante 1938* represents the negation of the Romantic/Classic idea – it is the sonata-allegro form turned against itself.

Such negation can be related to Becker's outlook on life, particularly in the foreboding pre-war atmosphere of 1938. It is typical of his music that such tender moments as these interludes seem helpless and inconsequential in the face of the stern mockery of experience. Given the apathetic and antipathetic reactions which so often met Becker's music during his lifetime, it must have been very easy for him to conclude that everything stupid and brutal in human life prospers, while the occasional sincere and truthful "voice in the wilderness" is inevitably disregarded, if not obliterated. And, as the development of *Vigilante 1938* might imply, he may have felt that there was never any real resolution. Though like him in so many other ways, Becker did not share Charles Ives' faith in the masses[15] nor his optimism concerning world affairs; and had Ives still been writing in 1938, perhaps his own enthusiasm would have foundered. Surely the disturbing sound and form of *Vigilante 1938* are as appropriate to the 1980s as to the 1930s. In any case, though far from being one of his major efforts, *Vigilante 1938* provides as clear an insight into Becker's personality as many of his larger, more familiar works.

It being his one paid commission, Becker was able to derive more enjoyment from *Vigilante* during his lifetime than from many of his other works. Diana Huebert performed the piece with the Carleton Dance Group on December 12, 1938, in Northfield, Minnesota (with another Becker work, *Nostalgic Songs of Earth* (1938) for piano, choreographed on the same program), and again later at Mundelein College in Chicago, a city where Becker was attempting to increase his reputation. Apparently though, the next performance had to wait until April 26, 1970, when Don Gillespie organized a concert performance at Chapel Hill, North Carolina, with Roger Hannay conducting the New Music Ensemble.

The Abongo and *Vigilante 1938* remained isolated experiments within Becker's output. *The Abongo* is a unique novelty, both for Becker and for Western music in general. *Vigilante* is a much more personal piece, and more closely related to the era of American music in which it was produced. Compared to the *Symphonia Brevis* and Soundpiece No. 4, both are minor pieces which merely point toward the heights that Becker sometimes achieved, but they illuminate aspects of Becker's mind and strengthen his credentials as one of the most experimental composers of the 1930s. One wonders what this polyphonist whom Cowell called the "Sixteenth-Century Modern"[16] might have done with vibraphones and marimbas; but it seems useless to inquire about what the man didn't write when what he did compose still lies so neglected. One can only hope the situation will continue to change.

Anyone wishing to do further research into the life and music of John J. Becker will have to consult Don Gillespie's 1977 dissertation, John Becker: Midwestern Musical Crusader, *available from University Microfilms, a book to which I am heavily indebted. Enjoyable, insightful, and complete, it will not be superseded in the foreseeable future.*

Thanks go to Sam Denison and the Fleisher Collection of the Free Library of Philadelphia, to whom many of Becker's scores are entrusted, for the loan of Vigilante 1938 *(there cataloged under its subtitle only:* A Dance), Soundpiece No. 1, *and* Rain Down Death.

Thanks also to Don Gillespie, Mrs. Evelyn Becker, John Boudler, Linda Swiniuch, and Donald Knaack for much valuable information.

Footnotes

[1]**Henry Cowell, "John J. Becker," in Henry Cowell, ed.,** *American Composers on American Music* (New York, Frederick Ungar Publishing Co., 1962), p. 82

[2]John Becker, "Finding a Personal Orchestral Idiom," *Musical America*, LXX (February, 1950), p. 126

[3]Richard Wallaschek, *Primitive Music* (New York, Longmans, Green, and Co., 1893), p. 8

[4]Ibid.

[5]Don Gillespie, *John Becker: Midwestern Musical Crusader* (Ann Arbor, University Microfilms International, 1977), p. 140

[6]Ibid., p. 82

[7]Letter of John Cage to John Becker, undated (c. April, 1939), quoted in Gillespie, op. cit., p. 140

[8]Mrs. Evelyn Becker and Linda Swiniuch in conversation with the author

[9]John Becker, op. cit., p. 127

[10]Troupe Will Give Concert, *Northfield, Minnesota Carletonian*, Nov. 26, 1938

[11]Diana Huebert Faidy in conversation with Don Gillespie

[12]Mrs. Evelyn Becker in conversation with the author

[13]John Becker, op. cit., p. 126

[14]Ibid., p. 256

[15]see, for example, John Becker, "Notes on Philosophy of Art," unpublished typescript (n.d.) quoted in Gillespie, op. cit., p. 128:

> [Although] we may talk about the democracy of Art all we please – from now to the end of time, there will be only the few finer spirits who think, and the herd does not, will not, could not think if it wished to, only the finer spirits who will understand the beauty of Art, and for that reason I contend that, after all, Art belongs to the aristocrat not the democrat...

[16]Gillespie, op. cit., p. 84n

A Draft of Shadows

Wesley York is a composer, theorist and artist. He studied music, literature and the visual arts at Clark University and composition at the New England Conservatory of Music. His analytical work with the music of such contemporary composers as Philip Glass constitutes a remarkable exploration into the nature of structure and perception. In addition, as a result of his expertise in both the aural and visual media, he has a rather unique approach to both instrumental and electronic composition. His most recent work has been in the area of computer music. Wesley York's compositions have been performed throughout the United States. He is also a highly respected visual artist currently working in the Boston area.

Thomas DeLio is a noted composer and theorist. He studied at the New England Conservatory and Brown University where he received a Ph.D. in an interdisciplinary studies program combining mathematics, music and the visual arts. His articles on the music of Luigi Dallapiccola, Elliott Carter, Iannis Xenakis, John Cage, Philip Glass, Robert Ashley and Alvin Lucier have appeared in The Musical Quarterly, Perspectives of New Music, The Journal of Music Theory, Artforum *and* Interface. *He is the author of two books on contemporary music:* Circumscribing the Open Universe *and* Contiguous Lines: Issues and Ideas in the Music of the '60s and '70s. *In addition, he is co-founder and co-editor of* Sonus, *an interdisciplinary journal devoted to the most progressive ideas in the arts today. As a composer he has distinguished himself in the area of computer aided composition and as the creator of a series of live electronic sound installations. His music is published by Dorn Publications and recorded on the Spectrum label. Dr. DeLio is a member of the faculty of the Department of Music at the University of Maryland at College Park.*

In Thomas DeLio's *A Draft of Shadows,* both text and music evolve, simultaneously, toward a re-evaluation and redefinition of some of our most basic notions of being in the world. In so doing, the work points toward a new vision of sonic discourse: one based upon the integration of two radically different concepts of musical structure. The piece is in three movements and

is scored for soprano and percussion ensemble. The percussion is divided into non-pitched instruments (three players; instrumentation including maracas, bongos, tom-toms, snares, cymbals, high tam-tam, wood block, slap-stick and iron pipe) and one pitched instrument, the piano. Over the course of the piece, there is a general shift from non-pitched to pitched sounds; from crescendos of very loud dynamics (*fff* in Movement I) toward an extended presentation of very soft sounds (*ppppp* in Movement III); and from what I will call a gestural type of music toward a more non-gestural kind:

Chart 1

Movement I (Prelude)	**Movement II (Pueblo)**	**Movement III (Postlude)**
Non-pitched percussion	Non-pitched percussion Piano Voice	Piano
Non-pitched instruments	Pitched and non-pitched instruments	Pitched instrument
Movement toward and away from very loud sounds	Incorporation of both loud and soft sounds	Very soft sounds
Gestural music	Transitional	Non-gestural music

One of the achievements of *A Draft of Shadows* is that it successfully integrates two very different stances toward the use of materials, and over the course of its unfolding, evolves from one of these positions toward the other. A compositional framework is built not only for the articulation of these two different stances, but also for their incorporation into a unified whole. That is to say, though the piece concerns itself with two different ideas of structure, it does not itself become two structures.

The most significant dichotomy present in the work is that of the "gestural" versus the "non-gestural." In Movement I, form is derived from the organization of musical materials into specific shapes or gestures. In contrast, in Movement III there are no such shapes; the materials are simply presented as raw matter, untouched by any specific organizational schemes. Over the course of the piece, the gestural music of Movement I is gradually transformed into the non-gestural music of Movement III. Clearly, then, Movement II is transitional: the non-pitched percussion here reflect back upon the music of Movement I while the piano hints at the essence of Movement III. Throughout, the soprano mediates between these two poles.

It is in fact these very poles of opposition which seem to reflect the central thematic opposition of the text by Octavio Paz, the poem "Epitaph for no stone" from the collection, *A Draft of Shadows:*

Mixcoac was my village. Three nocturnal syllables,
a half-mask of shadow across a solar face.
Clouds of dust came and ate it.
I escaped and walked through the world.
My words were my house, air my tomb.

(Reprinted with the permission of New Directions Books.)

The composer has written:
The opening of the poem refers to the dissipation of the external structures of life, those complexes which have appeared to nurture and support one's being in the world. The final line finds security in the pure state of presence, knowledge that being is its own support. Also, lines 1 through 4 acknowledge the transience of things

while line 5 comes to terms with this transience and from it synthesizes a new sense of order.[1]

In the poem, an initial focus upon place and other externals is gradually superseded by a more internal focus. The reorientation implicit in the text is reflected in the reorientation of the music itself; from the gestural character of Movement I (a localized music of specifics) to the music of Movement III (the generalized, non-gestural music). Thus, mirroring the poem's reorientation vis-a-vis the structures of the world, the composer infuses a quality of transience into his musical structure. Of crucial importance is the fact that these dramatic oppositions in attitude toward form are integrated into an organic, unified musical statement. To understand how this is achieved, I now present a more detailed analysis of some of the intricacies of the piece, movement by movement.

Movement I

Movement I is in two sections, each section characterized by a significant gesture. Throughout the movement, a variety of relationships shape materials into a unified design. Three aspects of its structure are considered here: first, its temporal proportions; second, the correspondence between its two principal gestures and the sound of the tam-tam; and finally, the derivation of one of the two principal gestures from the other.

Time in Movement I is proportioned on three different levels, into two sections as follows:

Chart 2

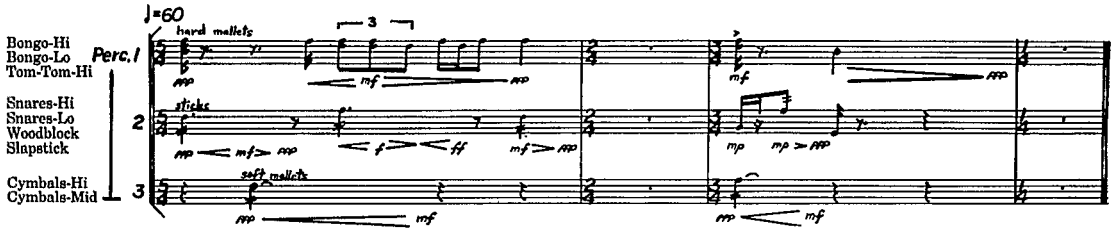
♩ = 60 △ = silences

	SECTION 1												SECTION 2	
Level 1: Sections	40 Seconds												19 Seconds	
Level 2: Phrases	11″ phrase 1				18″ phrase 2				11″ phrase 3				11″ phrase 1	8″ phrase 2
Level 3: Component measures of the phrase	5/4	2/4	3/4	1/4	8/4	3/4	5/4	2/4	5/4	2/4	3/4	1/4		
	meas. 1				meas. 5				meas. 10				meas. 14	meas. 17

Referring to Chart 2, one sees that at the highest level, level 1, the two major sections reveal the overall proportion of 40:19 or approximately 2:1, significantly, the first two numbers of the Fibonacci sequence. Looking first at Section 1, we note, at level 2, three phrases (beginning at measures 1, 5, and 10) each ending in a period of silence. The forty beats of Section 1 are thus articulated by a symmetrical organization: 11:18:11. It is important to note here that the 11:18 proportion of this middle level, level 2, relates *both* to level 1 and level 3. More specifically, 11:18 is similar to the 2:1 proportion present in level 1, but it is just noticeably[2] different. In fact, the 11:18 proportion equals .611 – extremely close to the Golden Section – thereby relating to level 3, which is formed by numbers from the Fibonacci series. Still another correspondence between the levels should be noted: the entirety of Section 2 (level 1) is essentially the same duration as phrase 2, level 2 in Section 1. Thus, Section 2 as a whole is derived from a component of Section 1. Further, we will see this same relationship (i.e. the whole of the later event derived from part of the earlier event) in the significant gestures of Sections 1 and 2 as well as in their temporal correspondence.

At level 3 of Section 1 we see a further proliferation of the Golden Mean with the use of

durations derived from the Fibonacci series. These durations are articulated through an opposition of sound and silence:



Two durations of non-pitched percussion sounds: 5:3

Two durations of silence: 2:1

Adjacent numbers from the Fibonacci Series (numerals represent beats per measure).

Example 1
Measures 1-4

This level 3 organization is continued in phrases 2 and 3, with some variation. In phrase 2, each of the durations from phrase 1 has been increased along the Fibonacci series:

PHRASE 2:

Two durations of non-pitched percussion	8:5
Two durations of silence	3:2

From the Fibonacci series

Completing the overall symmetry of Section 1, phrase 3 then returns to the lower numbers of the Fibonacci series. However, in phrase 3 there is only one period of silence. (It will be seen that, in several ways, phrase 3 is transitional.)

