BOOK REVIEWS

Herbert Drux

Singende Steine: Rhythmus-Studien an drei katalanischen Kreuzgängen romanischen Stils

By MARIUS SCHNEIDER

(Kassel and Basel: Bärenreiter-Verlag, 1955). Pp. 92, with 22 illustrations and 3 tables, giving musical examples and a compendium of musical patterns.

Igor Stravinsky: Zeitgeschichte im Persönlichkeitsbild. Grundlagen und Voraussetzungen zur modernen Kronstruktionstechnik

By HELMUT KIRCHMEYER

"Kölner Beiträge zur Musikferschung," ed. Karl Gustav Fellerer, Vol. X (Regensburg: Gustav Bosse Verlag, 1958). Pp. xvi+792, 11 illustrations.

Problèmes de la musique moderne

By BORIS DE SCHLOEZER AND MARINA SCRIABINE

(Paris: Éditions de Minuit, 1959). Pp. 192.

Was ist Musik?

By FRIEDRICH BLUME

"Schriftenreihe Musikalische Zeitfragen," commissioned by the Deutschen Musikrates, ed. Walter Wiera, Vol. V (Kassel and Basel: Bärenreiter-Verlag, 1959). Pp. 21.

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An attentive visitor to the convent of San Cugat del Vallés, situated near Barcelona and built toward the end of the twelfth century, will discover a peculiarity in the capitals of the cloisters; inserted, apparently without order between capitals with bibical, historical, and purely ornamental motives, are some representing fabulous creatures and animals. At first sight this architectural use strikes us as strangely arbitrary and perhaps meaningless. Thanks to Marius Schneider, the famous ethnologist of music, our attention has been called "to new ways of investigating" this kind "of romanesque building." In his study *Singing Stones* his thesis is "that the place of no single head within the sequence of columns of the cloister is ever accidental, but is determined by a musical totality—rhythm." Considerably transcending the limits of one specialized discipline the author provides, in two chapters of his study, the indispensable preliminary knowledge for understanding his research. He concentrates and summarizes findings on the origin, the nature, and the development of the symbolism of sound, based on archeological, mythological, ethnological, and musicological research. The results of his research are published in more detail in *El Origen músical de los animales—simbolos en la mitologia y la escultura antiguas* (Barcelona, 1946) *La Danza de espadas y la tarantela* (Barcelona, 1948), *Los Cantos de lluvia en España* (Barcelona, 1949).

Comprehension and interpretation of the animal symbols of the capitals depend, according to Schneider, on one's familiarity with mythical conceptions which are current in all highly developed cultures and must have been known to the anonymous builder of the cloisters of San Cugat. The following are the most significant of these concepts.

The primary matter of all that is created is manifested in the strength of a primary light tone. As an acoustic substratum it remains latent in pure matter in an ossified form; the volcanic phonolith is in many places considered the oldest substance. Creators and creatures are—according to their natures—only able to participate in the deepest sense in the original matter by singing or rhythmic speaking in an original language. The sound of animals which can mediate between gods and man approaches the unity of the original language, lost because it was misused. The animal symbolically copied in stone corresponds to the utterance of its sounding archetype which in its turns possesses a substance of tone which engenders various mystical relations. In the course of a long development in the direction of a rational system this substances of tones can be rendered by a definite pitch.

Schneider refers to those mythical ideas and proceeds from the presupposition that the animal symbols of the capitals in San Cugat are not musical notations but a materialization of tone. Building on what is called the "classical" Indian musical theory from the twelfth to the fourteenth centuries, he translates the

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sound symbols into our modern musical notation and obtains the following equations: the peacock is the symbol for the keynote (sometimes the subdominant), the singing bird the dominant, the eagle the subsecond to the tonic, etc. For each of the seventy-two pairs of columns Schneider uses a constant time unit (here a quaver), arranges the individual sounds into an aggregate rhythm, and thus gains forty-two of seventy-two tone values of a melody. It was indispensable to look for a pattern for the framework of melody thus found, a pattern which had to follow the framework minutely but also had, for each remaining gap, to show the same number of temporal values (that is, tones or intervals) which were missing in the symbolic representation because of the capitals without animal images.

At this point Schneider's research produced a surprising and even sensational result. The experienced musicologist who had been struck by a relationship between the melody frame, obtained by transcription of symbols, and the antiphonal hymn of the Gregorian choral *Iste confessor*, found at last in a variant of this hymn the melody which perfectly corresponds to the order of the capitals—a verse from the hymn to Saint Cucuphatus, the patron saint of the monastery on whose commemoration day the melody corresponding to the order of the capitals is sung even in our days. Sqhneider could adduce evidence, other than the melody pattern, which makes it plausible that there is a symbolic presentation of the course of the year in the sequence of the capitals, a second structural idea, so to speak, which could play around the *cantus firmus* like a contrapuntal line, as well as a third idea which interprets the text of the next to last verse of the Cucuphat hymn.

The author applies the same method to investigate the cloisters of St. Mary's cathedral in Gerona. Again he finds in a hymn for the *Mater dolorosa* a melody which corresponds to the arrangement of the capitals. The result, however, is not so convincing as in the case of San Cugat, owing to the ambiguity of the representations of the peacock which here represent tonic, subdominant, and dominant at the same time.

