

A LIFE OF LEARNING

Milton Babbitt

Charles Homer Haskins
Lecture for 1991



American Council of Learned Societies

Professor Milton Babbitt delivered the annual Charles Homer Haskins Lecture on April 25, 1991, at the ACLS Annual Meeting in Washington, DC. It was published as ACLS Occasional Paper No. 17 in 1991. An HTML version was made available on the ACLS website in the late 1990s. This pdf document reproduces the online version and may differ slightly from the print publication.

ACLS OCCASIONAL PAPER, No. 17
ISSN 1041-536X



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by

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Introduction

Milton Babbitt, the 1991 Charles Homer Haskins Lecturer, was born in 1916 in Philadelphia. He was educated in the public schools of Jackson, Mississippi, and at New York and Princeton Universities. His primary teacher of musical composition was Roger Sessions, with whom he studied privately for three years. At present, he is William Shubael Conant Professor Emeritus at Princeton University, where his teaching career began in 1938, including three years as a member of the Mathematics faculty, from 1942–1945. He also is on the Composition Faculty of The Julliard School, and was Fromm Foundation Visiting Professor at Harvard University in 1988.

A co-founder and member of the Committee of Direction, Columbia-Princeton Electronic Music Center, since 1959, Professor Babbitt has been a Visiting Professor at the Rubin Academy at Jerusalem, the University of Wisconsin, and Composer-in-Residence at New York University. He has taught, conducted seminars, and lectured at various universities and schools of music in this country and in Austria, Australia, Canada, England, Germany (Darmstadt), and Mexico. He is a member of the American Academy of Arts and Letters, and a fellow of the American Academy of Arts and Sciences. His honors include: two New York Music Critics Circle Citations (1949, 1964); National Institute of Arts and Letters Award (1959); Brandeis University Gold Medal (1970); National Music Award (1976); Pulitzer Prize Special Citation (1982); George Peabody Medal (1983); MacArthur Fellow (1986–91); Gold Medal in Music of the American Academy-Institute of Arts and Letters; Music Award of the Mississippi Institute of Arts and Letters; and Guggenheim Fellow. He has received honorary degrees from Middlebury College, New York University, Swarthmore College, New England Conservatory, University of Glasgow, Northwestern University, Brandeis University, and Princeton University.

Professor Babbitt's articles have appeared in such periodicals as *Perspectives of New Music*, *Journal of Music Theory*, *Musical Quarterly*, and *The Score*, and in anthologies, including *Perspectives on Contemporary Music Theory*, *Perspectives on Schoenberg and Stravinsky*, *Perspectives in Musicology*, *Contemporary Composers on Contemporary Music*, *The Orchestral Composer's Point of View*, *Twentieth Century Views of Music History*, *Esthetics Contemporary*, and *Words About Music* (ed. by Dembski and Straus). His most recent compositions include: *Concerto for Piano and Orchestra*; *Transfigured Notes* (for the Philadelphia Orchestra); *The Joy of More Sextets* (for violin and piano); *Whirled Series* (for saxophone and piano), *Consortini* (for five players). The most recent recordings of his music are of *Paraphrases* (by Parnassus, on CRI); *Composition for Guitar* (by David Starobin, on Bridge); and *The Head of the Bed* on New World Records; *Groupwise*, *An Elizabethan Sextette*, and *Time Series* on CRI; *Sextets* and *The Joy of More Sextets* on New World Records and the *Widow's Lament* on Nonesuch.

The Haskins Lecture was presented on Thursday evening, April 25, at Georgetown University, as part of the 1991 ACLS Annual Meeting.

I am grateful and flattered to have had my talk this evening included under the ongoing rubric of "A Life of Learning," but in all accuracy and necessary realism I must be permitted the protective sub-rubric of "A Composer of a Certain Age," for how might a composer justify his presence before learned representatives of learned bodies, when the very term "learned" has appeared and disappeared in the history of music only in the most apologetic and fugitive of roles, in such expressions as "learned writing" or—more specifically—"learned counterpoint"; usually with the intimation of the anachronistic, the factitious, and—even—the jejune? There does appear to have been a fleeting moment or so in eighteenth century France when the term "learned" was invoked to characterize a "taste" distinguished from the "general." Apparently, compositions were deemed to be "learned" if it was thought that their understanding demanded some musical knowledge. But this elitist distinction did not, could not, survive the guillotine, and never was to be reheaded, certainly not with the subsequent and continuing triumph of what Goodman has called the Tingle-Immersion theory, which—when applied to music—demands that music be anyone's anodyne, a non-habit forming nepenthe.