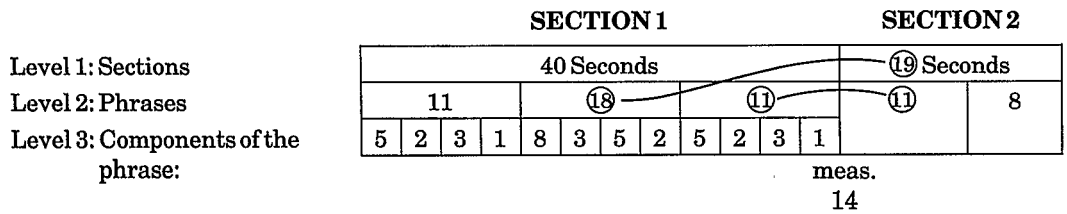
PHRASE 3:

Three durations of non-pitched percussion	5:2:3
One duration of silence	1

From the Fibonacci series

Section 2 of Movement 1 begins at measure 14. Regarding formal relationships between Section 1 and Section 2, at least two units are repeated (see Chart 3), thereby achieving a sense of formal continuity concurrent with the diversity and change heard at more detailed levels:

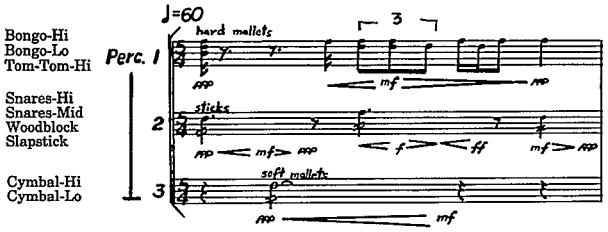
Chart 3



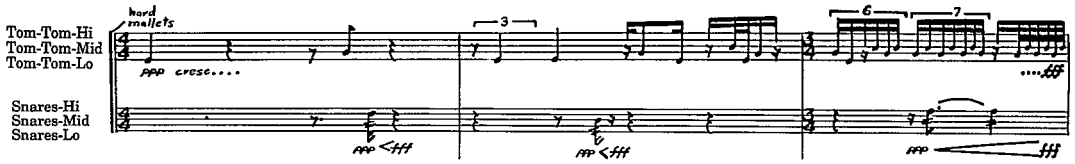
As seen in Chart 3, there are only two levels of formal articulation in Section 2. As such, in this new section, the music is already beginning to move from constructs of intricate shaping

and relating of materials toward a more global, more undifferentiated presentation of the materials themselves. Perhaps, in hindsight, we can now see phrase 3 of Section 1 as also part of this same motion away from highly articulated constructs. In any event, with the absence of the anticipated two beat silence there, level 3 becomes less articulated.

Turning to the events occuring within this temporal framework we find two gestures which are utilized quite extensively. Section 1 is characterized by Gesture 1, which might be described as an attack-swell-decay gesture, while Section 2 is characterized by an accelerando accompanied by a crescendo.



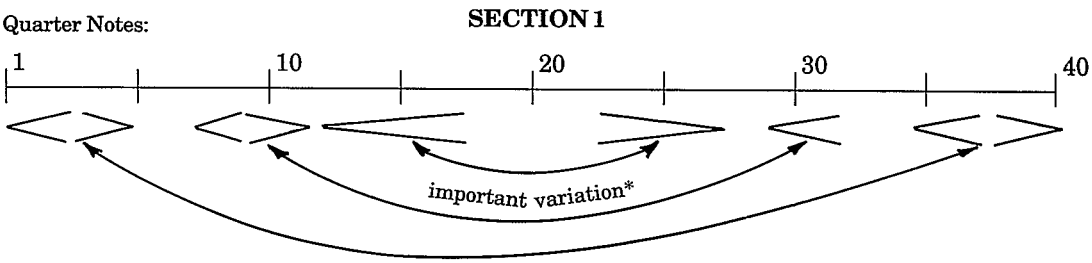
Example 2
Gesture 1 – Section 1, measure 1, measure 3 – Attack-Swell-Decay
Measure 1



Example 3
Gesture 2 – Section 2, measure 14, measure 17 (also found in Section 1, measure 10)
Accelerando, Crescendo of attacks
Measures 14-16

Interestingly, it seems that in Section 1, a symmetry of gesture supports the general symmetry of form mentioned above (11 beats – 18 beats – 11 beats). The gestures are in general symmetrical around the three beats of silence at the midpoint of Section 1:

Chart 4

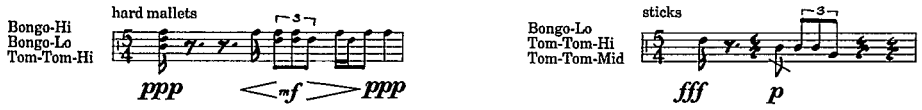


Looking at Chart 4, one might note the place marked by an asterisk, which indicates an exception to the symmetrical format. As we shall see, it is precisely this non-symmetrical element in the otherwise symmetrical scheme which provides a point of ambiguity and foreshadows the new gesture. This in turn propels the movement onward.

Having noted certain basic relationships of form with gesture, we now focus more closely upon the two gestures themselves. Gesture 1, along with its evolution through Section 1, is fairly complex and yet completely integrated into the fabric of the movement. As described above, Gesture 1 is comprised of three distinct components: attack, swell, and decay. It arises from the magnification, or sonic expansion, of the sound of a tam-tam being struck: an attack (noise-filled), a swell of sound and, finally, a long decay. In a process similar to that of Varèse in *Ionization*[3], Gesture 1 magnifies this sound. As the composer has written:

The clearest example occurs in measure 12. Here the tam-tam is struck, mp, in Percussion 3. The metallic attack component is amplified by the stroke of the iron pipe in Percussion 2 on the downbeat. The swell is articulated by the bongo crescendo in Percussion 1 and the decay is produced by the snare and bongo decrescendo. Note that the decay is on the snare while the swell is on the bongo. Again this models the tam-tam decay which leaves upper partials ringing longer than lower ones. Thus the decay appears to move up in register.[4]

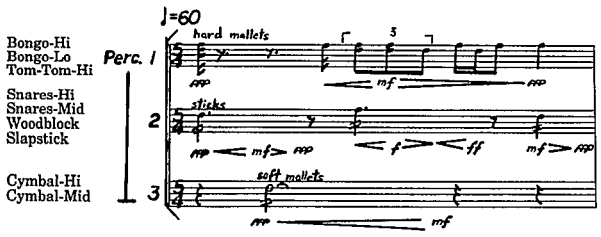
Such pseudo-tam-tam sounds occur seven times over the course of the movement: in measures 1, 3, 5-6, 8, 10, 11, 12. Throughout Section 1, each of these sounds can be heard as part of a progression gradually pulling the listener closer to the actual sound of the tam-tam, which does, in fact, occur at the end of the section. The attack component becomes sharper, higher, and at times more metallic. For example, when one compares measure 1 (Percussion 1) with measure 8 (Percussion 1):



Example 4 Measure 1 Measure 8

one finds a more focused attack being produced in measure 8 not only through the use of sticks instead of the former mallets, but also through the use of only one bongo. Moreover, the culminating entrance of the tam-tam is heard as a rather fresh event since it reverses an ongoing pattern. Up to measures 10 and 11 the swell-decay components are made more complex. In measure 12 then, with the entrance of the tam-tam, these components are made dramatically simpler.

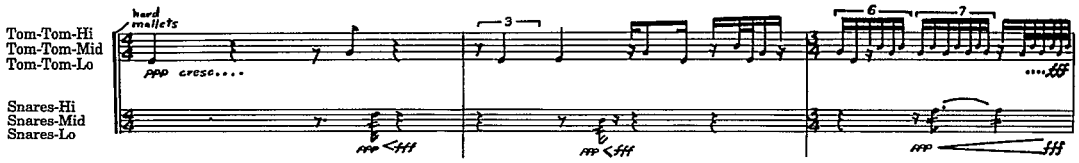
The composer's observations of the subtleties of a tam-tam sound become apparent when one considers some of the details included in his sonic magnifications. For example, in measure 1:



Example 5

the attack is exemplified in the downbeat of Percussion 1. The swell and decay are modeled in the crescendos and diminuendos in Percussion 2 and 3. Also, the *attack* itself swells and decays (as played by Percussion 1), though this is softer than the rolls accompanying it and, by design, is *almost covered.* The resulting sonic conglomerate is like an inner vibration within the sound; as though the attack resonates through the sound.

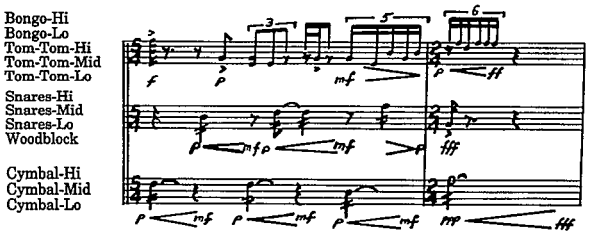
Turning now to Gesture 2, we find a more straightforward situation. It consists of a general crescendo and accelerando rising from low instruments to higher ones and occurs twice in Section 2 (measures 14-16, 17-18):



Example 6
Measures 14-16

The second statement is a more concise, more concentrated restatement of the first. In the first statement, alternating attacks and rolls proceed to an intermingling of these components. In the second statement, however, we find only the simultaneous sounding of rolls and attacks leading up to an *expansion* of the *end* of the first statement. Thus, Section 2 (and Movement I as a whole) seems to be concluding with an echo of the idea of *magnification* which played a central role in Section I. It is featured here in Section 2 in a new guise.

In addition to this concept of magnification, there is another, and perhaps more essential, relationship between the two principal gestures. Gesture 2 is derived from one of the components, the swell, of Gesture 1. Specifically, note that measures 10 and 11 are reminiscent of measure 1 in that the attack of measure 10 is almost identical (sticks are used instead of mallets) and that the attack is prolonged throughout the measure:



Example 7
Measures 10 and 11 (compare with Example 5)

Here, however, the attack swells to an accelerando, crescendo, and becomes, in effect, the *first statement of Gesture 2*. Thus, if we consider only the components of the swell of Gesture 1 in phrase 3, we find the first statement of Gesture 2. This reconfirms previous observations concerning the transitional nature of this third phrase.

Parenthetically, one might note that just as this important gestural link with Section 2 exists at the end of Section 1, propelling the music onward, so also a further link is made. When initially heard, the first attack of Section 2 seems to be a punctuation to what has gone before when, in fact, one discovers as the music progresses that it is a component of the next gesture as well. Thus, in at least two dynamic ways, an elegant transition is made between the two sections of Movement I.

In summary, then, Movement I is a music of gestures, of materials given specific shapes integrated into a large-scale formal context. Moreover, we have seen how Movement I is derived from the sound of the tam-tam. The *shape* of this sound informs the movement in several ways: first, the sonic components are magnified to become the details of the movement; second, the actual sound of the tam-tam itself is then used as both the culmination and cadence of each section. Further, one might speculate on ways in which this significant shape provides a prototype for the shape and sense of the entire piece, as I shall later in this article.

Movement II

The central movement, Movement II, is reproduced in its entirety on pages 53 through 61. In Movement II, the sound world from Movement I (non-pitched percussion) is joined with, and opposed by, that of Movement III (piano). Mediating between these, the soprano part is set to music based on a three-note cell, from which all twelve chromatic pitches are eventually derived. I will first discuss the form of the movement and how it organizes the three principal sounds: the non-pitched percussion, the piano, and the delivery of the text. Then, a discussion of each of these three elements will follow.

The movement is organized around three crescendos which gradually change color, become louder and more noise-filled. They partition the movement into three progressively expanding temporal units, a reflection of the three successively longer movements of the piece as a whole. The first crescendo, using maracas, occurs in measures 1 through 4. This is answered by a piano statement and ushers in the first two vocal phrases (lines one and two of the poem). Similarly, the second crescendo beginning Section 2 in measure 7 mixes the higher, brighter color of the cymbals with the maracas. This is answered by the second piano statement and is followed by the next two vocal phrases (lines three and four of the poem). Beginning in measure 16, the third crescendo progresses from maracas to snares to tam-tam. (Note the minimal use of the tam-tam, though. As in Movement I, it sounds at the climactic moment of the design.) Again, a third piano statement responds in opposition to the crescendo, followed by the final two vocal phrases (line 5 of the poem).

Consider first the crescendos of non-pitched percussion. In addition to the crucial role they play in formal articulation, they also seem to echo the two crescendos which constitute the two phrases of Section 2 of Movement I, thus providing a link back to Movement I. Moreover, this is not only an echo of the shape of the first movement, but also of relative dynamics (loud) and instrumentation. In reference to instrumentation, however, one notes that the first use of maracas occurs at the opening of Movement II, providing a fresh color. This new sound, closely followed by the first piano statement, heralds the opening of the new movement.

Each of the three crescendos seems to have an individual character, especially when one considers the relative location of the players on stage:

Percussion 2

Percussion 1 Percussion 3

Soprano Piano

In the first crescendo, all three percussionists play maracas, with each player's sound segueing in and out of the composite sound. Then in the second crescendo, we hear a tutti crescendo

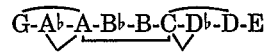
with two players on maracas and one on high cymbal followed by a shorter crescendo on solo high cymbal; again the overall motion toward a brighter color. Finally, in the third instance, the crescendo passes from player to player (i.e. from location to location) each on a different instrument (maracas, snare drum, tam-tam). Once again, the sound moves toward brighter color and this time culminates in the grand crescendo of the tam-tam sound which, of course, was the essence of Movement I. Thus, although we are given three bold statements of this significant musical shape, it is continually revitalized.

The three piano statements seem to answer the three crescendos discussed above, and also to act as polar opposites to them:

Percussion	**Piano**
Non-pitched	Pitched
Loud	Soft
Mostly rolls	Single attacks
Mostly crescendo	Diminuendo
High registers only	Low, mid and high registers

Significantly, as the percussion crescendos of Movement II form a sonic link with Movement I, the three piano statements anticipate the sound world of Movement III with its non-gestural music. Concurrent with this sense that the percussion and piano sounds define opposite worlds, at times, they also seem to be working together as components of a larger envelope of sound, which acts as a sonic opposition to the precise syllabic vocal setting of the text. Further, one might speculate on one additional aspect of this envelope. After each of the non-pitched percussion crescendos, the piano begins its diminuendo. Accompanying each of these, there is always a simultaneous diminuendo in the non-pitched percussion. The listener has the sense that the massive noise conglomerate has an internal pitch focus. This recalls the magnification construct which was so central to the form of Movement I, and, as a variation of that construct, it provides another subtle link between Movement I and the end of the piece (in which just the pitch elements, the "interior" of the percussion sound, if you will, stand alone). Moreover, not only does this larger envelope of percussion and piano sound mirror the evolution of the percussion sound over the entire piece, but also, in this sense of "turning inward," reflects the meaning of the text.

Turning now to the pitch organization of the piano music, we find an interesting development. The piano part begins to expand out toward the complete twelve-note collection of Movement III, but does *not* achieve this goal. More specifically, it is the *third* piano statement which reveals the core of its material: the chromatic tetrachord A-B♭-B-C in measures 19-22. The first statement (mm. 1-3) presents this tetrachord plus two whole steps in the symmetrical configuration G-A-B♭-B-C-D. Then, in the second statement, the collection is further expanded and filled in to form a nine-note aggregate of semitones:

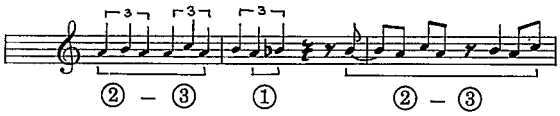


Thus, the piano part begins with the tetrachord already expanded by two notes. It then proceeds to expand further and to integrate these two extra notes into a larger chromatic collection, seemingly in a movement toward the twelve-note set of Movement III. However, in the third statement, this movement outward is thwarted for, as mentioned, only the original four note aggregate is heard. Three notes, E, F, and F♯ are withheld from the piano until Movement III.