In the second part of his study Schneider investigates the cloisters in Santa Marica de Ripoll. Here no melody can be detected on which the capital-figures might be based. However, referring to a "megalithic world view and its symbols," Schneider assumes that "the mystic journey of a man" or the "probable epic of the descent into hell and the merciful salvation of a woman sinner" have been expressed symbolically. It is impossible to discuss here the author's train of thought, which is extremely condensed in the study itself, especially since in this case his interpretation of symbols must be granted greater freedom than in investigating the cloisters of San Cugat and Gerona, where the compelling pattern of melody excluded such freedom.

Schneider's study, only eight-four pages long, will challenge those read-

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ers who approach the considerations of the author without prejudice to pose a number of questions or to raise objections. This is because of the concentration of its contents and the novelty of his theories. Scholars may take exception to the fact that several assertions cannot be proved. Obviously it cannot, for example, be determined unambiguously in which cases the peacock represents the keynote, in which the subdominant, and in which the dominant; or when the long-eared mythical animal represents the third to the tonic and when an interval. A new and unsolved problem is posed by the alleged fact that the animal symbols are the materialization of a sound, while, on the other hand, the mythical animals are equated with signs of punctuation. Nor can Schneider's study give exhaustive answers to such questions as: How far did mythical ideas which have their origin in different regions of the globe remain effective in the occidental culture of the Middle Ages, and were they perhaps reinterpreted in the Christian spirit? How far were the occidental builders in the thirteenth and fourteenth centuries aware of a symbolism of tones, specifically rooted in Indian theory of music? On the other hand, the testimony of A. Kircher from the seventeenth century (*Musurgia universalis,* X, 393) confirms the fact that oriental tone symbolism, at least from the Egyptian area, was received in Europe. Besides, modern researchers become increasingly aware of relations between India and the occident, although only in particular cases (e.g., travel diaries from the early Middle Ages). The author, accustomed to scrupulous scholarly research, is, of course, aware of the gaps in his chains of evidence. Again and again and with special emphasis he draws our attention to the fact that there is no evidence for some of his assumptions: "Such interpretation is no doubt highly unscientific for the lack of any document which might prove such an opinion" (p. 50; similar statements are found on pages 39, 69, 88 and 92).

On the other hand, we should point to the inner logic of the results of his investigations offered in the case of the San Cugat cloisters. This should be confirmed, above all, by every musicologist and every musician. Even though the equation of the individual animal symbols with certain pitches of tones and with certain meters had been made on a merely hypothetical basis and without any mythological background, the amazing congruence between the melody frame derived from the capital symbols and the corresponding tonal and rhythmic structure of the Cucuphat hymn would remain. This alone would entitle the author to our appreciation and gratitude for his bold publication and the publishers for their tasteful format and the most welcome insertion of a number of fine photographs. Not only will the reader greatly enrich his knowledge from the actual content but he will also enjoy the simple beauty of the language which has become so rare in professional literature. Let us hope that

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Schneider's request for confirmation of the correctness of his attempt by "analyzing other cloisters under similar points of view," directed in the first place to art scholars, will be complied with. His study shows that it is worthwhile to learn once more to hear by seeing, in order to become receptive of the spiritual background of a phenomenon which eludes the immediate understanding of the present. For "what does not meet the eye is not visible to him who is not receptive. It neither strikes him with deafness nor does it deprive him of the light of his eyes, but it passes him soundlessly and without lustre."

Helmut Kirchmeyer's voluminous publication sketches, in the image of the personality of Igor Stravinsky, the history of his time. The author endeavors to connect history and the present meaningfully, since—as he states in the Introduction—the observer of actual problems often loses the sense for the historical; the historian, on the other hand, the sense for the interests of his own time. To represent contemporary history, limited on the personal side to Stravinsky and on the objective side to the modern technique of musical construction, is an enterprise which should interest not only the specialist but any one whose mind is occupied with the spiritual conflicts that have contributed to form contemporary culture.

In the first and most significant part of his book Kirchmeyer investigates Stravinsky's position in music and generally in the culture of his time. I shall summarize the author's results from his point of view and without commentary.

When, under Peter the Great, influences from western Europe could penetrate Russian unimpeded, Russian puritanism disappeared and made room for music as an art. It is true that a considerable length of time had to elapse before, in the first half of the nineteenth century, music could reach a rooted originality with the works of Glinka. The general philosophical and cultural tendency of the nineteenth century which turned away from idealism towards realism was also expressed in the demand of the well-known Petersburg circle of musicians (composers such as Cui, Borodin, Mussorgsky, and Rimski-Korsakov, headed by Balakirew) that in music real life should be reflected. These composers considered musical doctrines, patterns of form and style unreal and, likewise, rejected academism as a spiritual principle. In place of academic forms they studied folksongs which, according to them, represented the reality of life in its purest form. A trend toward the technically formal and, with it, to a new determination of the contents of music was not inaugurated until Rimski-Korsakov, after the death of Mussorgsky, became the leader of a new group of composers of which Balaijew is considered the founder. The Belaijew Circle, consisting of educated musicians, soon freed itself from the radicalism of the group of Petersburg

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dilettantes. Pure form rather than musical expression, a retrogade movement in favor of pure order away from an inner life which emphasized expression, representation instead of experience—this is a brief formula for the way in which the Russian composers had to proceed from Mussorgsky over Rimski-Korsakov to Stravinsky.

Stravinsky's drive toward the tangible makes him conceive being as a state, in opposition to Schönberg who—in the German way of thinking—considers being as a constant becoming. The essential difference between these two renowned representatives of modern music is also characterized by their teaching methods: Stravinsky presents the result of his work, Schönberg offers the method to be followed.

