A NEW KIND OF MUSIC

ON this page of our May 10 issue we described a new kind of music, based on the manipulation of the sounds of everyday life, which the French have called "musique concrete." Here ARTHUR JACOBS reports on another kind of musical exploration being carried on in Germany.

IT sounds like a composer's dream—a kind of music that needs no performer, a kind of music that the composer himself builds up physically out of pure sounds in such a way that the listener can hear it. Many a composer would be glad to banish the uncertainty, the capriciousness, the intervention of personal temperament which the singer or instrumentalist brings when he performs music in the ordinary way.

This new kind of music, without using a performer, is now being developed at the headquarters of the West German Radio at Cologne. It is called Electronic Music. I walked into the Electronic Music Studio thinking to see some vast, unfamiliar, complex machinery. Behold, instead, in a room smaller than the average living-room, two sound-recording machines (superior versions of the ordinary tape-recorder) and two small box-like affairs called tone-generators. This, and not much else, is the apparatus which the composer of electronic music uses.

With a tone-generator he can produce, electronically, any note he likes. He can confine himself to ordinary tones and semitones (black and white notes on the piano) or can have more minute intervals than these. Having selected the sounds he wants to use in a particular composition, he records them on tape. Then, using scissors and a great deal of patience, he records, re-records, and edits. Building up from one tape to another until the final master-tape is achieved, he has eventually laid out the notes in the order, the loudness, and the tone-colour he requires. The final tape is, in fact, his composition. It requires no performer to "interpret" it. It merely needs playing back through the ordinary means of a tape-recorder.

A laborious business? Admittedly. Herbert Eimert, who directs the studio, and Karlheinz Stockhausen, the 28-year-old composer who is the leading light among the younger practitioners of the method, admitted to me that they might spend several weeks conceiving and constructing a piece that lasted only two or three minutes. Usually the composer has a studio technician, an engineer, to help him in the physical process of assembly.

These composers do not try to write "ordinary" music by electronic means. After all, they have a new set of musical resources to use. Not only can they get "in between" the conventional notes—in between C and C sharp, for instance: they also find that loudness, which hitherto was only vaguely expressed on paper and mostly left to the performer, can now be exactly fixed in some forty different strengths.

The same applies to tone-colour, that is, the difference we feel between, say, the note A above middle C when sounded by the oboe and the same note when sounded by the clarinet. It is known that the difference in tone-colour arises from the fact that each note on a normal instrument is made up of various "pure" tones. Now what the tone-generators give is "pure" tone in this sense. So the composer of electronic music chooses a combination of "pure" tones as he will. It *could* be the same as the combination which makes, say, clarinet tone or oboe tone; but equally it could be some tone-colour that never before existed.

Given these almost limitless possibilities, what is a composer to do? Those who work at Cologne have the answer ready made. They are "serialist" composers. They do not use tunes, themes, recapitulations, repetitions and the other usual ways of constructing a piece. They base their pieces—and this applies also when they write for conventional instruments instead of for electronic devices—on a *series* of a certain number of notes, arbitrarily chosen. This series is held to be valid whether it is heard forwards, backwards, upside down, transposed, and so forth. The whole piece is constructed on such handlings of the series. What is more, elements such as loudness, are also brought under mathematical "serial" control.

Music-lovers will recognise this procedure as similar to that of the *twelve-note row* evolved by Schoenberg. Indeed, the Cologne composers recognise Schoenberg's revolution as history, almost as pre-history. Their own starting-point is the music of Schoenberg's disciple, Anton Webern, killed accidentally by an American soldier in Austria in 1945.

In a private house just outside Cologne, when the enthusiastic Stockhausen was lecturing about electronic music, I listened to these new sounds. To the moderately sophisticated listener the compositions seem like a mere conglomeration of buzzes, slidings, and noises. But, let me emphasise, this is not because the music is electronic, but because it is serial.

Indeed, it might be said that the scope of electronic music is being unduly restricted for the very reason that it is being virtually monopolised by these "serialist" composers. That is the opinion of Dr Werner Meyer-Eppler, whom I interviewed in Bonn: he is professor at the unique Institute of Phonetics and Communications Research at Bonn University, and is scientific adviser to the Cologne Electronic Music project.

Dr Meyer points out—and indeed the composers themselves are well aware of it—that electronic music has implications beyond technical musical matters. In abolishing the performer it abolishes the performance. Instead of the public concert, that complex social and psychological phenomenon, we are left only with the relation between the individual listener and his private room (fitted, for the best reception of electronic music, with five loudspeakers). Similar considerations apply to other forms of "tape-music" (that is, music which does not come into existence until it is recorded) which are being developed in Italy, Switzerland, the United States, and elsewhere.

I make no prophecies about the future of this type of music. But, back in London, I have a strange souvenir on my desk. It is the first published score of electronic music (obtainable from Universal Edition), Stockhausen's "Study No. 2." Score, did I say? But it uses no ordinary musical notation. Along a time-base it plots, in the form of a graph, pitch and loudness. It is not a score that anyone can perform; it is a diagram from which an engineer anywhere in the world could reproduce a tape which, when played, would give the same sounds as Stockhausen's. I gaze at it and begin to wonder.

PHOTOGRAPH shows multiple tape-recording of electronic sounds in the Cologne studios of the West German Radio