While the musical language of the voice part reflects that of the piano, their evolutions are very different indeed. In both, for example, there is a gradual outward expansion of pitches toward the entire twelve-note collection. As we have seen, the piano does not achieve this in Movement II. The voice, however, does. From an initial structural core, a ②-③ cell,[5] the entire voice part is generated from, on the one hand, the use of the ③ as a stable, unifying element, and on the other hand, ① and ② as agents of change through which expanded structures are derived. Furthermore, the linguistic expansion which forms the basis of the vocal part supports the meaning of the text itself.

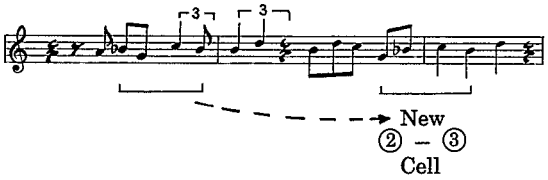
In each of the three sections of Movement II, there are two phrases for the voice. Looking first at Section 1 (measures 1-8), we find that

each of these two phrases is about three measures in length. In the first two phrases the structural core (cell) is exposed, a reproduction of that cell is generated, and the intervallic focus of the entire vocal part is suggested. More specifically, in phrase 1, a ②-③ cell, the pitches A, B♮, C, is introduced:



Example 8
Phrase 1 – meas. 3-5

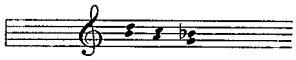
The B♭ introduces ① and acts as a link to the next phrase:



Example 9
Phrase 2 – meas. 6-8

The ① between A and B♭ shifts focus and ushers in a new ②-③ cell (CB♭G). Thus, in phrase 1, when the listener hears A and B♭, A is the cell tone, while in phrase 2, B♭ is the cell tone. Significantly, phrase 2 opens with this ① and draws attention to the imminent change. Also supporting this change, the B♭ now receives metric stress. More important, this new emphasis is clarified with the first three notes where we find A-B♭ followed by G (③ from B♭) rather than the expected C (③ from A). This denial of expectation occurs on the word "antifaz" – halfmask. In addition, the new ②-③ cell (G-B♭-C) shares a note, C, with the old cell, allowing for a smooth link between the two. Finally, in phrase 2, new connections are made. On the last three notes there is a return to the ①, but it is a *new* ①: B-C (not A-B♭). Also, a new ③ is generated from the B, i.e. B-D – all suggestive of further linguistic transformations.

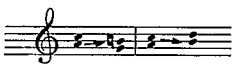
Summarizing then, in the first section we find that three ③'s are generated:



③'s in Section 1

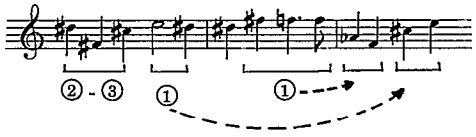
This suggests, as will be the case, that the ③ is the intervallic focus of the piece, and that its generation will occur in various related ways. Significantly, the ① appears with the first ③ (A-C) via B♭ and in the second ③ (G-B♭) via B, the relation between B♭ and B itself, of course, being ①.

③'s generated from ①'s:



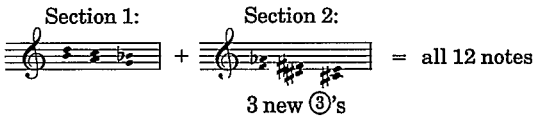
Phrase 1 Phrase 2

In Section 2 there are also two phrases, each three measures long (m. 10-13; m. 14-17). Here the procedure established in Section 1 is continued, generating new ③'s. The six dyads thus formed complete a chromatic scale. Turning to the details of this process, we find in phrase 1 more new ③'s:

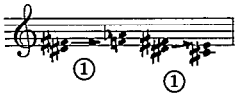


Example 10
Section 2, Phrase 1

Again, then, as in Section 1, the ① changes the focus of the initial ②- ③ cell (C♯D♯F♯) and, in so doing, generates two new ③'s. The ②-③ cell C♯-D♯-F♯, is exposed in a new spatial formation and order. Immediately following this, the E with its ① relationship to D♯ introduces an element of instability. This is left unresolved until the end of the phrase, when the E is more emphatically paired with the C♯ in a new ③ and a new cell, D♯C♯E. A similar process occurs when F♮ is introduced with the F♯ of the cell, in another ①. This in turn becomes the link to a new ③, F-A♭ and another new cell F♯A♭F. Again, we have three new ③'s, which, together with those from Section 1, complete the twelve-note collection:

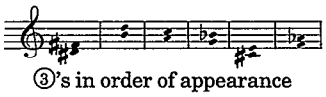


And again, these new ③'s were generated via ①:

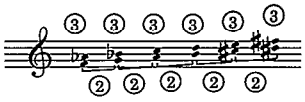


Also, it might be noted that the process of exposing three ③'s has been quickened. The first three ③'s were introduced during the entirety of Section 1; here they are generated in only the first phrase of Section 2.

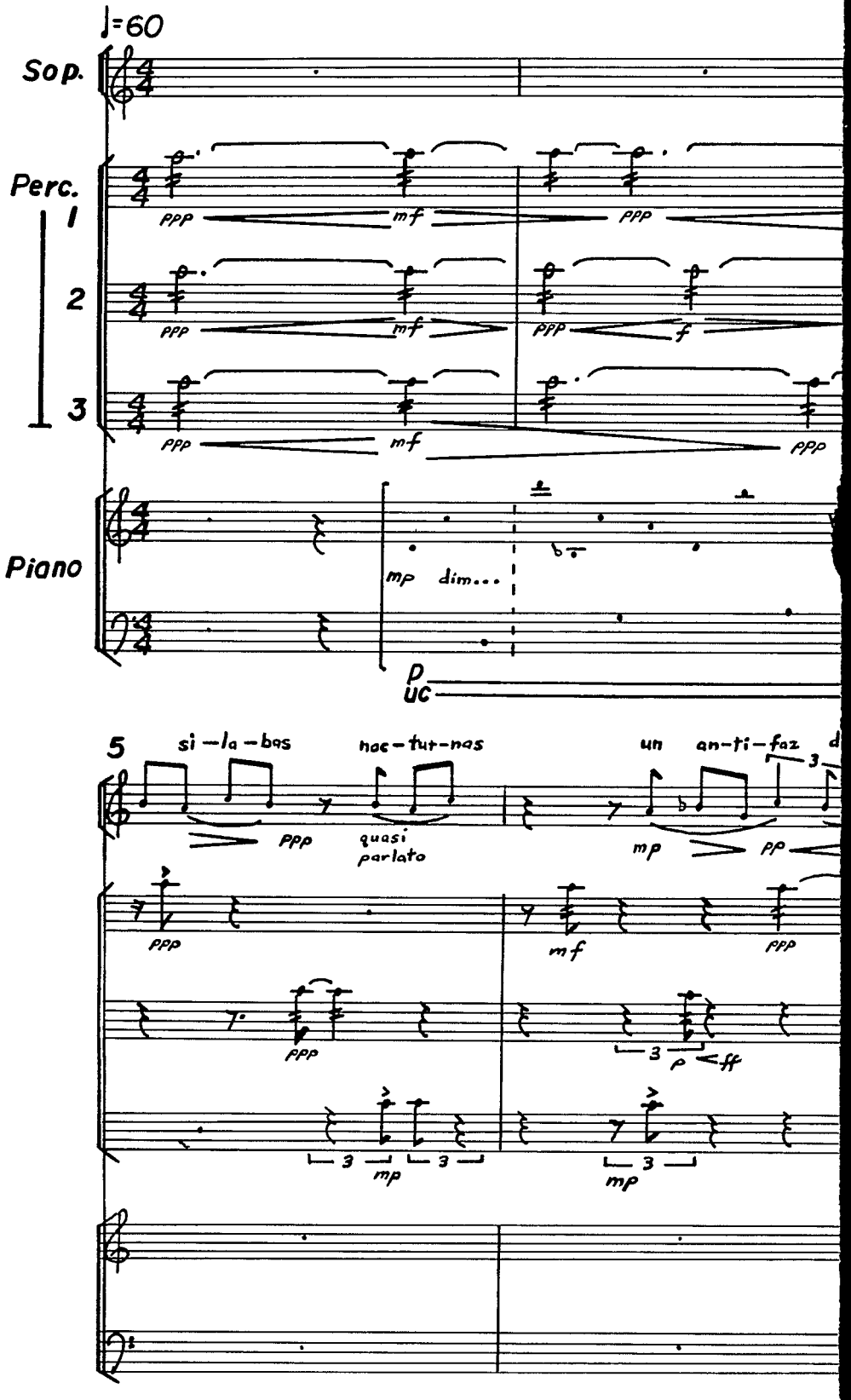
Proceeding to phrase 2 of Section 2 (measures 14-17), the music seems to sum up all the materials introduced thus far and to further integrate them. The phrase unites all six ③'s within one melodic unit:



The result is an intensification of the ②-③ cell now expanded to cover the entire chromatic collection:



Pueblo


♩=60
Sop.
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mf
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un an-ti-faz
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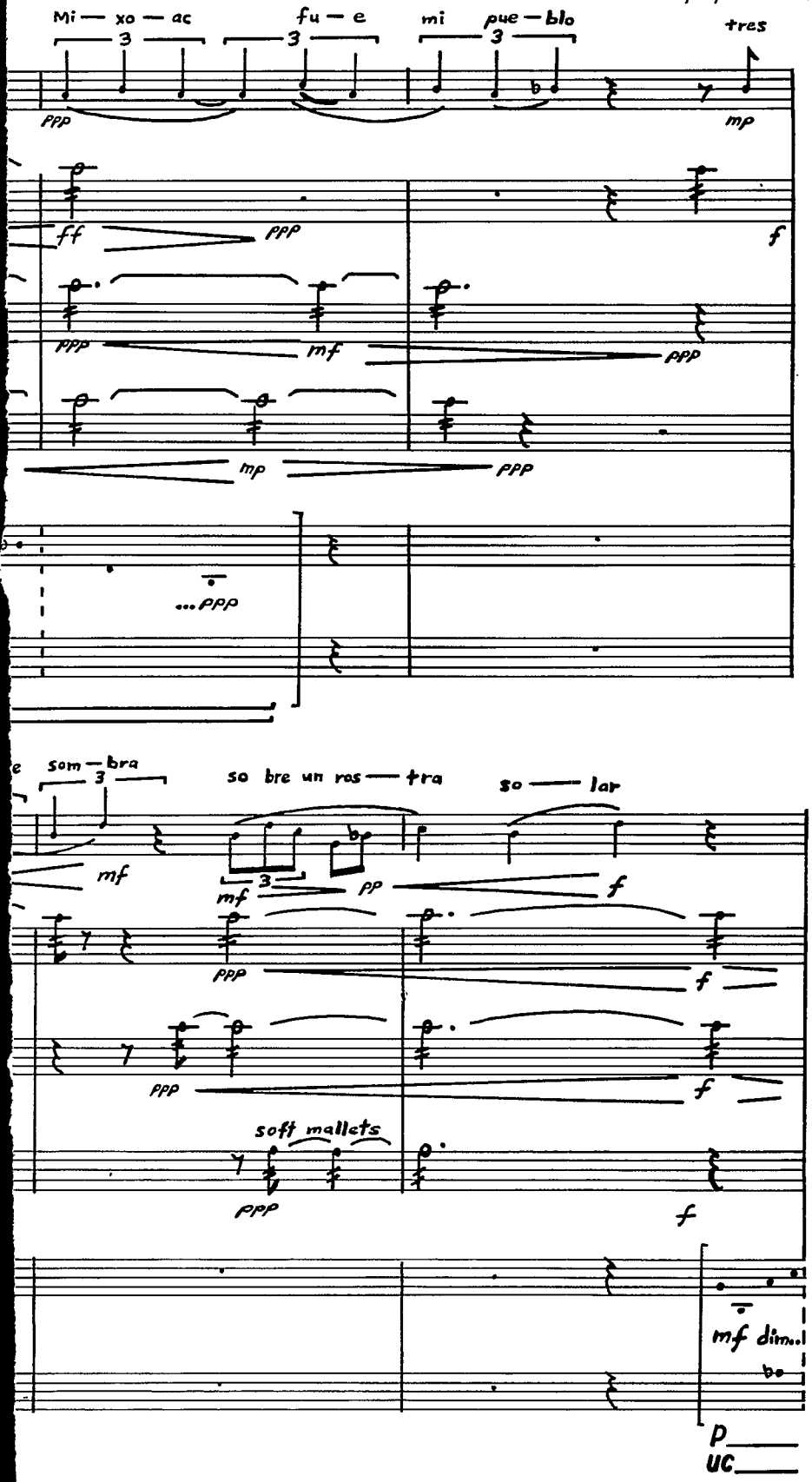
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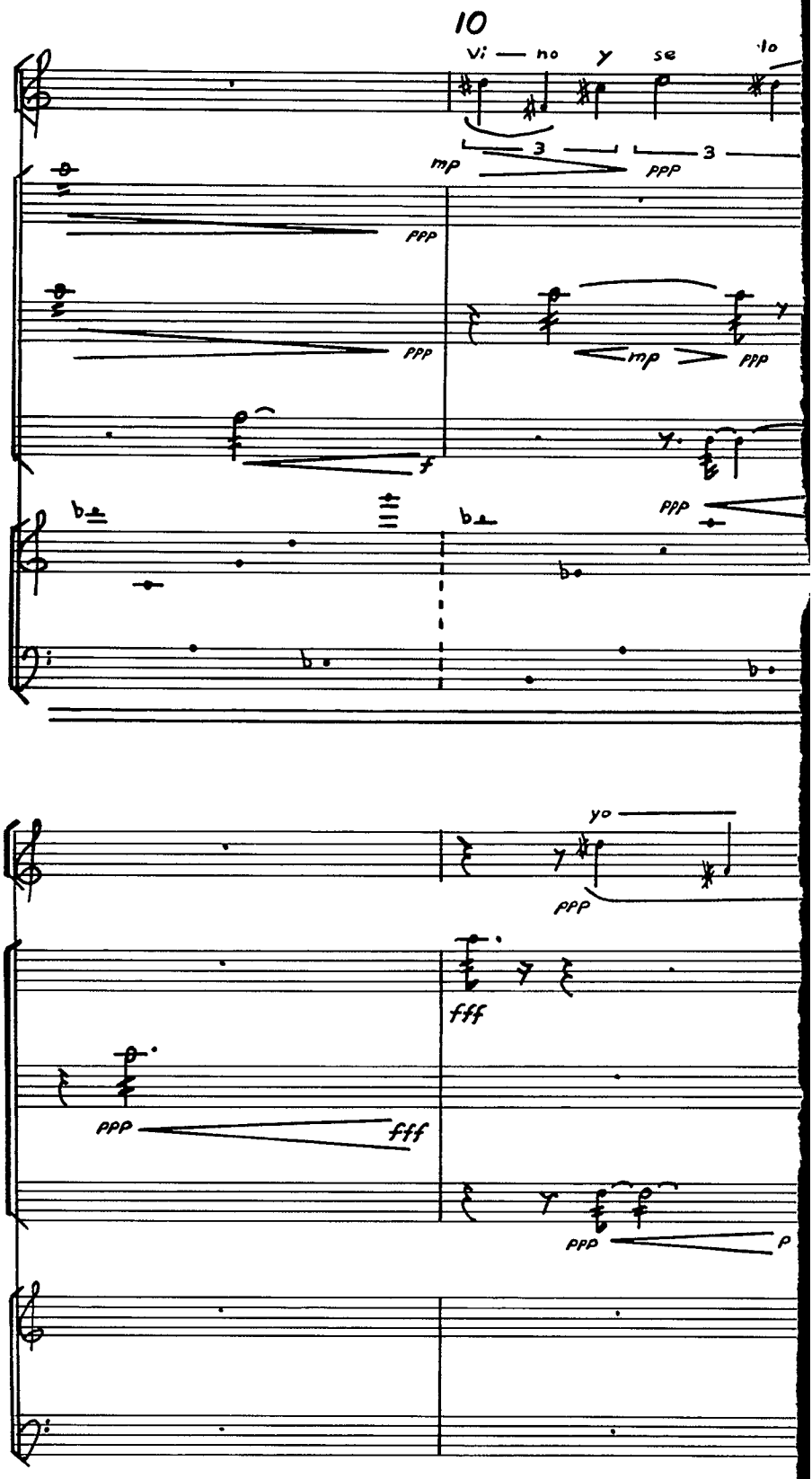
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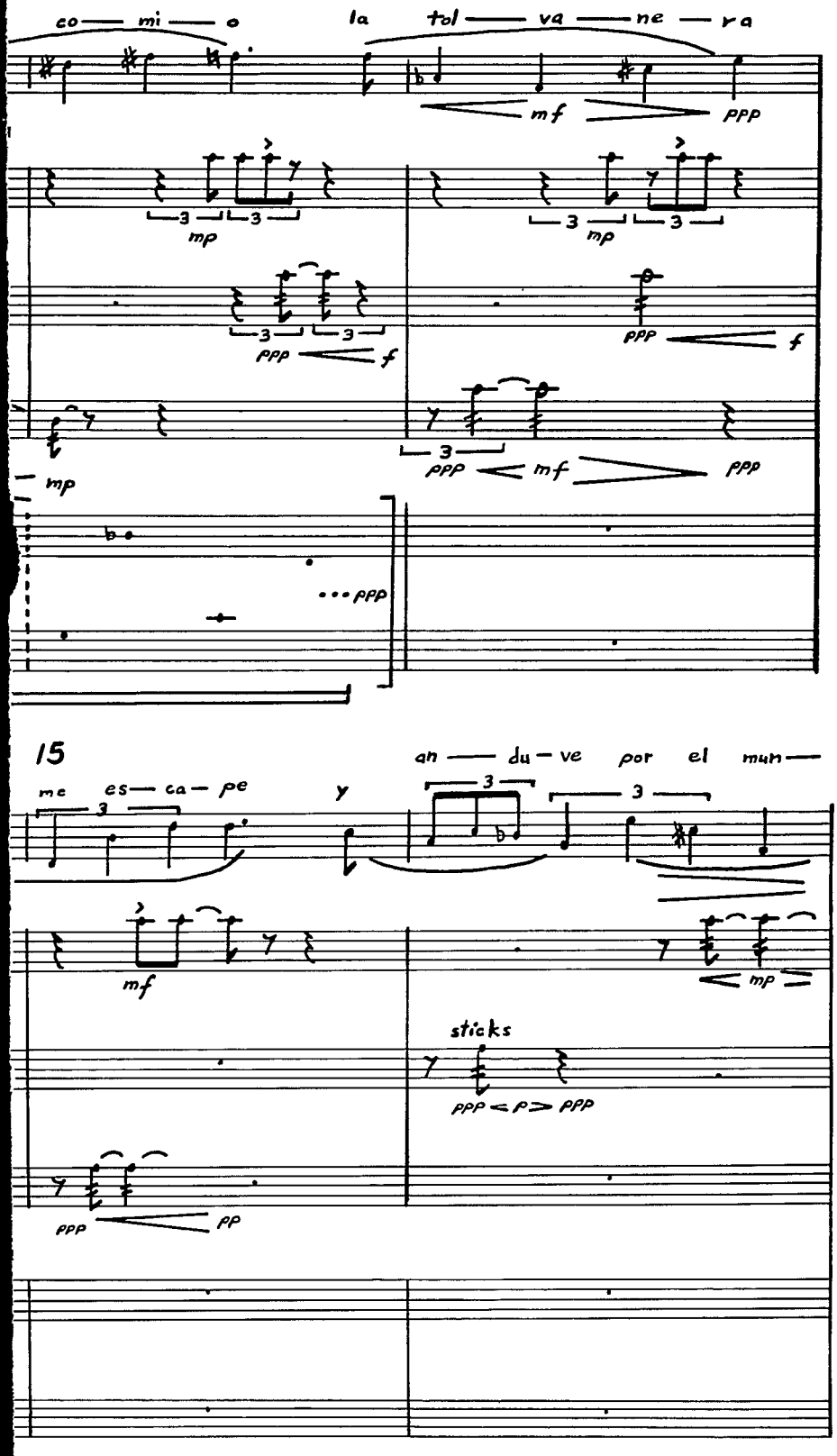
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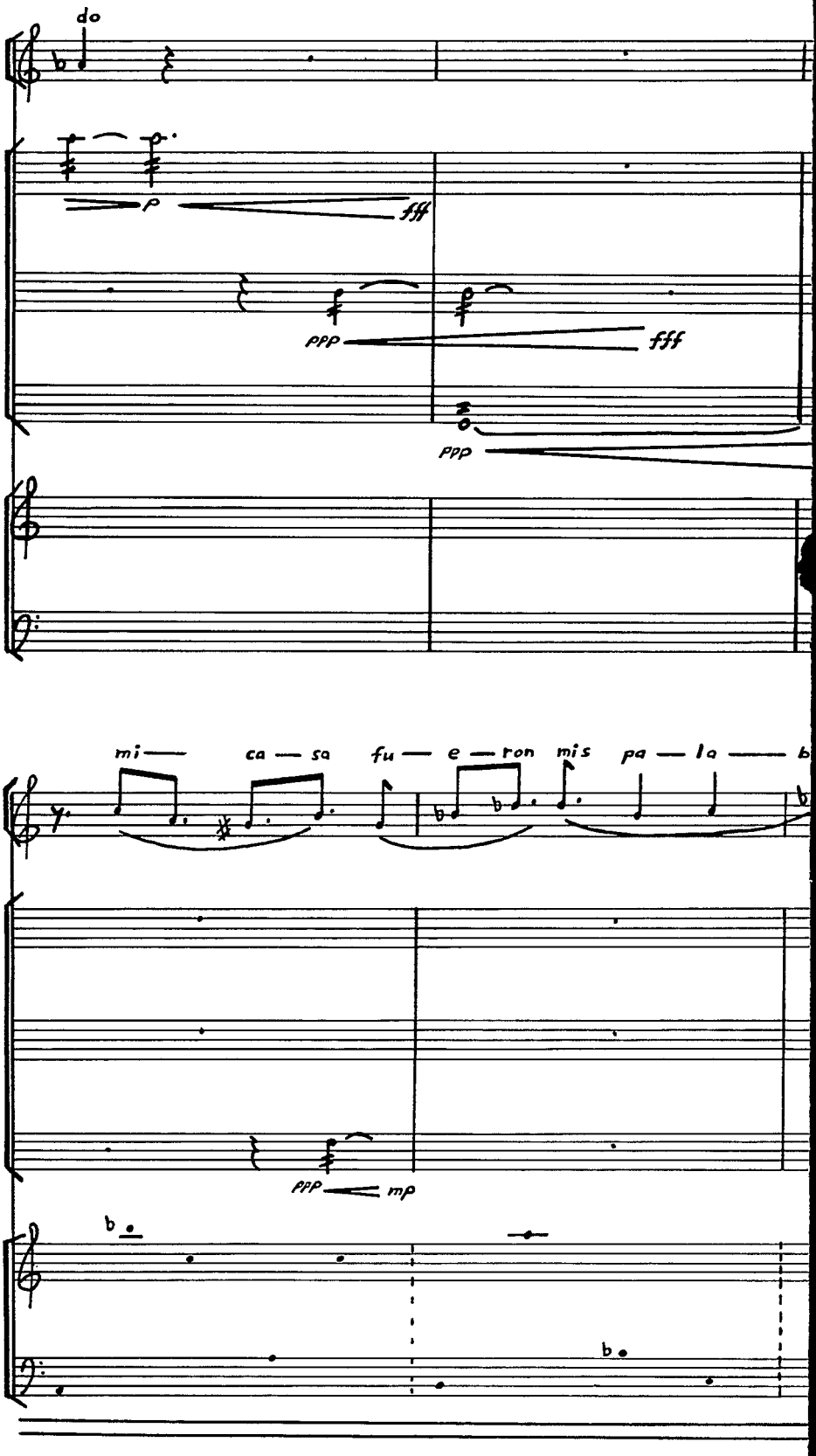
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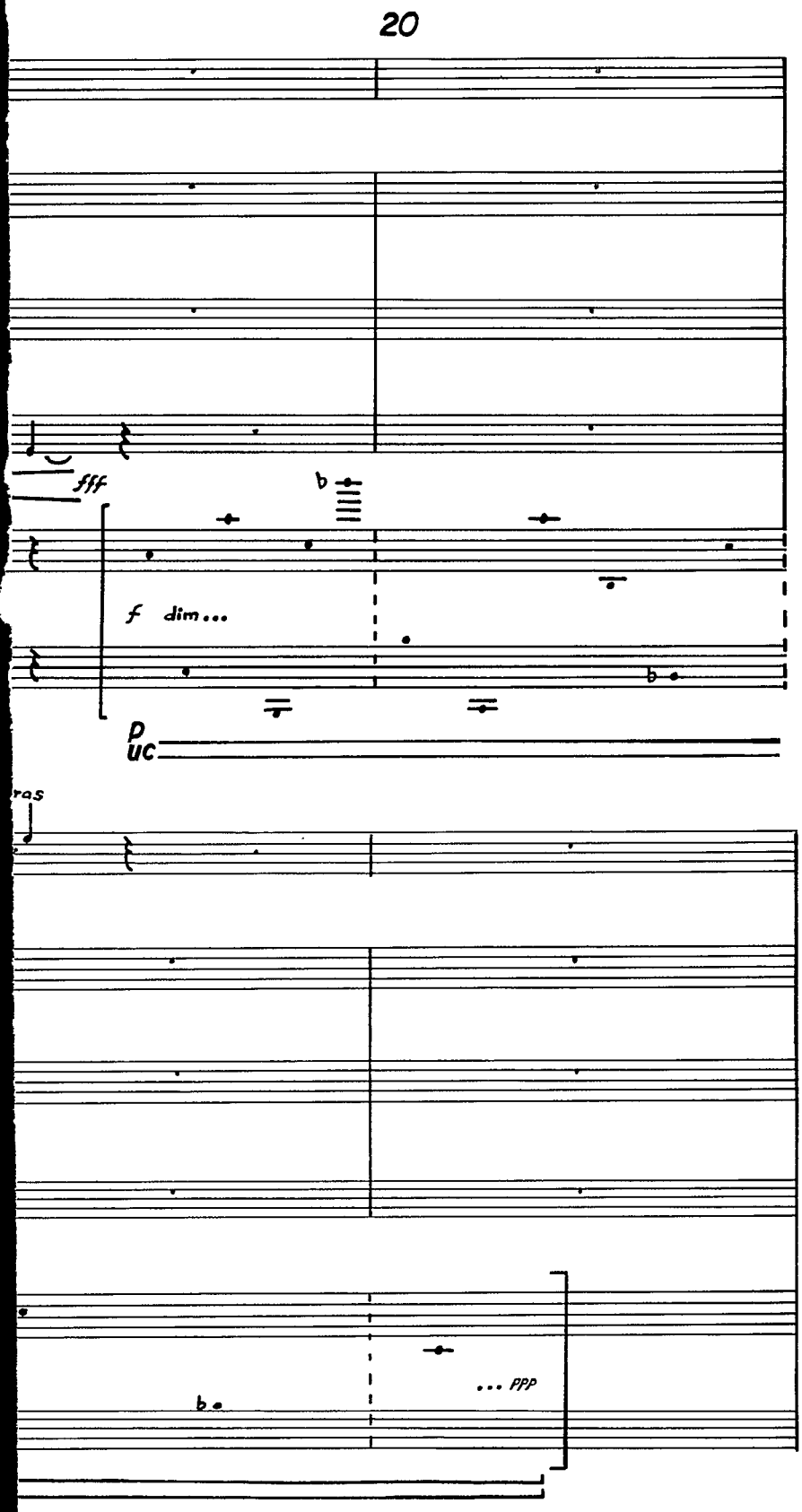
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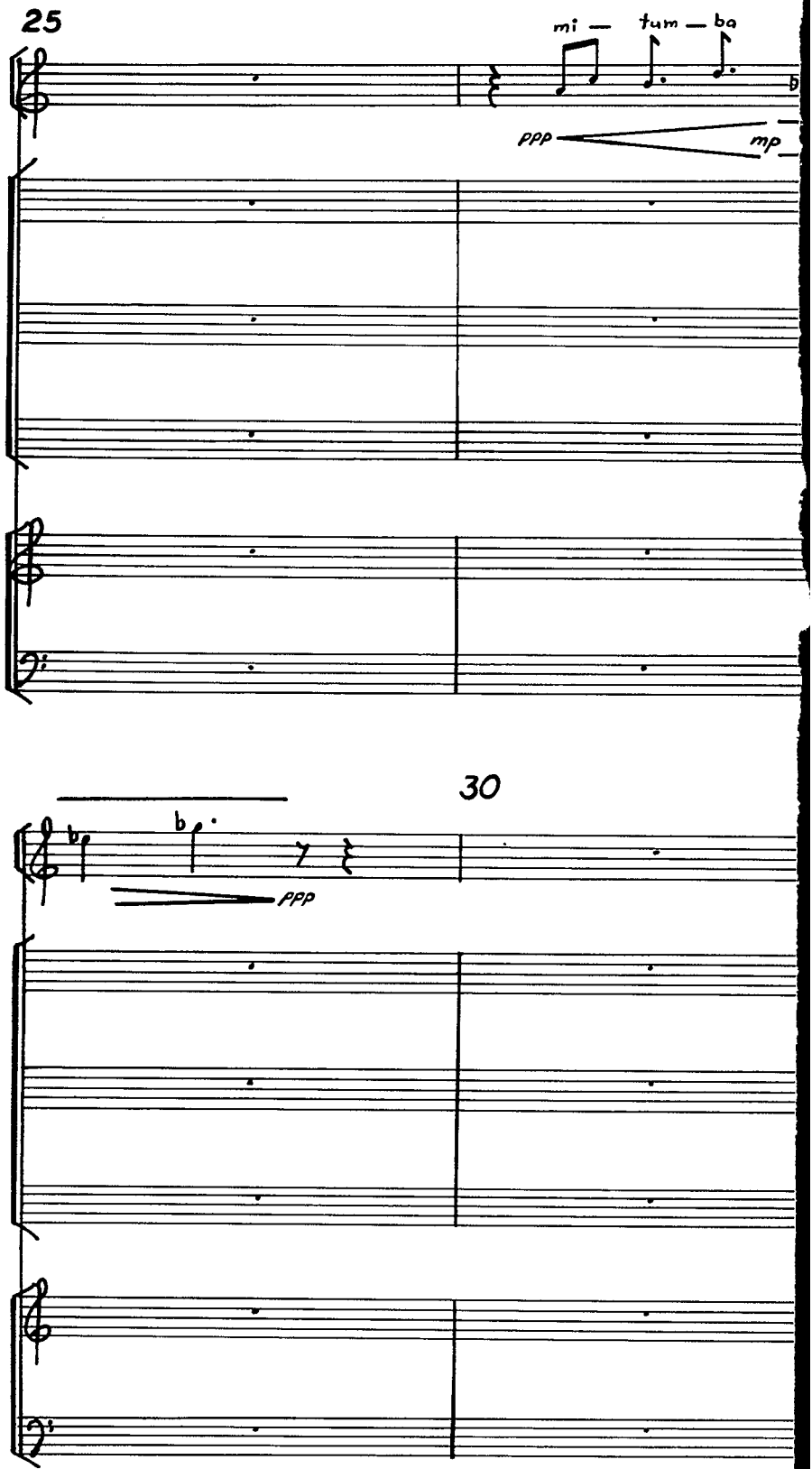
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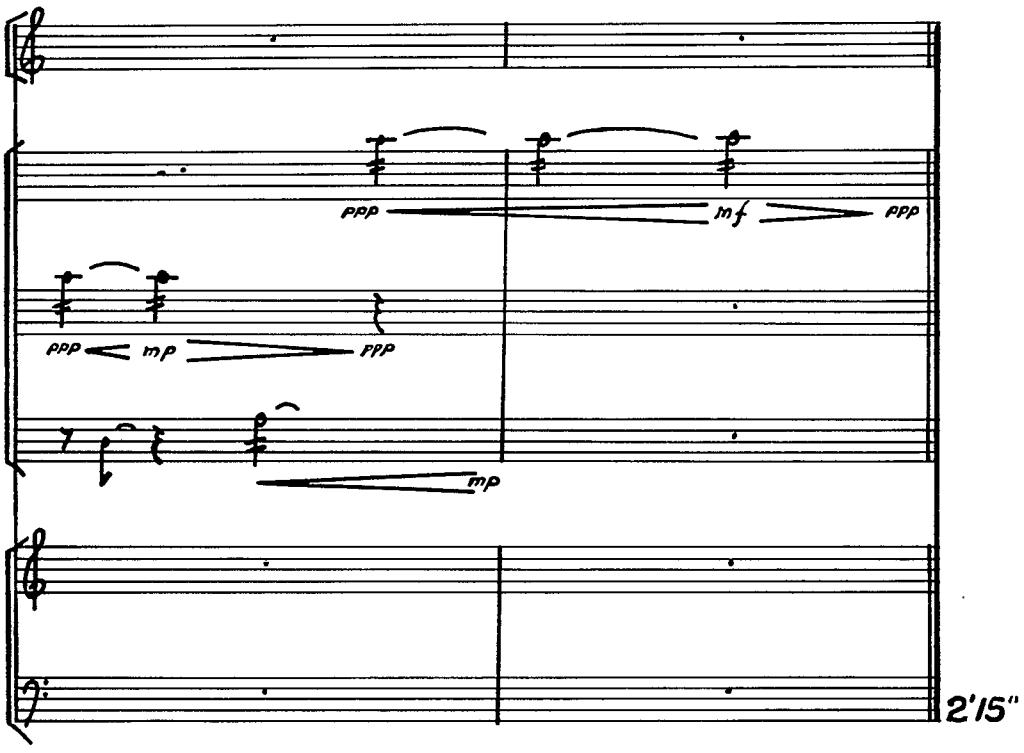
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The structural core (the ②-③ cell) expands into a series of ③'s linked by ②'s which reach out to encompass all twelve pitches.