According to the ethnopsychological analysis of Karl Nützel, one of the great errors of the Russians which can be observed again and again in various periods of history is to equate the objective with the impersonal and the impersonal with truth. Since they are liable to forget the difference between object and subject, they often obtain a false view of reality. This leads them to rapid changes in opinion, which they hardly perceive consciously. Entanglement in insoluble contradictions is elementary experience for the Russian, who believes in his objectivity as the Frenchman believes in his nation and the German in his sentiment. Stravinsky, too, shows this Russian characteristic, which explains the egocentricity of his statements and the numerous contradictions in his "musical poetics." His predilection for the concept of dogma does not prevent his "dogmatics" from being far too deeply in the personal and from being exhausted in subjectivistic norms. A false evaluation of art criticism is based on his dogmatism. He dogmatizes his subjectivisms because he presumes to know the truth; and the dogma thus reached, obligatory for the Russian, makes him feel that he is morally obliged to polemicize. On the other hand, the Russian realism which he experienced as inner compulsion and which became so fruitful for Europe, strongly impresses us. Insight into Russian peculiarities of thought makes us understand Stravinsky's claim to exclusiveness for his construction, its static rigidity, and the absoluteness with which it is applied, as well as the fact that this construction was never systematized by the composer himself.

Besides Russian influence the spiritual and musical development in France was decisive in forming Stravinsky's personality. Many caricatures of France are due to an overemphasis on the pessimism which served to explain the spiritual attitude of France, the weakening of the national will, and the vital energies of the French after the political catastrophies, particularly of the 1870's. A special worship of the self which paved the way for a new constructive scale of values was a starting point for the country's spiritual rebirth. When, after the turn of the century, the self, liberated from

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egotism, did again have significance, the strength of the "other France" mounted— the France that was often enough overlooked and which even the Russian, L. Sabanejew, in his mordant description of the musical life of Paris, written in 1927, still disregarded.

In France everything undesirable in art, scholarship, politics, and intellectual life in general had been rejected as romanticism. Perfect form, creation governed by reason, subordination of the individual to a whole, avoidance of outbursts of emotion, and subjection of arbitrariness to tradition were demanded. Culture of the self and classicism in a new synthesis formed a connection between asceticism and classical reserve. This paved the way for modern construction aesthetics; Stravinsky could be welcomed with open arms. His emphasis on the self, a national characteristic, affected the French culture of the self, developed as an antidote in the struggle against the futility of pessimism.

But Stavinsky, as his "poetics" reveal, misunderstood the French spiritual attitude and tried, in his theoretical works, to degrade art to craft by overlooking the delicate feeling for intuition peculiar to the French, by replacing the concept of inspiration with that of talent, by eliminating the subjectively human, thus separating artist and work of art in an objective sphere. He transformed the French aesthetics of order in the Russian vein and limited it to dogma and objectivity. While for the French the juxtaposition of classicism and romanticism had not been mere artistic polemics but part of the process of national recovery, it degenerated with Stravinsky into a formula oversimplified in two ways.

Discipline led the French to classicism in art, back to Catholicism in religion. This explains the striking inclination of French intellectuals toward Catholic dogmatics, which by many was hailed as the culmination of the process of recovery. The deeply religious Stravinsky immediately adopted the idea of "art for God" propagated by Cocteau, Maritain, and others. This explains in part his polemics against Wagner and Beethoven, although he highly esteemed the latter's skill. But the almost blasphemous worship of Beethoven was bound to be intolerable for French Catholics.

With growing nationalism, the receptivity of the French for Wagner's ideas caused by nineteenth-century pessimism gave way to a resentment against the cultural power of German art in France. This attitude was bound to lead, after the war, to German nationalism, which, strange to say, made the New Music the chief loser in Germany, because in reacting against the French attitude the polemic against modern trends was equated with a polemic against France and, incidentally, also against Russia. The New Music was considered to be of French origin. While France opposed the overpowering Beethoven with the argument of the New, in order to be heard again her-

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self Germany argued for Beethoven's great art and against the New Music in order to annihilate the latter's possibility of success.

Among others, Franz Liszt, recognized friend of the French, and Mussorgsky had given important aid toward creating a new, rooted French music. Liszt's significance for both the French and the Russians as a pioneer of French Impressionism which attained its climax in Debussy's works has been emphasized over and over again. "Art for art's sake," the motto of French Impressionism, became the perfect artistic expression of the French culture of the self. Debussy as chief protagonist of this movement detached himself from the conventions of his contemporaries. Satie and Fauré, however, two composers whose early works had influenced Debussy, did not really share the development toward impressionism and began to produce again only after it was on the decline. They rejected impressionism as a romantic style, while—by resuming contrapuntal forms, among other things—they approached a neoclassicism. Satie mainly fought for classicism proceeding from an artistic demand for a new simplicity. It was this inheritance which Stravinsky could take over.

One of the musical tendencies of that time led away from program and back to absolute music. Liszt, himself one of the first significant representatives of so-called program music, did not want the independence of music to be sacrificed to any program. But his concept of a program was, from the beginning, exposed to misunderstandings. Both New Music and Stravinsky very early fought against the misinterpreted idea of program music, especially against its use for political ends. In opposition to Schönberg, who judged with more understanding, Stravinsky not only denied the possibility of interpreting a non-musical idea musically but ignored all musical expression, although his own compositions contradicted his theories.

