

Interview With Lars Petter Hagen

Oslo, Norway, and MuttENZ, Switzerland, 21 February 1998

This interview was conducted in writing, almost a year after I had spent a month at the *Norsk nettverk for Teknologi, Akustikk og Musikk, NOTAM* in Oslo. I had met Lars Petter Hagen there, among many other interesting people. Lars Petter Hagen's questions arrived more or less in telegram style. I have left them largely unchanged in this text. The interview appeared in the Norwegian journal of contemporary music *Parergon* no. 3 (*estetisk elektrisitet*), 1998. –GB

Lars Petter Hagen: *How did you first get in contact with electroacoustic music and computers? What kind of equipment did you use? What intentions did you have when you first started to use the electroacoustic medium in your music? Can you say something about the historical situation?*

Gerald Bennett: I first came into professional contact with electroacoustic music quite late, around 1972 when I was already 30 years old, in connection with the first preparations for IRCAM. Before that I had made a couple of tape studies at the Swiss Radio in Basel, but they didn't really interest me and were never performed. I must confess that at IRCAM I started with absolute top-of-the-line equipment: the for those days very fast Digital Equipment PDP-10 36-bit multi-user computer, the best professional equipment otherwise. From the very beginning, electroacoustic music seemed to me a fascinating complement to instrumental music. I didn't belong to the very first generation of pioneers of computer music. Even so, I didn't immediately find much earlier music which really interested me. It was the works of Jean-Claude Risset, which I heard in 1972, which first gave me some sense of the potential of computer music.

LPH: *You have a traditional musical background, with studies in counterpoint etc., and you also write instrumental music in addition to electroacoustic music. Today people become composers with all kinds of backgrounds, e.g. popular music or visual arts. How does this influence the music? Positive/negative? What are the benefits of traditional education?*

GB: I fear that I have a very conservative opinion on this question. In my experience, people who do not have at least some professional training in historical music — harmony, counterpoint, composition — underestimate music's power. Their music is — at least so it seems to me — often superficial, they are happy with simple effects, because they have too little experience with the ways in which sound in the past has been structured and has succeeded in moving and touching us. Obviously, composers who have had a very intense and strict classical training may have some difficulty freeing themselves from the constraints of the music they know, but in my experience this is never really a serious problem for a strong and imaginative mind. Besides knowing the power and richness of music in the past, it seems to me important that a composer have experienced something of the tension between the affective and the speculative aspects of music — what happens to expressive sound when one tries to create a strict contrapuntal passage? What role does a complex formal pattern play for the expression of a composition? These things are much easier to learn from examples of older music.

LPH: *How has your work with computers influenced your instrumental writing? Is there a "traditional" electroacoustic education?*

GB: I think the greatest influence on my instrumental writing concerns my understanding of the role of chronological (as opposed to metrical) time in structuring a piece. I am not alone here: I think all composers working after about 1950 think of time in ways which have been either directly or indirectly influenced by electroacoustic music.

I believe one can hardly speak of a "traditional" electroacoustic education — the field is both far too diverse and too young for such a thing to have been established. Even so, one does see more and more often curricula, particularly in British and American universities, which resemble each other strongly and include courses on the theory, the history and the practice of electroacoustic music.

LPH: *Let us speak about IRCAM. What was your part?*

GB: Pierre Boulez asked me in 1970 if I would be interested in participating in the project which later turned out to be IRCAM. From 1972 until 1976 I participated intensively in the planning of the new center. I was a department head there from the beginning, the Autumn of 1976, until January of 1980. I continued working there until January of 1981. My department was concerned with research in room acoustics and in psychoacoustics, and I was responsible for defining projects and

hiring personnel to carry them out.