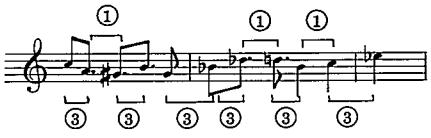
Since this music completes the first section of the poem (the first four lines), we now consider the unique relationship between music and text. The music, in a sense, reaches down into the text as opposed to "painting" each word at the moment at which it is sung. The speaker's village (his past, his place, his external life) is being swept away; and, he escapes. As the text describes dissipation, the music *counters* with the formulation of a new order (the total chromatic collection shaped by ②'s and ③'s).

In Section 3, this new musical structure will be equated with the new personal structure referred to in the final line of the poem – the inner being which is to emerge with assurance. Here, however, the crucial point is that while the text sweeps away the village, the music begins and completes a new construction; one which anticipates the text which remains unsung. This, it seems to me, serves to emphasize the essentially positive nature of the poem by allowing the words to speak of the past while the music prepares for, and anticipates the essence of, the final statement.

One might briefly note several examples of how new events both herald the new section, and also, serve to reiterate aforementioned processes as they are further extended. Section 2 begins with two new pitches: D♯ and F♯. Moreover, these two pitches are spaced in the widest leap so far in this vocal line which has principally been comprised of small steps. Further, the D♯ and F♯ extend the overall musical space achieved in Section 1 in both directions by a ①, (from D up to D♯ and from G down to F♯), further emphasizing the structural importance of that interval.

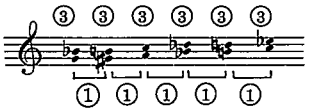
The vocal part of Section 3 begins at measure 21 and is in two phrases, the first phrase being slightly truncated (about two measures) while the second phrase is of the more typical three-measure duration. Section 3 repeats, with variations, the entire process presented in Sections 1 and 2.

Concerning phrase 1, one immediately perceives a link with Sections 1 and 2 through the predominence of ③'s:



Example 11

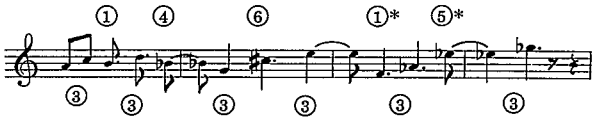
The only other repeated interval is the ①, which has previously been so crucial to the motion of the vocal line. The structural significance of these two intervals comes into sharper focus when one rearranges the ③'s:



Here we find a series of six ③'s linked by ①'s. It must be noted, however, that the result here is an *incomplete* chromatic collection. Three pitches are missing: E, F, and F♯, the same three pitches which were absent from the piano music of this movement. Several other aspects of the music here support the sense of instability which accompanies this incomplete statement of the pitch collection in this phrase. First, the relative brevity of this phrase; as mentioned, it is only two measures instead of three. In addition, there is a contraction of musical space (relative again to the previous vocal music). Not only are all the intervals in this phrase in close spacing, but also the entire range of the line is contracted from the previous

phrase. Hence, we find an ⑧ (G-E♭) as compared to a ①[4] (D-E) in Section 2, phrase 2. Moreover, this smaller spatial deployment suggests that this phrase is also echoing the vocal music which opened the movement.

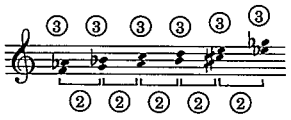
In phrase 2 of Section 3, the final vocal phrase, we arrive at a more stable pitch structure, once again involving all twelve pitches. As usual, there is a predominence of ③'s:



Example 12.

*All intervals named as if in close position.

Curiously, all intervals are present on the surface of the line, *except* 2, the interval which is, in fact, generating the ③'s:



Thus, we have arrived back again at the same structural expansion of the initial ②-③ core which was heard in phrase 2, Section 2. This time, however, the text has, in a sense, "caught up" with the music as the two reflect a new order of being. In summary, the third section: first, in phrase 1, moves back to a less stable state in which ③'s and ①'s dominate the structural background as well as the surface foreground (the structure here does *not* generate all twelve tones); and then, in phrase 2, completes the entire chromatic collection in a final synthesis and integration of all previously unstable elements. In this way, Section 3 repeats the progression of events which occured in Sections 1 and 2 though, of course, it does so much more rapidly.

We can now relate this entire process to the text itself. Previously, it was noted that as the text affirms the dissipation of the external dimensions of life, the vocal music, instead of reflecting that dissipation, proceeds to do quite the opposite. In Sections 1 and 2 one finds the gradual formation of a new structure which serves as a preparation for the structure of the music of Section 3. When in Section 3 the text boldly affirms its own new sense of order and being, it can do so, musically, with the greatest security, since the new musical structure has already been formed. Moreover, in the text one finds a movement away from the specifics of place to an embracing of a more all-encompassing sensibility. This movement, too, is echoed in the vocal music which extends from a specific core of three pitches to the more generalized, wider scope of all twelve pitches. Moreover, we have already noted, this is one of the most significant transformations in the piece as a whole, in the evolution from the music of specifics in Movement I to that of the unhindered presentation of materials in Movement III.

Concerning the integration of the three major sound sources in Movement II, it seems clear that the music of the percussion and piano parts does not simply support the voice as in a more traditional text setting. Rather, the percussion and piano seem to follow the general sense of dissipation of time and place which is found in lines 1-4 of the text. In fact, they seem to vaporize more and more until, in bars 25-31, they are absent almost completely. The voice, in contrast, makes its final synthesizing statement in precisly these same bars. The non-

pitched percussion then return in a brief reminiscence of earlier music. This is only an echo, and in no way a "return" or "recapitulation" of the opening (note the soft dynamics, for example.) Also heightening the sense of dissipation is the fact that the three percussionists are spread-out spatially around the stage so that the sound "travels."

In a sense, Movement II is a conduit through which the music of Movement I passes and is transformed into the music of Movement III. One senses an evolution from the music in which *time is measured* with intricate devices (Movement I) to a music in which *space is explored* without the aid of maps (Movement III). On the largest scale, there seems to be an opening outward – a direction of which we have noted several examples in the music of Movement II, a movement which, at its conclusion, is almost as diffuse as is the entirety of Movement III.

Movement III

In the piano music of Movement III, the intimations of an "opening outward" reach an explicit culmination. Moreover, the drive in Movement II toward the use of all twelve tones (achieved only by the voice) is here finally fulfilled in the piano part in which all twelve tones are present in equal distribution. This includes equal distribution of both the twelve pitch classes over time as well as equal distribution of each pitch class over all registers.

In Movement III, we dispense with the notion of "gesture," for there are no musical gestures as there were in Movements I and II. Nor are gestures ordered into any "form." Form is reduced to a simple identification with raw materials. In this movement there is no architecture. Here, materials *are* structure. Relating this to the text, one senses the appropriation of a new sensibility; one which has focused upon a new perception of presence. One finds the twelve tones which were generated by the voice in the previous movement now transferred to the pitched percussion and cast out, as it were, into the air ("the air is my tomb").

Movement III is linked to its predecessors in significant ways, as a concept of magnification helps integrate all three movements. This concept was first heard in Movement I with the magnification of the tam-tam sound and its use throughout that movement. Linking Movement I with Movement II, the three crescendos of the latter were heard as magnifications of those in Movement I, Section 2. Finally, in Movement III, a similar connection is made. In Movement II, we spoke of the three crescendos as each being part of an envelope of sound which was the composite shape of the opposing elements of non-pitched percussion (crescendo) and piano (diminuendo). Linking Movement II with Movement III, then, the entirety of Movement III seems to be a sonic expansion of the piano diminuendos of Movement II.

One final word, appropriately enough, about the ending of Movement III, before moving on to some conclusions concerning the piece as a whole. As in other works by DeLio, silence is conceived as an active presence and as such is particularly significant. Throughout *A Draft of Shadows,* silence is a positive, formally critical force. The many examples of its use include the silence at the end of each of the three phrases of Movement I, Section 1 (see Chart 2), as well as the silence before and after the culminating final vocal statement in Movement II. Consequently, after the final pitch is struck in Movement III and this evanescent continuum moves toward silence, not only the fading pitches, but also the *silence itself* seems part of the very fabric of the piece.

The Piece as a Whole: Some Conclusions

Having taken a close look at the local events of *A Draft of Shadows,* it is now possible for us to consider several aspects of the piece as a whole from a new perspective. Immediately apparent is the economy with which the musical forces are deployed; a complex musical context evolves with refreshing clarity. Further, while one initially senses a deceptive simplicity, this ultimately opens out onto a richness of suggestion not unlike Zen brush and ink works[6]. It might also now be noted that in the working out of the piece, certain compositional dangers implicit in the musical concept were avoided,

namely the problematical nature of the use of the tam-tam in a Western work, and the formidable difficulty of marrying in one piece two attitudes toward, two definitions of, structure. It seems to have been the same characteristics by which these problems were avoided which eventually led to the achievement of the above mentioned economy and clarity; the organic integrity in the unfolding of the musical fabric as well as a subtle and multidimensional correspondence between music and text.