Nevertheless, the word gained from a program of music could back modern music against the danger of being fragmented; it could justify aesthetically as a means of musical characterization what was disagreeable to the senses (accumulation of dissonances). Indeed, New Music was often introduced by means of a program, a method abandoned only when the unconventional combinations of sounds had become more or less legitimate in musical theory.

From the blending tones of constituent parts that stand in the close relation of harmonic tones of a consonant accord to the discord tones of an accord full of dissonances, a further tendency of development leads towards modern music. The richness in harmonic tones corresponding with physical data and the strong degree of blending of tones of accords of strings had to be subordinated to the idea of discord tones in New Music; therefore, modern music prefers wind instruments. The pure effect of the instruments, become shopworn in

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program music, was definitely overcome by Stravinsky in his octet for winds, where the differentiation in instrumentation was not introduced except for stressing the form.

The idea of progress which had led to orchestras of mammoth size was hollow, and this could not remain hidden for any length of time. It made the composers rediscover the principle of chamber music and at the same time develop new ways for expressing their creativity. The financial distress of orchestras in the economic crisis of the 1920's also pointed in the direction of chamber groups.

The year 1923–24 can be considered the "fatal year of New Music." With the first performance of Stravinsky's octet for winds which confused the public and led to a "scandal of silence," with the composition of Hindemith's *Marienleben,* with a perceptible change of style in Bartok, tendencies appeared which from this time on obviously attempted a resumption of the musical tradition. The longing for clear forms and quieter content could be observed in many places. All those musicians, however, who regarded this new tendency as "reactionary" turned against it, among them Honegger and Schönberg. Stravinsky's music adjusted to the conception of *serenitas* peculiar to Romance people, and in agreement with his own religious conviction it soon avoided the adopted standards of contemporary musical theory and was often thoroughly misunderstood.

The demand to include all tones in New Music as formulated by Busoni, one of its theoretical pioneers, seems reasonable and convincing; but the style itself opposed this as well as the elimination of certain groups of tones. What remained was the demand for the non-functional comprehensive use of all musical elements in the system of construction. For New Music the difference between tonal and atonal accords became meaningless; there remained two different systems, it is true, that of functionality and that of construction. Both made use of the same forms of tones, but they excluded each other as systems, differing in their combinations of these forms.

Kirchmeyer asserts that our era has perfected the method of rejecting the work of art without examination as well as ruining the artist economically by even preventing its creation. The author supplements his historical sketch in the second part of his work with "documents of contemporary history," making use of them as well for presenting criticism and polemics against New Music. The critical struggle with the problems of modern music he describes in the first place as the rejection of extremes. He then discusses the objections raised again and again against New Music as being unnatural, arbitrary, and itellectual. Discussions of the concept of nature and construction occupy a central place in his book. As in the first part the author investigated Russian and French influence on contemporary music, especially that of Stravinsky, he now describes the same

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events by tracing the controversies which were particularly violent in German-speaking countries of that period.

In the third part Kirchmeyer treats "the transformation of the musical material" by referring to the well-established research of such authorities as Ernst Kurth (*Romantische Harmonik und ihre Krise in Wagners 'Tristan'* [Berlin, 1920]) and limiting himself to supplementing briefly their scholarly results. Finally, he tries to find the key to the modern technique of construction, which will not be discussed here in detail since it is directed at musicians and musicologists.

Even in our fast-moving era nobody will expect that a book which appeared a few decades after New Music came into existence can now already legitimately systematize such heterogeneous facts as those of contemporary music. Krichmeyer stresses that the object of his investigation is "predominantly the presentation of conditions between 1920 and 1930." He prefers that methodical pluralism of letting documents speak for themselves—adapted from the ideal historical method of Leopold von Ranke. Where the same events are repeatedly described, though from different points of view, this method results in diffuseness, which not even Kirchmeyer is always able to avoid. On the other hand he succeeds, because of his emphatically European attitude, in avoiding political discussion, although a discussion of nationalistic tendencies is frequently indispensable. He describes history with all its contradictions; thus, contradictions in his presentation arise inevitably from the material but might, occasionally, have been more sharply characterized as such. The author is young (born in 1930); his ways of thinking clearly owe much to Kant and Jaspers. Not so his diction, which is at times refreshingly spirited, although occasionally a little clumsy. The chapters concerned with purely musical questions remain problematic. This is not to reproach the author. Kirchmeyer's book, in common with all writings about New Music, shows that the theory and practice of modern music is apparently not yet ripe for elucidation in a historically oriented scholarly treatise.

However, those inevitable critical objections do not diminish the very positive impression made by Kirchmeyer's book. Already, a few months after its publication, it may very well be called the most significant scholarly publication on the history of New Music. Avoiding the conventional patterns of almost all biographies of musicians, it reveals in European approach and in a sketch strikingly clear and brilliant with an immense amount of material, the intellectual background of a phase of development toward New Music. In spite of the comprehensive aims of the book, it contains more qualitative facts which show the nature of Stravinsky's personality than any enumeration, however careful, of biographical dates alone could hope to offer. This impression is intensified by an

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extensive bibliography which contains, so for as available documents permitted, precise statements of original and translated titles, exact instrumentation, duration of performances, dates of composition, first performances, printed editions, phonograph records, editions, revisions, and secondary literature referring to Stravinsky's compositions. There are also brief comments on the history of their creation, on the response of the public, and on the practice of performances. A concise report on attempts to find a notation suitable to the character of modern music, about forty pages of references, and the literature of New Music compiled in sixty pages give an eloquent testimony for the thoroughness of the author and a lexicographical value for musicology which K. G. Fellerer has emphasized by accepting the volume for his series, *Kölner Beiträge zur Musikforschung*. Last but not least, the publishers deserve our appreciation for the production of this book, distinguished by its typography as well as its layout and illustrations.