LPH: *Can you say something about your work on CHANT? Research on the human voice in connection with computers is to me very interesting, because of the extreme opposite situation between the voice, our first instrument ever, and the newest technology. I think this is a good illustration of how traditional musical thinking is related to computer music. What did you learn from this work?*

GB: CHANT is a sound synthesis program which Xavier Rodet and I developed at IRCAM between about 1978 and 1981. The program was first written to synthesize singing voices in order to check the validity of research we had done on the acoustics of the singing voice, research in which we were greatly aided by Johan Sundberg of the Royal Institute of Technology in Stockholm. Obviously, it was compositionally not very interesting to be able to synthesize good singing voices — for that one has singers, after all — but CHANT proved adept at the synthesis of all kinds of resonant sounds. Of course, I learned a great deal from this work, but perhaps the most important thing was how good scientific research can lead to a very rich compositional environment. I still think the CHANT project was a marvellous paradigm for what seemed then to me to be at the heart of IRCAM's concerns.

LPH: *Do you consider electroacoustic music and instrumental music to be two different worlds? Why or why not?*

GB: Yes, in fact electroacoustic music and instrumental music do seem to me to be two quite different worlds. Obviously, there are many parallels: both are arts which happen in time, both structure sound, often electroacoustic music seems instrumental, while instrumental music working primarily with sound masses or noise can sound electroacoustic. But there are many very important differences. The unit of instrumental music is still most always the note, usually the tempered half-tone, whereas the unit of electroacoustic music is the sound. The octave and the repetition of tempered pitches within the octave are the most important ordering criteria in instrumental music. There is, generally speaking, no equivalent to this ordering in electroacoustic music. The instrument is always playing “something”, is always a filter for what the music speaks of. In electroacoustic music, there is no filter: the music speaks its message more directly. In general, proficiency in the compositional craft (*Handwerk*) of one field does not guarantee proficiency in the craft of the other.

LPH: *To what extent is it necessary for composers to learn programming, acoustics, etc.?*

GB: I feel it absolutely essential that composers of electroacoustic music have some knowledge both of acoustics and of psychoacoustics. Music students regularly groan over the obligatory acoustics course, figuring their instruments know their acoustics and that there is no need for them to learn too. But in electroacoustic music, obviously, that's not true. A practical knowledge of acoustics and psychoacoustics is necessary, among other reasons, to help one understand what is wrong with how one's music sounds.

Any composer of electroacoustic music who wants to become independent of commercial programs will have to learn a minimum of programming.

LPH: *The software is getting more "intuitive" and maybe "inaccurate". Is this good or bad? What has to be done when it comes to development of new software?*

GB: I am old enough to be very impressed by the software available today. But I am also old enough to remember making pretty good music with very complicated and "user-unfriendly" programs, so I am probably not a good person to ask about software. I am not sure there is any deep relationship between the software used and the music produced, except that "intuitive" software attracts many people who are unwilling to work hard on their music (or, conversely: "intuitive" software forces non-lazy people to spend much more time than they might otherwise on certain operations, because the software doesn't let them specify things precisely). I continue to be amazed at the lack of generally available acoustic analysis software for composers (by generally available, I mean inexpensively or free). I also never cease to marvel at the stupidity of commercial "effects" programs written without any way of controlling or modifying things in time (except maybe by moving a mouse). I don't think anything "has to be done" about the development of new software. Instead, I spend my time encouraging younger composers to distrust all commercial software and to get their hands dirty doing programming (Csound, Common Music, SuperCollider) in an environment where their imagination will not be reigned in, but rather encouraged to soar and go where no one has been before.

LPH: *I would like to turn to the problem of representation. The duality between sound and notation has always been important in Western music. What happens when this relationship more or less is gone,*

and composers are forced to think in terms of logic and mathematical functions instead of the traditional notation which has always been the composers' language? How has the logical computer changed our way of thinking. Or has it changed at all?

GB: These are very complex questions which preoccupy me deeply as a teacher and to which I certainly do not know the answers. One consequence of the disappearance of the sound/notation duality is what I call the non-analyzability of electroacoustic music: if I don't know how an electroacoustic piece was composed, I (usually) cannot find out by listening to the piece, whereas I can learn a great deal from a score of a piece about which I know nothing. This makes teaching very difficult. Another consequence is that each composer has to develop his or her own metaphorical language for thinking about music, while in instrumental music there are some very general metaphors we all use for organizing things in our heads. I must say that I certainly haven't heard much music recently where I had the feeling the composers had been thinking in logical and mathematical terms. On the contrary, there seems to be a great deal of sentimental and not-very-carefully-thought-through computer music out there, and in that sense the computer doesn't seem to have changed the way of thinking of very many people (although I think the loss of organizing metaphors is partly responsible for this).