By way of summary, then, we can review some of the essential elements of each of these two overriding concerns in an attempt to integrate them into a greater understanding of the entire piece. First, regarding the structural network, we find the same constructs working to crystallize both the local details and the largest elements of the structure. Three of these constructs, with examples of each, are presented below:

A. Construct of magnification and expansion

Movement I:

1. Gesture 1 as magnification of the tam-tam sound
2. Gesture 2 as magnified component of Gesture 1

Movement II:

1. Voice: expansion of 3-note cell, eventually encompassing all 12 pitches
2. Voice: initial construct of "new ③'s generated by ①'s" expanded in final phrase
3. Voice: expansion of musical space
4. Piano: expansion (followed by contraction) of pitch collection
5. Piano: pointillism as magnification of the components of noise conglomerate of the non-pitched instruments
6. Percussion: repetition (expansion over time) of the crescendo from Movement I

Movement III:

1. Expansion of piano part from Movement II:
   a. Expansion of time
   b. Expansion of musical space, and consequently,
   c. Expansion of timbral "pallette"
   d. Expansion of musical language (first use of all 12 pitches)

Piece as a Whole

1. Three movements of entire piece as magnification of temporal proportions of central movement – i.e., 3 progressively expanding units
2. Entire piece as magnification of the "larger envelope" of the central movement

B. Movement from intricate shapes to more global, undifferentiated presentations

Movement I:

1. Movement from three levels of temporal organization in Section 1 to two levels in Section 2
2. Initial featuring of an intricate magnification of the tam-tam sound followed by the tam-tam sound itself

Movement II:

Vocal pitches: from specific core to more generalized wider scope of all 12 pitches

Movement III:

Transition from specific shaping of a core tetrachord in the previous movement to the wider inclusion of all 12 pitches in Movement III

Piece as a Whole:

Large-scale evolution from a gestural music to non-gestural

C. Integration of the tam-tam sound
The sonic shape of the tam-tam becomes not only a prototype for Movement I, but also on a larger scale, an encapsulation of the form of the entire piece and, thus, is integral to the meaning of the piece as a whole:

Integration of the Tam-Tam Sound

Sound of Tam-Tam	Attack	Swell, with echoes of attack	Decay
Magnification in Mvt. I	Attack	Attacks, with rolls	Rolls
Form of Entire Piece	Mvt. I as definitive, articulated form	Movement II as combination of both Mvt. I and Mvt. III, and a leading-through from one to the other.	Mvt. III as more global, less articulated form
The Text	The definite, "hard", external structures	"I escaped": the journey from one pole to another	The internal, the evanescent, that which continues mysteriously into strength and silence.

We now move from aspects of integration of the parts with the whole to our second topic of overview: the correspondence between music and text. In *A Draft of Shadows,* the listener is involved in a large-scale movement, a journey, between the principal oppositions of the piece. This seems to reflect the spiritual journey, the change in stance which occurs in the text. As the speaker arrives at a new answer for the question, "What provides a personal structure?", so the music reinterprets the notion of musical structure. Moreover, in the details of the piece, one finds a unique correspondence of music and text. Thus, in Movement II, we noted the progressive formation of a secure musical context for the arrival, in the final line of the text, of the new security found by the speaker. Another example was heard in Movement II: the enveloping sounds of the percussion and piano which supported the sense of turning inward in the text.

This concern of turning inward is, in fact, important in other ways. It seems that the music has captured one of the finest ironies of the text. As the text affirms a new being which is an *internal* order freed from the external structures of life, it opens *outward* to a "tomb of air," to a great panorama of space. Likewise, the irony of this sense of release is reflected in the music itself. Specifically, the quietest, most inward-turning music (Movement III) opens out to the widest registral space of the piece. The musical conception as a whole expands these ironies in another way. With the culminating achievement of a sense of *refinement* of sensibilities in both the text and the music, there exists the concurrent rejection, in the music of the final movement, of the notion of the composer as "skilled, refined craftsman" who imposes intricate shapes on his materials.

Finally, then, it is, in fact, this implicit redefinition of the role of the composer which seems to point to the concerns of DeLio's more recent work. In reference to one of DeLio's sound installations, James Wagoner has written:
...Thomas DeLio (is) among a number of important American composers who eschew all formal and gestural aspects of traditional music, replacing them with the pure physical presence of sound within an environment. Rather than using sound as a material to be shaped into a personal finite expression, their compositions result from tactile, physical operations. Thus, they create an interactive art that reflects human experience through its sensitivity to its environment and the influence of the participants.[7]

Accordingly, then, what was true of Duchamps' "readymades" seems to be the case as much in DeLio's recent work as in Movement III of *A Draft of Shadows:* the emphasis is on the artist's *finding* meaning in given materials, not *making* meaning from the materials. One of the principal acts of the artist becomes the identification of context. The resulting work, as visual artist Robert Irwin describes his own art, "...no longer (lends itself) to a literate or even an articulate read, but rather maintains (itself) at a more purely perceptual level."[8]

Thus, it seems that the formative literary construct of "opening outward" reflected in the music in *A Draft of Shadows* was perhaps emblematic of a profound re-orientation in the stance of the composer himself. It is that very sense of moving through a crucial turning point which infuses the work with a compelling vitality.

Footnotes

[1]Thomas DeLio, in correspondence with the author, 1983.

[2]In *Sonic Design,* page 241, authors Cogan and Escot note that Creelman's "studies suggest that most humans can discriminate consistently between two durations whose duration difference is approximately 10% (or more)." In this case, then, 1:2 would be a .5 relationship; 11:18 is a .611 relationship, or just over a .1 difference.

[3]Chou Wen Chung on Varèse. "New Worlds of Edgard Varèse," Institute for Studies in American Music, Monograph #11, New York, 1979, pp. 27-74.

[4]Thomas DeLio, in correspondence with the author, 1983.

[5]Intervals are measured here according to the number of semitones spanned by their notes, i.e., ① = ½ step, ② = M2, ③ = m3.

[6]An example is "Six Persimmons," ink on paper, by Mu Ch'i (active 1200-1265), a Ch'an or Zen still life of characteristically deceptive simplicity.

[7]From the program booklet for the Contemporary Music Forum 1982-83, The Corcoran Gallery of Art, Washington D.C.

[8]Weschler, Lawrence, *Seeing Is Forgetting the Name of the Thing One Sees,* Berkeley, California, University of California Press, 1982, p. 64.

Drums and Drumming in Folk Music in Poland

by Piotr Dahlig

I would like to thank Dr. Jozef Pacholczyk for his generous editorial assistance and Dr. Anna Czehanowska, Director of the Instytutu Muzykologii at the Uniwersytet Warszawa for her kind generosity in making this article possible.
Dr. Stuart Smith, editor

I.

The initial information about membranophones in Middle Europe, and so in Poland, too, were supplied by archeological investigations. In the central and western parts of Polish territory were found four drums made of clay from the Neolithic Age (about 3500-2500 B.C.).[1] These single-headed drums shaped approximately in the form of a turned-over bell or an hourglass probably played an important role in agricultural cults and fertility rites and belonged to the person having authority to manage these ceremonies. The lack of archeological evidence of the existence of drums from later ages should not be interpreted as a disappearance of such instruments for that period of time; instead, it reflects the fragile nature of the drums' components, e.g. wood, leather, and probably rope.

The oldest written sources about drums, and first images of these instruments among Slavonic nations, are contained in the inheritance of the Middle Ages. In the ninth century St. Cyril and St. Metody translation of the Psalms of David, the common old Slavic word "бѫбы нз" appears. Drums and pipes played for dancing have been mentioned in the Czech chronicle of the eleventh century. In the old Polish version of the Psalms (Psalterz florianski – fourteenth century) we find the first symbolic illustration with a drum.[2] This miniature presents a man, playing a single-headed drum, who represents elemental powers of nature. The reason for the scanty documentation of drums from the Mid-

dle Ages could be ascribed to the metaphoric meaning and usage of the instrument. Old Christian literature attributed features of sensuality to the drum.[3] When the drum is shown without a membrane, the lack of leather symbolizes the end of sensuality and of demonic passions.[4] In twelfth century Western Europe, a drum could have a symbolic meaning of winter.[5] (This is an interesting similarity to the old Chinese theory describing the drum with the metaphors of the north, winter, water, and skin.)[6] The frame drum, or tambourine, such as "dojra," is differently interpreted in Middle Asia. In Uzbekistan or Tadschikistan, the most important difference is the perceived psychic influence of drumming. The sounds of the drum should awaken, stimulate, and remove troubles and sadness.[7]

Referring to Slavic nations, a small single-headed drum like the tambourine remained popular with East, South, and part of West Slavs till the nineteenth or the first half of the twentieth century. This drum had probably had not only musical functions, but magical ones as well. Sources from the fifteenth century tell us of one group of West Slavs who would sow fields in the spring dancing and drumming with an instrument covered with dog's leather.[8] In the wedding ceremony of the Slavs, the drum was an indispensable instrument because its sounds were thought to drive away or tame evil and invidious powers that would harm the new marriage.[9] It is worth noting that the Polish word "bęben" (drum) means colloquially not only an instrument but a belly and a small child. These jocular associations of today could be a distant reminiscence of an important and serious linguistic paradigm of the past.

The small single-headed frame drum is older than a double-headed one among Slavs in Western Europe. In the opinion of C. Sachs, the drums, like the tambourine, were imported to Europe from the Near East in the Middle Ages.[10] Kettledrums came to Europe in the same way. In the fifteenth century, the kettledrum was used as a signaling instrument at the tower of the Church of Mary in Cracow. The single-headed frame drum without bells, or tambourine with bells, were used for accompanying the pipe, especially by joculators, in the Middle Ages. The double-headed one became popular in Europe at the courts and with troops in the sixteenth and seventeenth centuries. On the friezes at the Wawel castle in Cracow, we can see heralds and court musicians with trumpets and laced drums or kettledrums. A snare drum and kettledrums are fixed on the coffins of two Polish kings in the sixteenth and seventeenth centuries. At that time, however, villagers very likely used the primary form of the single-headed frame drum. Perhaps it was in the eighteenth or nineteenth century that folk musicians began to play their own hand-made laced drum imitating the military ones. At the end of the seventeenth century, a publication contained the illustration of a tavern band in which a small laced drum is played (Photo 1). Probably this double-headed instrument is played in the same way as in the Middle Ages, i.e., by one hand while the second is busy playing a pipe.

II.

Post-war and contemporary field work has revealed five types of drum which were in folk usage until the 1960s and now reappear in regional folk ensembles and bands.

The Woodcut from the book "Skład abo skarbiec znakomitych sekretów oekonomiey ziemianskiey *(Store or Treasury of Excellent Secrets of Country Economics) by Jakub Haur Kraków 1693.*

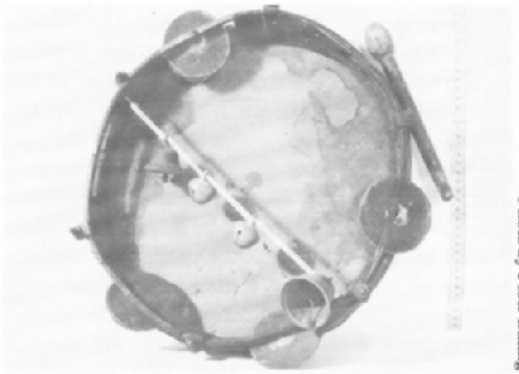


Photo by Piotr Dahlig

Photo by Piotr Dahlig

Photo by Zbigniew Kamykowski

(Top to Bottom)
Tambourine from the east part of Poland near Biłgoraj. The instrument is preserved in the Museum of Folk Music Instruments in Szydłowiec.
Józef Rubaj born 1912 playing tambourine, with two fiddlers, in Biskupie near Lublin. (VI 1982)
Laced drum from Stropieszyn near Kalisz used until 1913. The instrument is kept in Museum in Szydłowiec.

1) The tambourine (Photo 2) is often made from the frame of a sieve with a diameter of 20 to 45 centimeters and a height of 5 to 7 centimeters. The frame is of willow's bast or from linden or pine. The membrane is made from the domestically tanned leather of such animals as calf, dog, goat, sheep, or roe.* Sometimes it is maintained that the leather of the roe is the best one because it resonates so well, but the most frequently used are the leathers of young calves and old dogs. The membrane is fastened on the frame by screws or nails, formerly by wooden pegs and ropes. In the frame there are from three to six (usually five) holes in which pairs of jingles are fastened. Sometimes small bells are fixed under the membrane on the cross-bars or at the frame of the drum. In the frame there is also a hole for the thumb or for a handle to be fastened. Sometimes there is no such facility for holding the instrument. While playing, the drummer uses a stick between 15 and 39 centimeters long (Photo 3).

One can find similar drums in Western Europe, the Near East, and Middle Asia. The area of most frequent use of the tambourine in Poland seems to reflect the range of East Slavic influences on Polish territory (see the map). From historical and administrative viewpoints this area of tambourine usage coincides roughly with the domain of the Polish Kingdom formed in 1815 under Russian occupation. The geographical range of tambourine usage in Poland determined the area of occurrence of the other later types of drum. In other parts of Poland the cello or double bass (in the South and Southeast) or a bagpipe (in the West and Southwest) were used instead of the drum for a bass instrument in bands.

2) The wooden double-headed laced drum (Photo 4) is constructed from willow, linden, or poplar trunks hollowed out, two pairs of wooden counter-hoops, and two membranes of calf leather. The outward hoops are usually tightened by a y-shaped lace. The membranes are fastened on the inward hoops. The diameter of the membranes, and the height of the cylinder, fluctuate between 32 and 55 centimeters. For accoustical reasons, there is one small opening in the frame. The drummer attaches the instru-

*Editor's note: a roe is a European deer.

ment on with a belt or rope tied to the drum's frame. The drum is played with a stick about 30 centimeters long with the tip of the stick wrapped up in leather and a rod of wood with a notched end. The stick is kept in the right hand, the rod in the left. This kind of drum is a rarity, existing until the 1960s in only one small district, and it is reminiscent of drums used in the infantry of past centuries.[11]

3) The double-headed drum with screw-mechanism and metal counter-hoops is most prevalent at the present time. The diameter of its membranes can be as large as 70 to 80 centimeters but usually is about 50 centimeters. The frame (cylinder) is made of wood or metal; the membranes are from animal leathers. This instrument is made by the musician and a village smith. The instrument is supplemented either by a cymbal (Photo 5) or by a triangle (Photo 6). The cymbal is often made from large-caliber shell casings. One wooden and one metal stick are used for playing. While drumming, the instrument either stands or is hung up on the shoulder of the drummer. The drum with a cymbal or triangle has been popular in the first half of the twentieth century, and it still appears in all these regions where tambourines were formerly used. The drum with the triangle is played more in the western area of the tambourine's zone; the one with a brass plate is played more in the eastern part of the zone.

