n 1970, Jonathan D. Kramer-composer, theorist, now professor at the University of Cincinnati and program annotator for the Cincinnati Symphony—participated in a happening at Bennington College. In description it comes off as your standard '60s info-overload piece, a barrage of slides, film, electronic sounds, a magician, actors, instrumental performers, and whatever else was handy. Every component was geared to make it impossible to focus on the others. The event started at seven. and, after what Kramer figured was about two hours, came to a spontaneous halt. Loading equipment into his car. Kramer looked at his watch: it wasn't yet eight. The happening had lasted less than half an hour.

The following year, he walked in on a performance of Erik Satie's Vexations. the four-phrase middle movement of the piano piece Pages mystiques, which Satie indicated (whether seriously, no one knows) should be played 840 times. At first tortured by the relentless repetition. Kramer dropped his habitual listening expectations, relaxed, and began to enjoy himself. He staved 40 minutes it seemed. but when he looked at his watch upon leaving-you guessed it-he found that

three hours had elapsed.

These experiences led to a fascination with how music "distorts" time, and eventually Kramer wrote The Time of Music (Schirmer, \$35). The book takes off from Marvin Minsky's whimsical notion that music lets musicians play with time the way children use blocks to play with spaces: putting one time inside another, placing two times next to each other. Kramer then draws on philosophical and psychological evidence that time doesn't exist apart from experience, that "absolute" or clock time is as suspicious a fiction as any other type. Music creates its own time, and different musics can create very different kinds of time. These simple premises form the foundation for a sweeping, elaborately documented intellectual and psychological defense of postserial music, conceptual music, minimalism, various ethnic musics, and other genres that until now music theory has done a terrible job of accounting for.

Up front. The Time of Music's draw-

Jonathan D. Kramer

Your Time or Mine?

BY KYLE GANN



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posers have resorted to ever more complex harmonies and structures to bypass what their left brains can classify with increasing ease; most nonmusicians, less left-cultivated, cling to sonorities their right brains can comprehend. A musician, hearing a dominant ninth chord. too quickly left-thinks "oh, dominant ninth" and looks for greater complexity with which to stroke his right lobe. Your average M.B.A. finds that ninth chord sufficiently titillating.

When Kramer urges use of both brains in musical perception ("Musical image processing is predominantly a righthemisphere and musical information processing a left-hemisphere function," he quotes Karl H. Pribram), he strings a thread from hard-core (left-brain) serialism to free (right-brain) improv and makes a good argument for a middle path. His discussion of pop music is mostly restricted to an excellent chapter on recording technology's effect on time perception, but he does a great job of separating, via analysis, left- and rightbrain processes in Beethoven's Quartet Op. 135, Stravinsky's Symphonies of Wind Instruments, Rzewski's Les Moutons des Panurge, and other works. Repeatedly, he clarifies that lobe orientation can be in the ear of the beholder. Anything, at will, can be heard in either mode: we can ignore the internal meaning of a Mozart sonata and listen to it as pretty sounds, and we can memorize (as Kramer did) a recording of Cage's Aria to the point that its random noises come to sound causally connected. Best of all, in apologizing for discussing left-brain ideas in more detail than right, he insists that the latter's nonreduceability to words doesn't make them insignificant.

As a side course, there's a lot of timeperception research pulled together here. delivered with cautions against reliance on information theory (responsible for thousands of drab academic works) and diatribes against music psychology's contextless and therefore misleading experiments. One interesting finding is that goal-directedness distorts time perception; a perceived duration seems longer as completion of a task or sequence (or final cadence) is approached. Short time intercreate very unierent kinds of time, tinese simple premises form the foundation for a sweeping, elaborately documented intellectual and psychological defense of postserial music, conceptual music, minimalism, various ethnic musics, and other genres that until now music theory has done a terrible job of accounting for.

Up front, The Time of Music's drawback is the scores it has to settle. Determined to machete a path through the forest of misunderstandings that have grown up between musical analysis and the psychology of music. Kramer clears a lot of brush that the general reader may not have known was there. His integration of various phrase-accentuation theories may secure academic credibility, but his fast and loose Urlinie-talk will scare away crowds. Nevertheless. Kramer is one of the few living beings to survive graduate school with his ability to write a lucid sentence intact, and he could do the public a great service by issuing this network of ideas in a less forbidding context. In the meantime, if you can skip over the weeding-out passages (a feasible approach), The Time of Music may be the most revelatory book on music since Rosen's The Classical Style.

The sword with which Kramer slices through myriad Gordian knots is one missed by time theorists from St. Augustine to Husserl: split-brain theory. For centuries, descriptions of music have contradicted one another, and according to Kramer, it's only natural; each cranial hemisphere hears in a different way. We have two histories of music, conflicting and each correct. As Kramer cautions, characterization of brain functions is partially metaphorical (since the division isn't universal, especially among the lefthanded), but in general the left brain deals with objective, verbal, literal, and analytic functions, understanding thought as information and wholes as sums of parts. The right brain is subjective, nonverbal, metaphorical, synthetic, understanding thought as emotion, and recognizing the essences of wholes.