LPH: *How do your students relate to computer music? They have probably grown up with digital sounds and computers.*

GB: It is true that my students today have a much more direct relationship to electroacoustic music than did students 20 years ago, although obviously in my computer music courses, I only see those students who are very interested in the field. Of course they have greater ease in dealing with the computer, although I believe that doesn't count for much. Today's machines are much faster, and today's software is much richer, than they were, and that makes it possible for students to make something satisfying faster than used to be the case.

LPH: *Performance. How do you think electroacoustic music should be performed? What do you demand of an electroacoustic performance? Should electroacoustic music be performed at all?*

GB: This too is an enormously complex question, referring as it does to what I consider the great remaining field of research in electroacoustic music. Personally, I am always very happy to listen to tape music without any performance aspect. I often like "mixed" pieces, too, where

a tape plays along with one or more instrumentalists. I am a hopeless reactionary in that I have heard very little live electroacoustic music I don't find too simple to interest me. I have never been very impressed by loudspeaker orchestras, although it's always good to have different loudspeakers. On the other hand, I have heard a few remarkable performances by the Institut International de Musique Électroacoustique de Bourges on their GMEBaphone, where subtle real-time filtering and delay techniques performed in the hall and played over a large number of loudspeakers can greatly enrich a composition. We know a few things: amplifiers should be very powerful, loudspeakers should be expensive, halls should not be too reverberant for electroacoustic music which uses space as an aspect of the composition. The rest is religion and magic. I will not live to hear the perfectly rigid, point-formed sound source we dreamed of as a replacement for loudspeakers (removing all distortion and transmitting sound perfectly in all directions) in the 70's, but there is still a great deal of research to be done on transducers. Much experimentation is still to be done on spaces in which to present electroacoustic music. There is also very much research and experimentation to be done in the field of live electroacoustic music. I must confess that I don't understand why so much of it has to be so bad.

LPH: *I know you don't like to talk about the future of computer music, but it is impossible to avoid the question at the end of an interview like this. Do you think in the future we will have only electroacoustic music? Only instrumental music? Techno? Do you foresee the death of the Music Academies? What styles will there be? Will there be a plurality of musics? Will we have new sciences (chaos, etc.)?*

GB: Another impossible question, thank you. One thing seems to be clear: we will never again have only anything. As far as I can see (which is not far at all), the temper of our age and of the near future is plurality. I understand plurality as an expression of mental and spiritual maturity, of what the German theologian Dietrich Bonhoeffer called *Mündigkeit*. I cannot imagine, and certainly would not wish to do so, living in a world in which a great musical tradition ruled. On the other hand, it seems to me that in the near future, at least, serious, contemporary "classical" music (we do need a better name for it than the German *E-Musik*) will continue to occupy the tiny corner of consciousness it has occupied for most of the century: no money, no recognition, no interest, compared to other intellectual activities. It is possible that electroacoustic music will also continue to occupy a tiny corner of that tiny corner, as it does today, which at least has the advantage of freeing electroacoustic music from all financial pressures. On the other hand, once in a while, after the

rare concert where 250 instead of the usual 73 concert-goers frenetically applaud electroacoustic music, or after excited discussions with people who for the first time heard and were thrilled by music coming out of loudspeakers, I find myself thinking that electroacoustic music is the art form of the future, and I dream of immense concerts in sport halls and thousands of listeners far more deeply moved than by the music of Brahms or Beethoven, for there is not the slightest doubt in my mind that our music has the potential to reach and fascinate great numbers of people not the least interested in contemporary music otherwise. It's hard to know what to wish. A curse lies over almost everything big in our century, but it is surely petty and sentimental to wish that electroacoustic music remain the fragile flower it is now, virtually unknown and unheard. Music is communication, and electroacoustic music needs the resonance of large audiences, needs to move into the depths of a collective subconscious, and to find there, as did the music of earlier centuries, the dreams and fears to fuel its future fires.