I could dig even deeper historically and dare to remind you that, in the medieval curriculum, music was a member of the Quadrivium, but that curriculum, like so many demanding curricula after it, has long since

been banished. And, in any case consider the company that music kept in the Quadrivium: arithmetic, geometry, and astronomy. If that curriculum had survived, music would be burdened further with guilt by association, since—for reasons apparently more sociological than methodological—there is no characterization which guarantees music more immediate, automatic, and ultimate derogation and dismissal than “mathematical,” thereby joining “learned” and, above all, “academic.”

But it is as academics that we join here this evening. I trust it does not come as a surprise, or as an unpleasant embarrassment, or as further evidence of the Greshamization of the university, to learn that there are composers in your very midst on your faculties. Apparently there still are those who remain unaware of our presence, and even more who are unaware of the significances and causes of our presence. But there is no more consequential evidence of the intellectual, institutional reorientation of musical composition in our time and country than the fact that the overwhelming majority of our composers are university trained and/or university teachers, and that—for this and other reasons—the university has become, awarely or unawarely, directly and indirectly, the patron of and haven for not just composers, but for music in all of its serious manifestations. This state of affairs began at that crucial moment for music in this country in the mid-thirties, was interrupted by World War II, and accelerated and spread after that war.

There were isolated spots of enlightenment much earlier, but the fate of Edward MacDowell at Columbia University early in the twentieth century was a more characteristic symptom of the state of music in the academic community. MacDowell, having recently returned from musical training in Europe—the customary journey of the American composer at that time—and hardly a wild radical, either musically or otherwise, was determined to—in his own words—“teach music scientifically and technically with a view to teaching musicians who shall be competent to teach and compose.” But the new president of Columbia University, Nicholas Murray Butler, who—in this regard at least—was slightly ahead of his time, set a precedent for future administrative attitudes toward music in the university, by opposing MacDowell, proposing instead what MacDowell described as a “coeducational department store” at Teachers College. Butler

triumphed; MacDowell resigned.

That was three decades before the cataclysm which carried the transformation of thinking in and about music in that sudden reversal of its former path between Europe and this country and, not entirely coincidentally, carried me to the chief port-of-call at the end of that journey, making my musical, academic life chronologically co-extensive with that decisively new musical era and the subsequent, almost immediate change in the role of the composer in academic society.

For I, in very early 1934, transferred to New York University's Washington Square College because of a book, a book that by current standards would appear to be a modest makeshift of a book, but it was the first book written in this country on twentieth century music, and indeed—it was entitled *Twentieth Century Music*. The author was Marion Bauer, an American composer born in Walla-Walla who had studied in France and returned to teach here and—it must be admitted—to collect and assemble snippets of musical journalism and other trifles into a book. But that book, published in 1933, displayed tantalizing musical examples from Schoenberg's *Erwartung* and *Pierrot Lunaire*, Krenek's piano music, late Scriabin, Casella, and other music little or never performed in this country, and difficult to obtain for study. In the book, unknown names were dropped in droves. And so a young Mississippian, whose curiosity and appetite for contemporary music had been aroused by summer visits to his mother's home city of Philadelphia, decided that if the works discussed by Marion Bauer were, as she strongly suggested, music to be reckoned with, then music's day of reckoning must be at hand, and he wished to be there.

There were other stimulations at the Washington Square College by 1934 beyond Marion Bauer's enthusiasms and the music itself; there were Sidney Hook, William Troy, and the early James Burnham. Burnham and Wheelright's *Philosophical Analysis* had just appeared, and the periodical *Symposium* was being published. But, overshadowing all of that for a young composer/student, just a bit over three months before I arrived in New York, Arnold Schoenberg had arrived, from Berlin, by way of Paris, to teach in Boston, but soon to live in New York. Schoenberg was one of the first to do many things,