The following review confronts an extensive publication on the problems of modern music with the reprint of a public lecture of not more than fifteen pages. This procedure is justified for two significant reasons: First, the problems in question cannot be solved without taking into account the *"central* musical question of our time: What is music." Second, the lecture, which deals particularly with the music of our day, has a special importance because it was written not just by any author but by a leading historian of music (Blume is president of the Internationale Gesellschaft für Musikwissenschaft and the Deutsche Gesellschaft für Musikforschung) who focuses his investigation on a "burning question of our time" and whose presentation undoubtedly is representative of the point of view of a vast group of musicologists and even of musicians who are seriously interested in modern music. This question and the present situation of music, which might be called a crisis, is also discussed by Schloezer and Scriabine, whose book attempts "to understand this crisis, to discover its significance, to disentangle its problems and the vistas which it opens."

No one has yet found a definition of music which is tolerably comprehensive and satisfactory. Blume, in order to overcome this difficulty, limits himself to describing attempts "to collect from experience what is and what is not regarded as music, what is and what is not required in order to produce the phenomenon which we are accustomed to call music" (p. 9). Schloezer and Scrabine, too, avoid from the beginning a dubious attempt at definition and in the first chapter of this book treat in detail "the language of the musician," outlining the limits of the language of music as compared with other media of communication, and analyze, from historical, psychological, and physiological points of view, the special features which music has de-

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veloped in the course of a long history. They continue by investigating "the sonorous universe of the musician" and pay special attention to three sectiors: *"le matériau"* (the tones, the points of the disconnected sonorous space) corresponding to Blume's concept of "tone-material or building material," and *"le matériel"* (the instruments with whose help the musical process is made audible). In Part II they devote the second chapter ("structures, operations, functions") to a detailed consideration of the prerequisites of musical events, their origin and their effects, as well as to the relations between the individual elements of music (among others, rhythm, melody, harmony).

The authors agree in stating that the differences between the music in the cultures of different times and places are based on two processes of selection, the first of which chooses a definite system of tones from the abundance of potential tones and the second of which connects the tones thus obtained with a specific timbre, both processes, however, representing abstractions from empirical sounds. According to Blume all tones, however complex, of all musical systems known to us are based on "sounds of nature," from which the selections were made in the processes described above. The tone material is based on the natural without being natural itself. "The 'pasture' of the musician is not natural, it is artificial; its very elements must be gained by conquering the chaotic universe of noise" (Schoezer and Scriabine, p. 64). Human spirit creatively forms the tone material into musical products. "Diastematics" as (roughly) successive up-and-down movement of frequencies, and "color" as (also roughly) motionless synchronism of tones are closely related in music with the elements of "duration" and "intensity" ("pitch, timbre, duration, intensity" in Scholezer and Scriabine, pp. 95 ff.). The "sensory-spiritual appropriation" of the relations between the elements of tones in a piece of music is the starting point for the *understanding* of music. Blume considers it indispensable for human understanding to organize tone material in certain "fields of gravitation" and sees the limits of music reached where "such tonal orders"—no matter of which kind—"are neither intended nor comprehended" (p. 13). The demand of Schloezer and Scriabine, directed to the Dodecaphonists and the serial composers, moves in the same direction: "He should organize, which means in this context to create a whole, the form of which, the actual unity makes sense; for music as poetry is only then living language" (p. 154). Blume—it should not be overlooked—uses the term "tonality" in a very broad sense when he says: "Relations between tones, functions, in one word, 'tonality,' arise automatically" (which of course need not be identical with that tonality which is derived from the functional harmonics of the major-minor system.) Schloezer and Scriabine, too, emphasize: "dodecaphonism did not

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ipso facto suppress tonality" (p. 140).

Blume fears that in abandoning all functional relations in the sense mentioned above we run the risk of abandoning music itself: "Here is a genuine borderline of the concept of music: There cannot be a tonally unrelated music, free of tonality. The transgression of this borderline would lead from music as ordered tone material into the chaos of pre-musical and noises" (p. 13). "As there is no music without the tone material of nature, however complex the sounds may be, there is no music without tonality however difficult it may be to grasp it" (p. 15). This notion is obviously not shared by Schloezer and Scriabine, as is mad particularly clear if we juxtapose the opinions of the authors in regard to the so-called electronic music, since they consider electronics the logical goal of the development of Occidental music. Once reached, it liberates the musician from the old restrictions, even from any coercion, and imposes on him the urgent task of a voluntary self-restriction in building a new, sounding cosmos (p. 87). Blume, on the other hand, energetically refuses to recognize as music "this product entirely deprived of natural elements and originated from the assembly of physical sounds," because "here something is produced which we cannot apprehend because our hearing, adapted to natural sounds and their derivatives, is not capable, either physically or mentally, of appropriating these products," although "this generation of sounds which can only be produced and reproduced by appliances may be something which reflects our age of atomic fission and complete automation" (p. 17). He thus transcends the purely musical point of view and alludes to the additional possibility of considering the question from a superior ethical stand point. Schloezer and Scriabine, however, answer the question of whether the fredom granted to an interpreter of Boulez' third piano sonata or of "piano piece 11" by Stockhausen, which may even interfere with the formal structure of the composition, should be regarded as reaction to the subjugation of the musician to electroacoustic appliances—whether electronic music, as many assert, is inhuman: "Nothing could be more wrong. To handle electroacoustic appliances does not dehumanize .the musician, does not mechanize music, but rather humanizes the appliances. In a certain sense we might even call this music 'human, all too human'; it in fact allows the author to express his life experience, to reveal his intimate being as he never could when using the instrumental language" (p. 185).