The frame of the double-headed drum is sometimes painted with geometrical figures. Sometimes one of the membranes is also painted in order to identify it with a given band.

4) The set of a big and a small double-headed drum (Photo 7) is made either in village workshops or in factories. The appearance of this drum set in country bands is influenced by the attraction and prestige associated with city bands, which used drum sets first. This set, consisting of two drums, a cymbal fastened on the bigger drum's frame, and sometimes a pedal mechanism, began to spread in the 1930s. Before the second world war, this drum set was being used in the south of Poland where it was replacing the bass. The drum set is called "dżaz" (jazz) by peasants to this very day and is usually

Photo by Piotr Dahlig

Photo by Piotr Dahlig

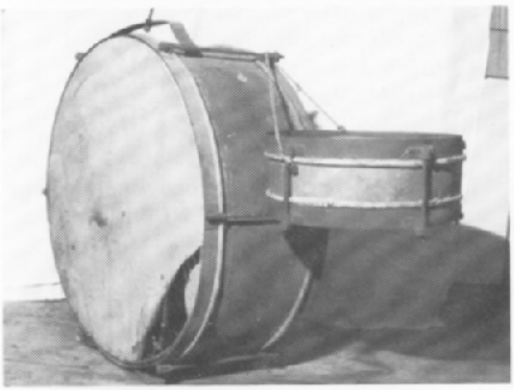


Photo by Zbigniew Kamykowski

(Top to Bottom)
The drummer Mieczysław Wenek born 1933 and the fiddler Jan Zmijan born 1920 from Zamch near Zamość. (VI 1982)
The drummer from Czermno near Plock.
Drums used twenty years ago near Rzeszów. The bigger one had a cymbal.

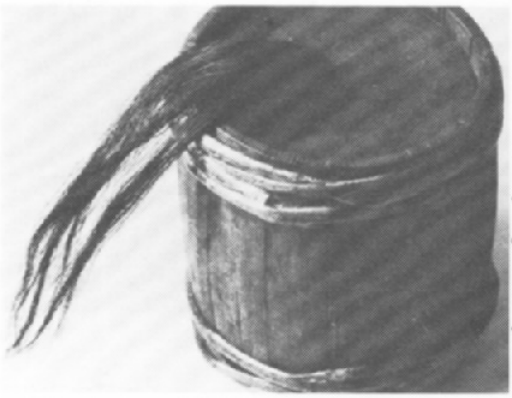


Photo by Zbigniew Kamykowski

Friction drum made by Augustyn Mielewczyk in Kartuzy, Kashubia. The instrument is kept in Museum in Szydlowiec.

played with accordion, clarinet, trumpet, and saxophone.

5) The friction drum (Photo 8) is the only folk membranophone having no related professional instrument. It has a cask-shaped trunk made usually from curved wooden staves. The instrument has a wooden bottom and a wooden or leathern top with a bundle of horsehair fastened to the latter. The characteristic sound of the drum is elicited when a drummer draws the bundle with a wet hand, or uses a glove rubbed with resin. The friction drum remains in use in the northern area of Poland and is widely known in Europe. Formerly, this drum was used during carnival rites in corteges of disguised waits*. Now it is incorporated into the regional ensembles as well. Because the friction drum is played in such an unusual manner, it is considered an instrument with inherent humorous properties.[12]

III.

The basic function of drumming in folk practice in Poland is to inspire dancing and to make dancing easier by clearly defining the rhythmic patterns. The aesthetic quality of the bands, as judged by villagers, is frequently determined by the quality of the drumming. A good drummer makes a band acceptable for country people. Such percussionists are highly appreciated and are treated as a valuable member of the band. He stimulates music-making as well as feels and reacts to musical nuances of the other musicians.

A drummer and a fiddler can form a folk band that plays for wedding ceremonies. Drums have become traditional folk instruments because of the ease of their production, carrying, and playing. The drum is usually owned by a fiddler, who sometimes just before playing asks for a voluntary drummer. However, there are also specialized drummers who always accompany fiddlers in more complex musical situations. In return for drumming during rites and parties, the drummer is paid by the violinist with about one third of the gains of the latter. For example, if the fiddler earned for two days' work ten zloty (two dollars in 1930s exchange rate), then three zolty of it would be given to the drummer. When the drummer is a volunteer, his playing with the fiddler is understood as a neighborly gesture. In any case, the drummer receives additional payments which are given to every musician in the course of a wedding ceremony or other social and family rites. In the 1920s, for instance, the drummer could be paid in kind with corn or ceremonial bread, whereas the fiddler would be paid with money and food. The wages of drummers, compared to that of other musicians, have been equalizing as the drums have developed to the form of drum set and the drummer has become the owner of his instrument. It should be noted here that folk musicians are paid differently by villagers, not only according to difficulty of playing, but also to the cost of the instrument. When the drum became more expensive, enlarged, and complicated, the drummer's fee got higher. The evolution from the most common single-headed drum to the drum set reflects a general process of more specialization and professionalism in musical practice and, with it, all the usual social and economic consequences. It is worth noticing that now country musicians present older types of drumming and drums when they play in city environments during festivals. While playing for villagers, however, they use a modern drum set!

In the beginning of the twentieth century, another use of a single or double-headed drum was to call together village meetings or to sig-

*Editor's note: the usage of the word "waits" is probably an archaic usage referring to guards or waiters.

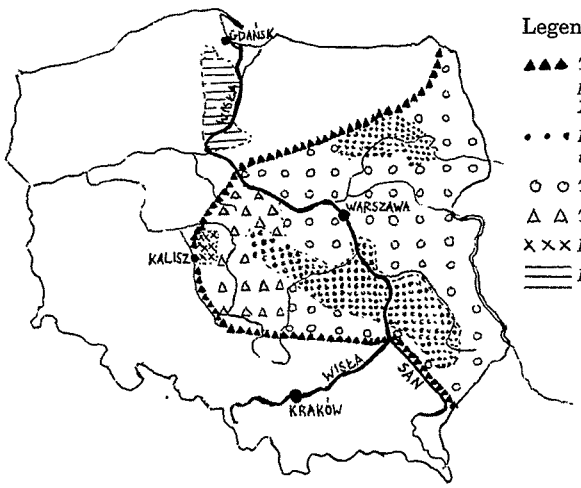
nal public announcements. Up to the time of between the world wars there was a tradition of drumming during religious processions, particularly on Corpus-Christi day. Some older musicians in eastern Poland remember a custom of playing the fiddle, drum, and bass in fields during the harvest. When the reaper would work too slowly, the musicians would stand close to him and the rhythm performed on the drum and bass was intended to accelerate his movements.

Summing up the functional aspects, we can say that drums are used in folk practice because of its stimulative, communicative, and musical possibilities.

IV.

The techniques of drumming in Polish folk music seem to combine European and Asian traditions with the prevalence of the former. In Asia, drums are usually played by hands and fingers. In Europe, one drums mostly with a stick(s).[13] The East-Slavonic tambourine is played by the right hand, using fist, stick, rubbing the membrane with a thumb, and shaking the instrument. It is possible to also strike it on the knee and even to play on the drum's frame and on the inward side of the membrane. Accents are played by stick or fist in the middle of the membrane and unaccented beats are played with the heel of the hand near the rim. Tambourine drumming exclusively with a stick is rare. In this case, the tip of the stick strikes the membrane at the accented beats and the other end of the stick knocks the wooden frame on unaccented beats. The drumming with stick and hand alternately is the most frequent. According to most players, there are two tambourine sounds. The first is caused by beating (usually with a stick); the second is produced by so-called "adding" (usually with the hand). The succession of these sounds and their arrangement is governed by types of time, dance movements, setting of instruments, the formal course of the melody, and the individual inclinations of the drummer. The timbre is also important. Villagers like rather bright and clear sounding drums. Drumming creates a kind of "bourdon" (drone) which should evoke something of a trance among the dancers. The specific pitch of this bourdon is indefinite, but sometimes a trace of an underlying pitch is recognizable.

In Polish folk instrumental music, three meters are prevalent: 3/4 (3/8), 2/4, and 4/4. The first is usually performed on the tambourine in the following way: stick, hand, hand – with downward or onward movement of hand at the second offbeat; or, less frequently: fist, stick, stick. The second meter is played similarly without the repetition of the unaccented beat.



Legend of the map:

▲▲▲ *The area where folk percussion instruments appear, particularly of tambourine, in Poland in the first half of the XXth century.*

• • • *Places of frequent use of tambourine or (less frequently) drum with a cymbal.*

○ ○ *The area of prevalence of the drum with the cymbal.*

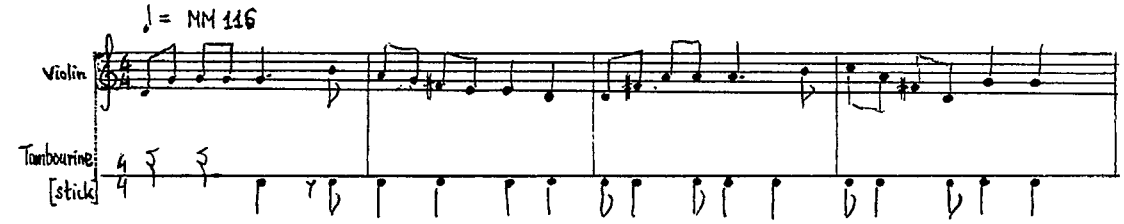
△ △ *The area of prevalence of the drum with a triangle.*

× × × *Places of documented laced drum use.*

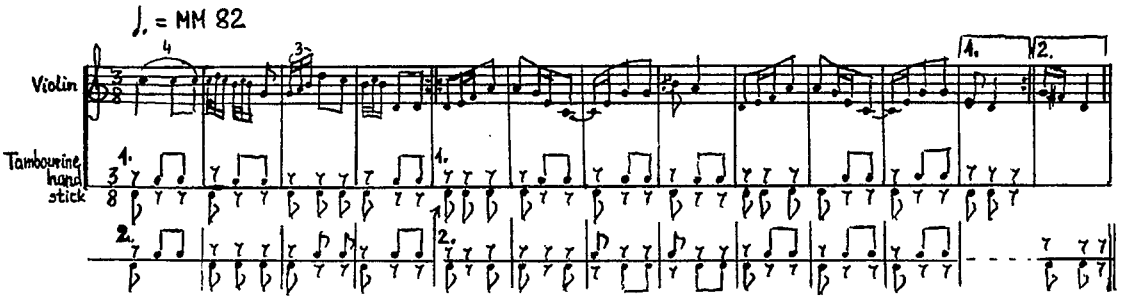
═══ *Places of use of friction drum use.*

One plays using only the stick in 4/4 time. Sometimes accented beats are completed with syncopation (see Example 1). The other simple patterns of the rhythmic accompaniment are often varied. Comparatively, the three-beat meter is performed in the most variable way. This is because rubato is often used in such meters in Polish folk music. Such rubato tempos often bring about marked changes in the rhythmic accompaniment. The drummer often introduces changes in drumming when the fiddler repeats melodic sections (see Example 2). Accented beats fall on the cadences of the melody and on important dance movements, such as change of direction or illustrative dance moments (see Example 3 – "Bowed dance"). For instance, measures marked with an asterisk indicate the part of the dance where women and men, who are dancing in pairs, bow to each other.

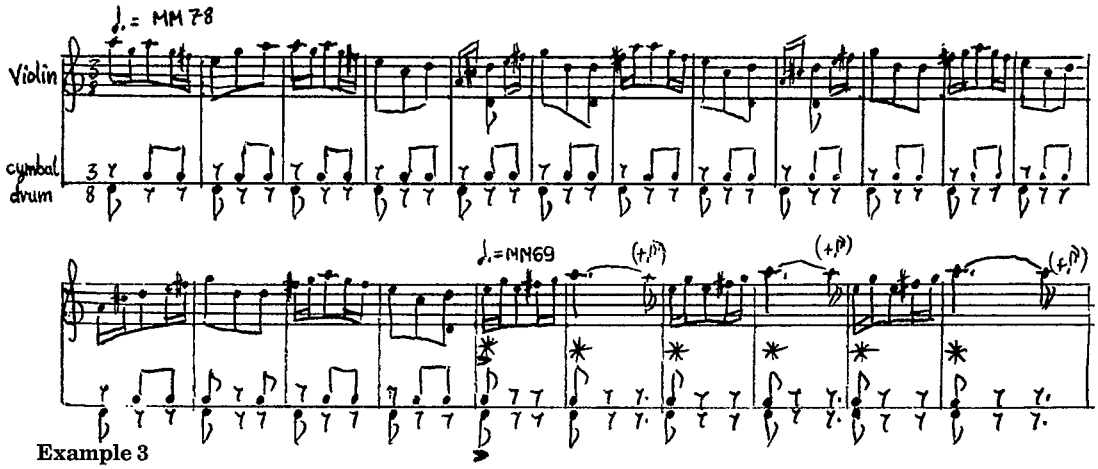
The manner of playing the double-headed drum is more systematic than the single-headed one, and there is no striking with the hand in drumming on the former. While playing tambourine, the drummer usually wants to fill up the performance with all beats in the meter in spite of a swift tempo (see Example 4). And with the sound effects of small bells and jingles, his drumming seems to be in competition with fiddling. The double-headed drum with either cymbal or triangle is usually played in bands of four or five musicians, and its role of maintaining the tempo is more important than in the case of the tambourine. In playing the laced drum without idiophones, both membranes are used. Strong beats, played by the right hand holding a stick, strike on one head, and unaccented beats, played by the left hand with a so-called rod, strike the other head. Because country people prefer rather bright and sharp timbres, drumming is complemented with the metallic sounds of idiophones. When a triangle is used, the triangle sound nearly always doubles the strong beats drummed with a wooden stick held by the left hand. As to membranophone with the cymbal, the right hand plays accented beats with a wooden stick on the drum head



Example 1
Wedding march from Opoczno, region of Mazovia, central part of Poland. Fiddler, Stanislaw Kaleta; drummer, Bronislaw Steleblak.