including landing on these shores, but soon to be followed by Krenek, Hindemith, Stravinsky Milhaud, Bartok, and others less celebrated—Rathaus, Schloss, Pisk, Wolpe—yet all of whom had contributed to that intricately tessellated territory which contemporary music had become over the preceding quarter of a century. They were not all at or straining at the various and varied musical frontiers; there were even—among them—prelapsarians (Hugo Kauder, for instance) who believed that contemporary music had gone wrong when it had gone anywhere. But almost all of these composers became college and university teachers, whereas in Europe they had taught, if at all, only in conservatories. And just that suddenly and summarily the complexly convoluted path of contemporary musical creation crossed the ocean and critically transformed our musical environment at a crucial moment in music. The once musical innocents abroad now became the hosts to and custodians of a host of traditions, old and new. There were, on both sides of the engagement, the unavoidable shocks of new cognitions, the awareness of the effects of deeply different informal and formal conditioning: the European musicians had heard and been shaped by what we could not hear, but had not learned in their vocational schools what we had in our universities, both in music and beyond.

When I graduated from college in 1935, I chose to remain in New York, and to study composition privately with Roger Sessions, who, though a product of American universities, had returned only recently to this country after some eight years in Europe. His compositions, here regarded as complex and—even—forbidding, were actually a skilled and sophisticated but highly personal product of European compositional attitudes and thought. He had written about both Schoenberg and Schenker, who are to concern me here and already concerned me then, and also of European “music in crisis,” a crisis which he hoped to see and hear resolved in this country. Soon thereafter, Sessions began teaching at Princeton University, where I joined him on the faculty in 1938. But even during those three years of intensive private study with him, the powerful presence of Arnold Schoenberg, or to be more accurate, of Schoenberg’s music affected, even directed me, as it did many others, some in very different directions, for all that the music still was seldom heard, and Schoenberg himself had emigrated across the continent to California.

When Schoenberg had arrived in New York, he embodied—far more than any other composer—within his creative achievement the revolutionary road which music had taken. It is too easy to say, albeit with some slight accuracy, that he was a reluctant revolutionary, a revolutionary in spite of himself, but not—surely—in spite of his music. The designation “revolutionary” may smack of hyperbole, even of hype; it may suggest music’s presuming to reflect the glamour of such entrenched expressions as “the revolution in physics,” “the revolution in philosophy,” but while eager to avoid any intimation of that undisciplined, interdisciplinary diletantism which has so bedeviled music, I can find no evidence that any other field has undergone more fundamental and pervasive a conceptual transformation so affecting the field’s practitioners’ relation to their field, or to the world outside the practice. There are even those who locate the first shot of the revolution as the last movement of Schoenberg’s *Second String Quartet of 1908*, and even suggest that Schoenberg himself did, in the words of the soprano in that movement: “I feel the air of another planet,” for all that the words were those of Stefan George. After all, Schoenberg selected them.

The works that followed, many of them now familiar, include the *Five Pieces for Orchestra*, *Erwartung*, *Pierrot Lunaire*, and they and a few yet to follow soon were termed “atonal,” by I know not whom, and I prefer not to know, for in no sense does the term make sense. Not only does the music employ “tones;” but it employs precisely the same “tones,” the same physical materials, that music had employed for some two centuries. In all generosity, “atonal” may have been intended as a mildly analytically derived term to suggest “atonic” or to signify “a-triadic tonality,” but, even so there were infinitely many things the music was not; what it was is better described by such terms as “automorphic,” “contextual,” “self-referential,” and others, all agreeing on a characterization of the music so context dependent as to be highly sensitive to its statement of its initial conditions, and defining its modes of relation and progression within itself, that is, within each composition. Later, Schoenberg described his procedures of that period as “composing with tones” and “composing with the tones of a motive,” which are not equivalent characterizations, the first suggesting as a referential norm a pitch class collection, the second a registral and

temporal instantiation of such a collection, but both confirmed the notion of the highly autonomous nature of the individual compositions' structure, and both placed the composer in the position that an idea for a piece was, necessarily, the idea of a piece.