From the abundance of problems Blume chooses to examine the central one: musical form whose nature lies in limiting the unlimited, giving order to what is unordered. The more freedom the musician gains in handling the tone material, the more rigidly he must observe strict forms in relating sound events with each other in order to make them comprehensible for the listener. "Repetititon

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of the observable in observable dimensions" is for Blume a fundamental law of all form in music (p. 19). Similar ideas are uttered by Schloezer and Scriabine, who use not only the concept of observability in an adequate relation of meaning but also with frequency the concept of "coherence." With the unrelenting strictness of form of the most recent technique which started from the twelve-tone composition and "was made by some composers into a strictly arithmetical task in which the form is no longer a result of planning to produce observable orders and relations but results from the pure logic of mathematical construction," according to Blume, a further limit of music has been reached; "the *'humanitas'* of music has been sacrificed to the absolute perfection of a mathematical equation" (pp. 19–20). Toward the end of his lecture he writes: "The seemingly boundless freedom which was showered upon the composer by shattering the old system of tone material and the boundlessness of creating, which seems now to be open to him, entail the paradox that no longer the mind but only the machine, no longer the *ethos* of responsibility but the *logos* of the formula are capable to reign in this region." Schloezer and Scriabine, too, devote the fifth and last chapter of their book to the "paradoxes of liberty" after having earlier discussed the technique and method of dodecaphonal and serial composition ("the stages of autonomy") in all detail. Although they appreciate the historical importance of the twelve-tone theory inaugurated by Schönberg, they point out its inconsistencies—not to say mistakes—more relentlessly than does Blume in his short treatise, indicating again and again, like him, that in view of the "excess of the actual powers" it is indispensable to "limit one's self" and also to demand auditory comprehensibility of a composition. In their opinion musicians in our day are beginning to master the boundlessness of the newly won material "by a rigorius economy of means"; "this asceticism, however, does not solve the difficulty, for it is a question of knowing whether the unity thus obtained is audible" (p. 155). They, too, reproach the young musician for frequently seeking "the explanation and the justification of their enterprises in most recent physics, mathematics, cybernetics," etc., and ask: "Is it not indispensable for us to know how and uder what conditions we hear what we hear, now that we are renewing the language of music, turning its material upside down? There is no doubt that our auditory organs are remarkably adaptable, yet this nonetheless has its limits" (l. 190).

Unlike Blume, Schloezer and Scriabine do not try to define a borderline beyond which a tone product ceases to be music; that would contradict the perspective in which they view the historical development of music. "In seeking to understand the present condition of music we considered it indispensable to place it within the framework of a history which has di-

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rection and meaning. Beginning with the late Middle Ages and the first attempts at contrapuntal polyphony, this history has appeared to us to be a sequence of stages in which musicians have won autonomy from their material; stages, the most important of which were: the constitution of complexes of the second degree or accords; the recognition of their statute and the development of the harmony which follows from it; then, the direct action of the composer upon the primary elements or notes, realized by dodecaphonism, the extension of the series to all the sonorous aspects, and, at last, the complete mastery of the totality of the material by the composer, which electronics made possible" (p. 189).

In spite of their differences of opinion, fundamental attitudes of the authors toward the most recent musical productions do not differ as much as it might seem. The purely mathematical mechanical construction which pays too little attention to the auditory comprehensibility of a work of music is condemened as much by Schloezer and Scriabine as by Blume. They, too, pose the question: "Must we really expect that the sonorous art, whose complexity even now discourages so many listeners, should become still more complex and consequently less and less comprehensible until it is finally reserved for specialists exclusively?" (p. 89.) Studying modern methods of composing, they emphasize "the problems, particularly urgent and poignant, which concern the perception and, in general, the relations between the work and the listener." In principle they approve of electronic music, yet are by no means content with its present condition; they consider the reintroduction of an interpreter, a "human intermediary," indispensable (pp. 180–81). (Boulez, by the way, complies with this demand in his work *Poésie pour pouvoir.*) All restrictions, however, which they impose, all reservations with which they examine the most modern compositions, and all the warnings which they address to young composers, bring no answer to the question: How far are sounds comprehensible, depending on our sense of hearing; under which circumstances can they be inserted meaningfully into a system of relations, the reproduction of which gives the hearer the experience of a complete whole which he is willing to recognize as music? Perhaps this question cannot be answered accurately. But that does not prevent it from being posed again and again, nor does it prevent those who are caught completely helpless in the new situation from turning for help to a forum from which they expect to receive an answer: musicology. We therefore gratefully recognize Blume's courageous attempt to take an unequivocal stand with regard to the present situation of music. For the time being it does not matter whether or not we agree with him, especially since, as is evident, "it was not an easy task for him" to "venture onto the thin ice of such a delicate subject." Both publications show an

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extraordinarily high level of scholarship. While Blume's lecture, of course, must limit itself to a brief discussion of some cardinal points, Scloezer and Scriabine deserve praise for having treated or indicated practically every point of view referring to the problems in question. He who wishes to approach the situation of modern music "without anger or partiality" should therefore be urgently encouraged to study both works intensively. A certain subjectivity is almost inevitable when matters are discussed which are still in the process of developing. The decision for or against the latest development of occidental music is everybody's individual responsibility. Therefore, the following ideas are expected to offer only a small aid to the interested reader who wishes to reach an opinion of his own.