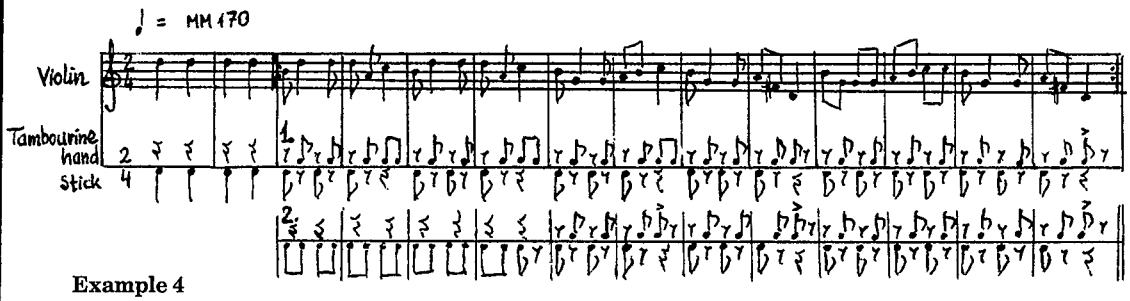


Example 2
Oberek (dance) from Opoczno. Musicians – as above.



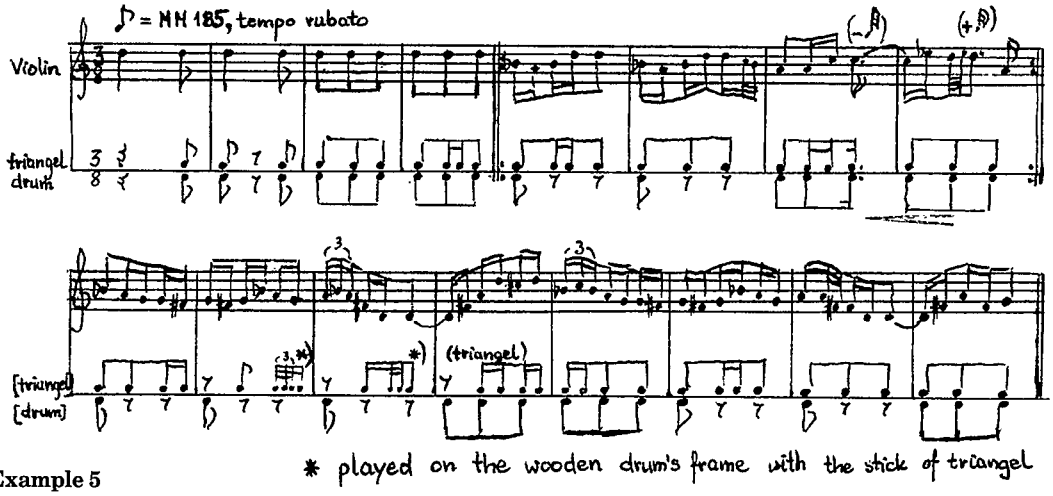
Example 3

Bowed dance (dance with bowing) from the east part of Poland, Hamernia near Zamość. Fiddler, Bronislaw Slupski; drummer, Kazimierz Miciuk.



Example 4

Polka (dance) from Kadzidlo, region of Kurpie, north-east part of Poland. Fiddler, Tadeusz Olszowski; drummer, Tadeusz Wolosz.



Example 5

Kujawiak (dance) from Polesie near Lowicz, central part of Poland, region of Mazovia. Fiddler, Stanislaw Wiercioch; drummer, Stanislaw Domanski.

and the left hand strikes the cymbal with a metal stick on weak beats (see Example 5). Simultaneous sounds of the drum and cymbal are, in this case, less frequent than those of the drum and triangle. As to a set of drums, strong beats are performed on the bass drum, while weak beats are played on the side drum.

Generally, folk drummers use as many possibilities as their traditional musical function and instrument will allow. Notwithstanding its simplicity, the drumming of a good musician is fresh and lively and without rigidity.

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An Annotated Bibliography of the History and Music of Trinidad

Lennard Moses is a native of Trinidad, a former member of the Desperadoes Steel Band under the leadership of Rudolph Charles and a colleague of Robert Guenwich (performer with Taj Mahal). Moses received a Bachelor of Music Education from Central States University in Wilberforce, Ohio, and a Master of Music from Northern Illinois University. He has written a large number of arrangements and original compositions for Steel Band and for other instrumental combinations utilizing steel drums. He has been appointed as Instructor of Music at Central States University effective in the fall of 1983.

Introductory Notes

One of the western hemisphere's most unique developments in ethnic music has been the steel drum. This bibliography is compiled to suggest sources of information for a more complete understanding of its development. Since its invention, the instrument has gained an increasing amount of exposure beyond the boundaries of its birthplace. It has found its way into western popular music, public schools and university curricula. Paralleling its musical development is an increasing interest in the area of research to understand the physical and acoustical make-up of the instrument.

Where commentary is omitted, the publication was unavailable for examination, but it is included to make the list of potential sources as complete as possible.

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Innis, L. O. *Reminiscence of Old Trinidad.* Port-Of-Spain, 1932.
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Contents: When did the Arawaks arrive in Trinidad? Visit to an Arawak Community, Ca. A.D. 1940. The meaning of the term "Arawak" by Irving Rouse, etc. Guanahani, Friday, October 12, 1942. This information contributes to a historical understanding of Trinidad.

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Reis, Charles. *The Government of Trinidad and Tobago: Law of the Constitution, Commemorating 150 Years of British Rule, 1797-1947.* 3rd rev. ed. Port-Of-Spain, 1947.
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General overview of this book: A) A brief history of the Island's geographic position; B) The people, religion, and culture of Trinidad; C) Colonial order and population growth; and D) The government, language, and the struggles between the different ethnic groups.

Seeger, Pete. *Steel Drum: How to play and make them.* An Instruction Manual. New York: Oak Publication, 1964.
A brief history of the Island of Trinidad, with special emphasis on steel drum and, to some extent, the native music. Discussion of the steel drum is based on the concept of how to make the instrument, with illustrations, clippings and aside remarks. Mr. Seeger and Mr. Wong, maker and performer of the instrument, have contributed to the enlightenment of non-Islanders concerning this great invention, but most of the methodologies, tools and ideas of this book are primitive and do not include the refinement of

the instrument, the education of the makers, and the tunes of today.

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Talbot, P. A. *The People of Southern Nigeria.* Vol. II. London: Oxford University Press, 1926.

Underhill, M. M. *The Hindu Religious Year.* Calcutta Association Press, 1921.

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Articles

Aldrich, Putnam. "Oil Drums and Steel Band." *Saturday Review,* September 1956, pp. 35-62.

Borde, Percival. "The Sound of Trinidad; The Development of the Steel Drum Bands." *Black Perspective,* Spring 1973-74, pp. 45-49.
The national music and instrument of Trinidad have been related by Mr. Borde to events during the origin of these art forms. From the Ibo word "kaiso" came the English word "calypso." Due to colonial pressures, the African drum and the Afro-Trinidadian Tamboo-Bamboo became outlawed. This brought about another search for a new musical expression, which was captured in the ingenius invention of the steel drum. There were attempts to outlaw these instruments also. "The steel band has truly captured the genius of African music in the New World." This quotation emphasizes the importance of both past and present musical influences: First, from Africa to Trinidad with the word calypso, the rhythm and the melodic elements; second, from western Europe with the influence of Baroque, Classical and Romantic music which is performed today.

Callanan, Joe. "Music from Oil Drum." *Musical Courier,* May 1954, pp. 8-10.

Charles, Wayne E. "Meet the Steelpan." *Instrumentalist,* August 1979, pp. 86-87.
Information related to the origin, construction, and contribution of the steel drum as a musical instrument. Also mentioned was the type of instrumentation used in small ensembles. Mr. Charles' work was refreshing and was based upon knowledge. This article would give a student at least a sense of direction, when undertaking the task of learning about steel drums.

Corcoran, Timothy, Father. "Music from Oil Drums." *Music,* Summer 1968. pp. 23-24.

Fischer, George. "Ethnic minorities beyond yellow bird." *Music in Education,* July 1978, p. 284.
Mr. Fisher's article fills in the background on steel drum music and the value of the medium in British Schools.
Contents: A) Historical notes; B) Some unfounded criticism; C) Steel bands in primary school; D) Secondary pan music; and E) Exploitation. Fisher's contribution to this area has given us more insight and understanding in regard to what a steel drum (or pan) is, how it should be perceived and where it originated. He mentions some of the misconceptions that affect the value of this instrument's status in schools. "One finds that groups of children can beat out tunes on pans but cannot really play the instrument, i.e., use techniques of rolling, dampening and phrasing, etc. More time should be spent on developing such techniques and introducing the scope of the pan which is made to cater for a wide range of individual sound, melody, harmony, bass, etc." I agree with Fisher, but we must not forget that the steel drum is still a very new instrument.

Gibbs, A. John. "The Unit Steel Band." *Music Educators Journal.* November 1978, p. 19.
Book review, contents: Photographs, illustrations, music examples, appendices and glossary. "This book also covers the origin of the instrument and their manufacture. Tuning and

an introduction to the acoustical principles of sound generation from steel omnivibraphones." The publisher's address is 900 South Oyster Bay Road, Hicksville, New York 11801.

Hill, Errol. "On the Origin of the Term Calypso." *Ethnomusicology,* September 1967, p. 359.
This article contains works related to the etymology, early and late, of the term "calypso." Many suggestive sources of the term's derivation and some definite confirmation of the origin of the term. A variety of spellings of the same word, lyrics and translated terminologies of some calypsos, as well as the terms relation to some dances found in early Afro-Trinidadian religious practices.

Holder, Geoffrey. "Drumming on Steel Barrel Heads." *Music Journal,* May-June 1955, pp. 9, 20, 24.
The author, who is a native of Trinidad, discusses the steel drum with its history and purpose. He also makes references to the instrument's relationship to African instruments, and the different types of steel drums. There is also a picture, showing the steel drum being played by three other Trinidadians. An obsolete method of carrying the instrument by a strap around the neck, that was attached to both sides of the instrument (drum) has been outdated. There are now metal stands to support the pans while the player performs.

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Kirpalani, Murli J.; Sinanan, Miltra G.; Rameshwar, S. M.; and Seukeran, L. F. *Indian Centenary Review: One Hundred Years of Progress.* Trinidad: Guardian Commercial Printery, Port-Of-Spain, Trinidad, 1945.
A series of articles published in Trinidad. Not available for examination.

La Fay, Howard. "Carnival in Trinidad." *National Geographic,* November 1971, pp. 690-701.

Nketia, Kwaena, J. H. "The Study of African and Afro-American Music." *Black Perspective in Music* 1-2 (spring 1973): 7-15.
Nketia in his article raised and suggested some important questions regarding the study of African music and its retention in America. References are made to the historical, the problem of unity and diversity, the search for closer affinity and comparative studies. These studies are most valuable as background for studies related to African music in Trinidad.

Official U.S. Navy Photo. "America's First Steel Band." *Music Journal* 16 (September 1948): 42-43.
The origin of the steel drum, disputes as to which West Indian island was responsible for the discovery of the instrument, the sizes of oil drums used in constructing a steel drum, the social importance of organizing ensembles on Trinidad festive day, carnival and the development of the first American steel band. The author identifies a specific era in Trinidad in which the invention of the steel drum took place. As an indigenous Trinidadian and musician of this idiom, I find the information disputable.

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A preview on the progress, concepts and craftmanship of the steel drum. Also, the philosophy of a tuner named Leroy Williams who was born in Trinidad but now resides in South Florida, and is now known as Ali. The man and his art as he remembers it and is now pursuing it.

Peggie, Andrew. "School's Steelband Festival." *Music in Education* 42 (June 1978): 291.
"There is something to be said for music which actively sets out to demolish racial and cultural barriers. That this music should come from the culture of a socially disadvantaged ethnic minority is doubly praiseworthy." Overall, the article justified the rise of the steel drum as part of an organized unit in Commonwealth Institutes. References were made in terms of repertory, which was all "serious" music, as some call it. The process of conventional musical training was discussed, but it was stated that such training is not essential to perform this instrument with musical expression and precision.

Photo through courtesy of Trinidad and Tobago Board. "The Steel Band: Musical Tin Pan of Trinidad." *Instrumentalist* 14 (September 1949): 98-99.

Brief history of the steelband, types of steel drums, and the tuning process.

Quevedo, Raymond (Atilla the Hum). "History of Calypso, This Country of Ours." *Independence Brochure: The Nation,* Port-Of-Spain, 1962.
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12 Annual reports on Emigration from Port-Of-Calcutta to British and Foreign Colonies, Emigration Department, Calcutta, 1877-86.
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Barnhart, Stephen. "The Steel Drum: Its History, Music, and Construction." Research paper in lieu of thesis. Presented to the Graduate Council of North Texas State University in partial fulfillment of the requirements, Denton, Texas, August 1980.
Contents: List of Illustrations, Map of Trinidad and Tobago. Chapter I, The Social Setting; II, The Drum's Lineage; III, Drums from Steel; and IV, Making the drum. Also included are folk-music types, discography and bibliography. Most of the music in the discography has been surpassed in terms of quality and musicality by the ingenius innovations of young steel drum players and tuners. The incorporation of synthesizers and other complex electronic devices, which was first introduced by Burty Marshall (one of Trinidad's most accomplished pan tuners with his electronically controlled double tenor pan), is also potentially greater than what is included in the Discography.

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Encyclopedia Britannica, XIII, s.v. "Hindu Chronology," by J. F. Fleet.

Gibbs, John A. "Fusion In Music: A New Explosion In Sound." Abstracted for preliminary and general circulation by Cheryl Huff, from the completed text, "Acoustical Foundations of the Steel Band." Philadelphia, Pennsylvania, April 1976.
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Koss, J. "Cultural Conservation Among East Indians in Trinidad." Paper read at Meeting of the American Anthropological Association, Washington, D.C., 1958.

Moses, Lennard V. "Trinidad: The Voice of a Native." Paper presented to Techniques of Research in Music at Northern Illinois University, DeKalb, IL, 7 May 1982.
"This study of the West Indian Islands (Principally the island of Trinidad) is conducted from the perspective of the Africanisms, the social life, the African retention in Trinidad and Haiti, and the religion and music of the islands." With much emphasis on the musical style, calypso and the steel drum pan.

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Pearse, Andres. "Carnival in Nineteenth-Century Trinidad." *Caribbean Quarterly, Carnival Issue,* Vol. IV, No. 3 and 4, (March and June 1956).
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The steel drum by way of written history and visual production. Review of a 16 mm black and white film, made in Trinidad by Pete Seeger. (New York: Folkways Records and Service Corp., FS 100, 1957. For rental at $5.00 or purchase at $85.00.)

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Lou Rose Music Co., Edison, NJ
S & S School of Music, Pottstown, PA
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