

Concert Notes: the architect of serialism and his digital processor



Pierre Boulez

"Serialism has had to develop very much in order to survive. Like an organism, it needed to grow. In Germany some younger composers have returned to romanticism, but minimalism hasn't had much effect yet in France, Germany, or Italy. Maybe in England. But in France the younger composers are more attached to the structures of sound you can achieve with serialism, not to the pitches. They want more freedom. I can understand that perfectly.

"In a way, yes, my own music has gotten simpler. Strict serialism only occupied me for a short period of my life, after all, a couple of months. Now it's easier to hear what's going on in my music. My experiences as a conductor made me efficient."

It's difficult to believe that the Angry Young Man of 20th-century music turned 60 last year. Nor, to all appearances, is Pierre Boulez any longer angry. Though he was 2,000 miles away in Los Angeles when I spoke with him, it was easy to tell that there was an indulgent grin on his face as he made himself perfectly clear one more time. His Gallic charm is imperturbable, and breaks easily into laughter. Absent are the sarcastic polemics that marked his early writings, such as the notorious 1952 article "Schönberg est mort" (S. is dead), as well as the impatient denunciations of composers whose methods differ from his own.

"What I ask myself about each composer is: 'Does he bring me something I can steal?' If he does, I like him. Stockhausen is an exceptional personality and a very inventive mind, and it's always interesting to see what he does. He still brings me things I can steal."

For Boulez was, with his colleague Karlheinz Stockhausen, the architect of a new style of music in the late 40s and early 50s, one that has adherents in virtually every civilized country and that even now shows little sign of relaxing its influence: serialism. The war had given technology a tremendous boost, and improvements in tape-recording equipment had opened the possibility of using any conceivable sound within a piece of music. A new musical language was needed, capable of encompassing musical sounds, noise, and the continuum in between. Tone color and rhythm, more controllable than ever by electronic means, would have to become susceptible to the same level of nuance applied by earlier composers to melody and pitch.

Boulez's answer was to divide up every aspect of music into a **series** of levels, say, the six dynamic levels from pp to ff. Expressed numerically (pp=1, p=2, mp=3), those levels could then be structured with the same kind of logic that earlier composers had applied only to pitches. As you'd expect, early forays into this style tended to be absurdly mathematical in their construction and incomprehensible to the ear, though Boulez's most important early work, **Le marteau sans maître** (The Hammer Without a Master), was widely imitated by hundreds of American and European composers in its stringent vocal style and percussive ensemble sound. Over the years, Boulez's use of the series has become much more subtle and more related to human aural perception — "more efficient," as he says. Such recent works as **Rituel** and **Éclat**, in fact, exude a kind of hard-edged impressionism, brilliantly orchestrated and exhibiting an infinite variety of sound within well-defined limits, that is quite enchanting to the unbiased ear.

To American concert audiences, Boulez is probably better known as the controversial former conductor of the New York Philharmonic, a perfectionist who, as legend has it, would stop after a passage of rapid 16th notes, turn to the fourth-chair viola player and icily warn, "A-flat, not A-half-flat." He left that position in 1976, partly to spend more time composing and partly to help administrate his pet project: IRCAM (in English, Institute for the Coordination of Acoustic and Musical Research). The institute's purpose is to bring together musicians and scientists who, working independently, would pool their knowledge for the benefit of both: the scientists would learn how to make computers and new instruments that will better serve creative needs, and the musicians would learn how to use the new technology for composition. Ever mindful of the dangers of enclosing artists in an ivory tower, though, Boulez instituted at IRCAM a superb performance ensemble, the Ensemble InterContemporain, to bring to a general public the musical results of this unique interdisciplinary collaboration.

One of IRCAM's proudest achievements was the development of the 4X digital processor, the unusual origins of which were explained to me by Andrew Gerzso, Boulez's assistant at IRCAM: "While we were working on the 4X, we were contacted by the French aerospace program. Their pilots were having trouble flying in silent cabins, and needed to be able to hear the sounds of the engines to tell whether everything was working properly. They needed a computer that could realistically simulate aircraft sounds, so they paid us to do the research and development on the 4X. Technology usually starts within the industry and then goes out to private use, but in this case it was the opposite: the industry came to us."

Digital sound synthesis is a rapidly growing field, but your average digital synthesizer still looks pretty primitive next to the 4X. "It's a very fast computer, capable of 250 million operations per second. It does transformations of acoustic sounds in real time (as they are played), using all known synthesis algorithms. It's the equivalent of a thousand-piece orchestra within three square feet. It has eight boards, each of them containing up to 224 oscillators, and you can change the entire programming of all eight boards in 100 milliseconds." (But can it play "Color My World"?)

Nearly ten years after leaving New York for IRCAM, Pierre Boulez is finally coming back, bringing with him the 4X, the Ensemble InterContemporain, and his first major electronic work, **Repons**. The organization of sound in space has long been one of Boulez's dreams, and **Repons** promises to be a spectacular realization of that dream, requiring so much space that it is being performed in Northwestern University's Patten Gym. The ensemble occupies the center of the room; the soloists (two pianos, harp, vibraphone, xylophone, and cymbalum, a large Hungarian dulcimer) are in the corners and against the walls, with the audience in between in a doughnut shape. Each soloist has a speaker associated with him to his right, though the 4X may sometimes move his sounds around the room to the other speakers. The 4X will also modify the soloists' sounds in many ways: digital delay, pitch transposition, and many kinds of tone color modulation. The work's dialectic has to do with the ways in which the ensemble and the electronics echo the soloists; **repons**, in medieval French, is the term for "the one answered by the many" in liturgical antiphony.

Compared to opportunities like this, Halley's Comet drops by with tire-some frequency, and "Boulez Week" has turned into a technology fest. Northwestern's computer music school, directed by Gary Kendall, is kicking off the festivities with a concert of music by "second-generation computer composers," including some from NU, Stanford, MIT, Princeton, and IRCAM. That free event will take place at 8:15 PM Tuesday in Northwestern's Pick-Staiger Concert Hall on the Evanston campus. Boulez, who rarely lectures, will speak the following night, Wednesday, at 8 PM in the same hall; \$5 general admission, \$3 students.

Repons will receive its first midwest performance (and, considering the enormous expense involved, possibly its last) at Patten Gym, 2407 Sheridan Road in Evanston, Thursday at 8 PM. Then next Friday Boulez will wrap things up by conducting his ensemble at Orchestra Hall, 220 S. Michigan, in a program of works by Varese, Dufourt, Carter, and Schönberg, plus another Boulez premiere: **Derive**. Prices for each concert are \$12.50 general, \$7.50 students. Call 491-5441 for info on the NU events, 435-8111 for the Orchestra Hall box office.

"**Derive** is based on material that I had written for **Repons** and then didn't use," Boulez explained. "I developed it into a smaller piece. The program notes call it a 'Prelude and Fugue.' I hadn't thought about that when I wrote it, but I realized that's right. The first section is based on a series of arpeggios, and the second is canonic."

Will some angry young composer in the next century have to write an article entitled "Boulez est mort"? Boulez laughs loudly.

"Someone certainly will have to. I should do it myself before I die, and denounce myself. After I am dead, I can only shut up."

— Kyle Gann

Exhibits of re **Markarian** a from 5 to 7:30 Superior. A re 7:30 tonight, February 21. influence in t art, will talk **A Personal A** Fullerton Hal (free, 443-360 February 22, Evanston (\$2 0911).

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