In the music of all cultures and all periods natural elements are connected with those that are artificial and against nature. The predominance of one of those elements, however, depends not only on time, race, or culture but also on the present sociological function of the music heard. It makes a difference whether music is supposed to entertain, to satisfy aesthetically, to stir up, to move us deeply; whether it has a function within a cult or is supposed to exercise a magic charm. To clarify this, let us examine an analogous phenomenon: The unrestricted right to dispose of words, syllables, and even letters permits the poet to construct products which are completely nonsensical and unnatural. He does occasionally when he wishes to withdraw language from any rational comprehensibility to make it serve a magical purpose. This is shown in the magic formulas of witches (the scenes in Goethe's *Faust*) and it still lives in the rhymes children use in their games, where some of the magical powers of sounds deprived of their rationality have been preserved (in German, for example: *I-drischneck, du bist weg!*). The occidental listener or reader accepts without objections this anomaly related to a particular situation, perhaps even (as in the magic formulas) as a correlate to a work of art. But he will emphatically deny its legitimacy in an abstract form of art, if it is not sociologically warranted, as the example of short-lived dadaism may show.

Electronics creates a similar siuation in the field of music. Its tonal material is abnormal, "completly unnatural" in Blume's terminology, if we agree to call a "natural sound" the tone caused by the freely flowing human voice, the vibrations of a chord or of a column of air in tubes, and to consider the use of electronic tones as justifiable only when this use avoids the tones which can be produced by the human voice or conventional instruments and makes full use of its advantage of disposing of a*continuum sonor* (see Schloezer and Scriabine, p. 178). This limits it, in principle, to a substance of sounds which is defined as noise. It is not purely accidental that one of the elementary products of electronic

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music is called "white rustling." Noise, however, cannot be unconditionally introduced into "highly developed music without causing a break" (see Blume, p. 16). A well-ordered combination of noises can move the listener, can even affect him more strongly than genuine music is able to do. But then the question arises whether the occidental listener can evaluate the effective, well planned organization of noises as a work of art, perhaps as music.

The majority of all consumers of music listen strictly emotionally, which means that the relations existing between the individual tones are not consciously reproduced by these hearers but sensorily comprehended in their totality. For instance, a listener may infer the meaning of a spoken sentence in a foreign language unknown to him from the situatiton, from the cadence and gestures of the speaker. In the same way, music can be meaningful to him without his understanding it in the sense of "sensory-spiritual appropriation." These are facts to be considered by the sociologist and the psychologist of music, but the musicologist (in the narrower sense of this word) cannot start from these listening habits to arrive at results concerning music itself. If Blume and Schloezer and Scriabine make auditory comprehensibility of music a condition for its sensory-spiritual appropriation, they are in the tradition of millennia of the Occidental theory of music, which places rational comprehension of tone relatitons above the sensory aspect of music. Occidental music was primarily determined by this rational comprehensibility, and thus a basis was formed on which the acts of different individuals, such as composition, interpretation, perception, and even theoretical determination, could be performed, so that they obtained universal validity both for musicians and listeners. The musical pitches firmly rooted both in the Occidental system of tones and in the Occidental sensation of hearing and their precise fixation in writing by notation (if we neglect problems of temperament) have led to unique development: they have produced a characteristic polyphony which arranges the simultaneous tones in their verticality and the relations between this complexity of sounds just as they arrange successive sounds into a system, rational *and* at the same time comprehensive for audition.

Unlike frequency, the sound elements of color (generally), of intensity (apart from rough gradations), and of duration (detached from a musical connection) cannot be grasped auditorily so that they can be inserted by the listener as absolute quantities into an a priori scale. The difficulty in the perception of many works of modern music is caused by the emancipation of just these elements, that is to say, by their not being audible "absolutely" as are the frequencies. The West shares the primacy of the movement of pitches with all singing, highly developed cultures. Yet on account of the pecu-

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liarity of Occidental music as it has just been characterized, we should beware of adducing processes from non-European music as evidence in favor of the practices of the most recent occidental musical production, which Schloezer and Scriabine, unfortunately, occasionally do. The single elements of an individual musical culture formed by racial talents, habits of listening, and sociological functions of music cannot be isolated from the total way of life in order to be transposed into a different culture. These attempts are made again and again, particularly with respect to sound elements of color and of intensity.