When you hear a melody, your left looks at each interval, but your war aram grasps the contour. Learning



music from a score absorbs the left brain. shaping a musical line the right; any pianist can tell you how irritating it is to be spoken to in an inspired moment, since words jerk one back to the left lobe. (I've heard that marijuana suppresses the left brain and alcohol the right, which is why the latter encourages talk and ruins sex while the former does the opposite. Make sense? I've found that even one beer vitiates my ability to concentrate on a concert.) We live in an overwhelmingly leftbrain-oriented society where, as Kramer points out, "we are diligently educated to value certain activities that are left-brain: reading, writing, mathematics, logic, Areas that call upon right-brain skills, such as art and music, come to be regarded as pastimes." There's a statement for future NEA brochures.

The crucial difference, for listening purposes, is that the left brain keeps track of time-tick, tick, tick, tick-while the right floats in a kind of timeless suspension. If you wonder what the latter feels like, Betty Edwards's fantastic book Drawing on the Right Side of the Brain contains exercises to get you centered in the right hemisphere; draw as she recommends, and you really do "lose track of time." (We need a similar book of rightbrain exercises for musicians.) Kramer focuses first on Stockhausen's moment form—a conception of music in which static passages abut each other in seemingly arbitrary order, revived in John Zorn's music—and then on minimalism. Both, he claims, encourage a right-brain feeling of "eternal now," a time sense that relies more on cumulative, unordered memory than on linear progression. Even conceptual pieces as bizarre as Daniel Lentz's 1969 Hydro Geneva (in which hydrogen peroxide is poured into each audience member's ear) play into Kramer's schema, and in best medieval tradition, he goes beyond present practice | poser and audience: in this century, com-

to suggest time conceptions that haven't even been explored yet.

Other writers have drawn parallels between minimalist time sense and those of drugs, dreams, and schizophrenia, but Kramer backs them up with specific documentation. He quotes psychiatrist Frederick Melges on a schizophrenic patient's experience: "Time has stopped; there is no time. . . . The past and future have collapsed into the present, and I can't tell them apart." In schizophrenia, "Critical left-hemispheric functions ... are suppressed, so that much of the information

he or she receives is not indexed as past. present, or future." In the loony bin this is a real drag, but in the concert hall it offers a safe alternative to normal time perception without weakening our hold on the "real world." Music's move back to the mellower right lobe has taken place "despite (or perhaps as an antidote to or reaction against) the ever-accelerating pace of life and the hollow obsession with progress in modern Western society."

Besides sticking new music back into everyday life where it belongs, this approach takes big steps toward a "unified field theory" for rock, jazz, and classical music, for to an extent left/right is the barrier between classical and jazz/rock thinking. Classical music (not only Euro-American but also Indian and Japanese) has cultivated its garden of left-brain concepts; jazz tends to distrust what can be accurately put in words. Kramer confirms what I've long suspected is true of classically trained players, less so of jazzers, that as they "are trained, they shift their musical activities to the left. analytic hemisphere." Here's the psychological basis for the chasm between com-

ON MINORMANION MICOLY (TESPONSIBLE TOL thousands of drab academic works) and diatribes against music psychology's contextless and therefore misleading experiments. One interesting finding is that goal-directedness distorts time perception; a perceived duration seems longer as completion of a task or sequence (or final cadence) is approached. Short time intervals can be distinguished as different lengths only if they differ by at least 16 per cent. Of two five-minute tapes containing the same sounds, one in random order, the other with similar sounds clumped together, the random tape was perceived as 33 per cent longer on the average. Surprisingly, environment size affects duration perception: subjects confined in an abnormally small room sped up their information processing rates to the point that they thought an hour had passed after only a few minutes. The vague limit on what can be perceived within the horizon of the "perceptual present" is about eight seconds, depending on the stimulus; Kramer sees this as the basis of phrase length in most Western music.

Musicians may exploit such tidbits, but the exciting news is that, after a theoretical vacuum of almost two decades, Kramer has combed the existing literature to synthesize a philosophical background for 21st century music that welcomes both classical and nonclassical music without urging precedence for either. At a recent SUNY at Stony Brook conference (where I was invited as a token critic and briefly met Kramer), one professor complained that, despite all their expensive digital gadgetry, rockers are still mired in the same old 4/4. Two others jumped up to insist that there are hundreds of subtle, right-brain, unnotatable ways to feel 4/4, and that's where rock shows its innovations. (That's two more professors than would have made that defense 10 years ago.) The academy is loosening up in revolutionary ways, and Kramer is both symptom and catalyst. Steep our present young musicians in this book, and in 10 years the music you hear at Roulette and Merkin Hall may be far more varied and compelling as a result.