If Blume, following Schönberg's thesis "that tone color is thus the larger area, pitch one of its segments," states that the nuances (the tone colors in the narrow sense) determine the character of music more strongly than do absolute movements of pitch, this is undoubtedly correct for the rough differentiation of musical cultures and periods, but not—and that is what Schönberg apparently means—for the sphere of occidental music down to Schönberg himself. How much for example, does an organ fugue by Bach lose of its musical substance by being played on the harpsichord, on the piano, by a string orchestra, or even by an ensemble of concertinas or guitars so that the tone color is completely altered? Does not the soloist, whether singer or instrumentalist, even today study the score arranged for the piano—even of Schönberg's works—in order to penetrate into the nature of the music without thinking first of tone color. If in New Music, therefore, the composers follow a trend, observable for decades, to place the tone elements of duration, color, and intensity as equally important beside the element of pitch, it seems only consistent to eliminate, first of all, the primacy of the element of the pitch as is done in the so-called serial (puntal) and even more unequivocally in electronic composition. Nobody will deny that in this really atonal music the elements of duration, color, and intensity can appear much stronger than in any music which is still at all tonal. The effective impression of such a work on the listener can under certain circumstances be extraordinary; but in the last analysis it leads "back" from the sensory-spiritual assimilation to purely emotional listening or, as Blume says, "to the chaos of pre-musical tones and noises," because with the elimination of the element of pitch the tone material is to a large extent deprived of auditory comprehensibility. These facts are particularly and unequivocally supported by the development of Occidental notation. The new and different notation which electronics had to create for itself shows how radically it breaks away from tradition.

With the elimination of sound relations which can be reproduced by a trained ear, the formal order required for a work of art must be submitted to new laws. These laws split the sensory-spiritual appropria-

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tion into one which is purely sensory (emotional listening) and one which is purely spiritual (rational construction or analysis)—no longer immediately connected with the former, but isolated from it. Here the mortgage with which Occidental music was encumbered by introducing the notation (which, to be sure, helped to make possible the magnificent development of polyphony) yielded unexpected and undesired dividends: the range of sounds which could be auditorily comprehended and acoustically organized becomes "music" which is no longer auditorily comprehensible but is optically organized. Concepts such as *inventio, modulatio,* melody, etc., are necessarily replaced by structure, construction, etc. Nothing shows more clearly how far this purely mathematical and constructive thinking has gone than the fourth section of Kirchmeyer's book, which bears the title "Construction." The headings of its individual sections deal with "constructive chromatics," "constructive interlacing," "constructive combination of intervals," "constructive sonority," "complementary constructions," "constructive determination," with the "principles, the presuppositions of musical theory, the consequences, and the special forms of construction." When Kirchmeyer tries to analyze the fourth variation of the second movement of the sonata for two pianos by Stravinsky (p. 493) we are fully justified to assert that the constructive arrangement of the tone material which he wants to make plausible cannot be apperceived by the listener in spite of the best training; it seems even very improbable that that was intended by the composer, while the structural elements of this musical example (quoted incompletely by Kirchmeyer) which are much more easily perceived, that is, which strike the auditory sense right away—the horizontal tones in the treble which create tonal centers, the diatonic sequence in measure 2 and 3—are not even mentioned. This example is particularly suited to show the great danger of a mathematically constructed analysis (as a parallel to adequate musical creation) which is separated from the reality of tones comprehensible to the ear. The work of music entirely surrendered to the "*logos* of the formula" loses living contact with the listener; its composer can shun all responsibility and no longer bears any obligation towards what, for the time being, is still generally understood by the concept of "musicality."

However, the absolute loss of contact of many products of modern music and the consequent isolation of the work of art from the consumer reduces, sociologically speaking, the criterion of quantity to one of quality. The work of art meaningful in the last analysis only for an individual or for a small group ceases to be an integrated constituent part of culture; it exists in the often used and abused term "ivory tower." Champions of modern music often argue that Beethoven's late string

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quartets are model examples of "ivory-tower" music. We should ask them: Would Beethoven be even mentioned today if he had produced nothing but those string quartets?

In this connection let me cite a new fact in the history of music, which has so far had little notice; popular and folk music in its various branches (folksongs, hymns, "hit" songs, entertainment music, and, to a certain degree, jazz and marches) still cling to the traditional order which the new classical music is on the point of completely ignoring. This signifies that music is split into two camps which have lost contact due to the elimination of similar tone material and of its systematic order. This situation is bound to lead to consequences which can be indicated here only in a few brief remarks.

In our accelerated pace the avant-garde of modernism considers the compositions of a Schönberg antiquated and makes tremendous efforts to contrive new possibilities for the combination of tones, even of notation, probably guided often by the desire of being sensational. If such attempts, for example, leave it to the interpreter to realize confusedly written notes into which a system of lines was inserted afterward as "music" *ad libitum,* if the meaning of instruments developed in a historical process supposed, among other things, to abstract a specific color from the totality of tones is turned completely around, if "pianists" armed with stop watch and percussion instruments preferably belabor their instruments outside the keyboard, these practices surely prove that it is justifiable to attempt to become aware of the limits of music. How much Blume hit the mark when he tried to indicate such limits is shown by the attitude of those who apparently are taken aback and feel threatened by his arguments. Their reaction, predominantly worded in the jargon of the streets—of a characteristically low level and untouched by any real knowledge of the field—was published in March, 1959, in *Melos,* German music journal. The objection often raised against Blume's analysis, that the limits of music are determined not by scholarship but rather by man in his situation, which changes with every period and with every cultural region, does not do justice to the personal freedom and responsibility of the scholar as a human being. Not only is he permitted in the name of scholarship to offer any reasonably plausible hypothesis, but he is expected in times of general uncertainty to take an elucidating stand. Blume knows, of course, that one day our descendants will say with Schloezer and Scriabine: "In those days the compositions, not the theories, molded the fact of music and determined its fate."

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