Almost immediately after the appearance of Schoenberg's *Second Quartet*, his Viennese students Webern and Berg created works sharing only the property of being comparably self-contained, and soon compositions by those not of this inner circle began to appear. The "paradigm shift" was on. I dare to employ this expression, not to give my once colleague Tom Kuhn an unneeded plug, or to demonstrate that music is or was "with it," but because the concept is, at least, suggestive in describing the subtle effect of Schoenberg's new music. Almost immediately, there was the attempt to patch the old paradigm by attempting to describe, to "understand" the new, unfamiliar in terms of the old, familiar. But the result was only to create a picture of an incoherent, unsatisfactory familiar, inducing the normative conclusion either that this music was "nonsense," or required a different construal. Here we are talking of discourse about the music, a theory in some sense, and I intend to return to some of the senses of music theory. But for a time, neither the music nor the observations of the music had any other widespread effect than that of puzzled wonderment or bitter antagonism. There appears to have been little or no effect on composers in this country, but Schoenberg himself was critically affected by this music, his music, which still remains in many respects fascinatingly refractory. For, at about the age of forty, this composer not only of those "problematical" but of such "traditional" early works as *Verklärte Nacht*, *Gurrelieder*, and *Pelleas und Melisande* suffered nearly a decade during which no considerable work was completed. Later, he said of those works immediately preceding that hiatus, that he felt that he (and Webern and Berg) could not produce, by those compositional means, works of "sufficient length or complexity." The term "complexity" is a particularly startling one here, if one thinks in terms of quantitative complexity, for surely, few works have as many notes per square inch or elapsed second as the fourth and fifth of his *Five Orchestral Pieces*, only for example. It is clear that he was referring to that kind of structural complexity, that relational richness which tonal music manifested in its capacity for successive subsumption, cumulative containment which musical memory demands

if a work eventually is to be apprehended, entified as a unified totality, as an “all of a piece of music.” One must infer that Schoenberg failed to find such structural “complexity,” such a realization of his version of musical concinnity in compositions which, for all of their fresh and fascinating local linkages, novel rhythmic and instrumental modes, associative harmonic structures, could not achieve such a realized unity. For a silent decade, then, he proceeded to pursue, not by word, but by musical deed, a new synthesis, a truly new conception of musical structure.

At this point, perhaps I should confess that—whereas I was contracted to offer an aspect of my autobiography here this evening I appear to be presenting Schoenberg’s biography. But I am offering my highly autobiographical version of his biography, and without at least such a brief overview of those unprecedented developments, my own activity would appear and sound *in vacuo* in a quarantined region.

What Schoenberg’s works, beginning in the mid-nineteen twenties, and Webern’s and Berg’s soon thereafter, instantiated was a conception of musical structure which altered fundamentally the hierarchical positions of the primitive musical dimensions, beginning with the primary realization that music proceeds in time, an observation made by even so non-professional a musical analyst as T S. Eliot. The works that displayed such features of organization were commonly, all too commonly, termed “twelve tone,” or “compositions in the twelve tone system.” Schoenberg particularly objected to the term “system” since it connoted for him, with his rather special view of the English language, imperatives and prescriptives, as would be associated with such expressions as a “system” for winning, or losing, at roulette. And he did describe the conception far better himself as “composing with twelve tones related only to one another,” or, as amended and extended by picky Americans: “composing with pitch classes related to one another only by the series of which they are members.” Observe that the autonomous, inceptually context dependent features of those co-called “atonal” works are preserved, but the shared characteristics are now embodied in the word “series,” thus serial. For this shared mode of pitch class formation is indeed a serial relation: irreflexive, asymmetric, and transitive, and its compositional interpretation is usually and primarily, although not exclusively, temporal. Our colleague Leibnitz

once asserted that “time is order”; from this I promise not to commit the illicit derivation that “order is time,” but most often it is so interpreted in the twelve tone case, but music also presents order in space, and it is in these representations of the series, transformed by interval preserving operations, that the new communality resides, for Schoenberg was passionately attempting to restore a common practice, but a new common practice, in order to regain, for the composer and the listener, that interplay of the communal and the proprium, of the shared and the singular, with the attendant consequences of contingency and dependency of progression susceptible to inter-compositional regularity.

When Schoenberg arrived in New York, his name was far better known than his music, because we had no opportunity to hear his later works, and we were able to study only a few of his later scores, one of which, a piano work written just two years before his arrival here, had just been published, not in Austria, but in California, by the New Music Edition. It was customary for this publication to include a biographical and program note with each work, but in the case of Schoenberg’s composition the editor wrote: “Arnold Schoenberg has requested that we do not publish either biographical notes or musical explanations concerning his work, since both he and his musical viewpoint are well known”. Although Schoenberg remained in New York only a few months, that was certainly sufficient time for him to discover that what was well known as “his viewpoint” was derived not from a knowledge of his music or even his words, but from misapprehensions derived from a tradition of absurdities, originated and propagated by newspapers, magazines, and textbooks. The few of you who can recall and the more of you who are aware, I hope, of the climate of those times, the mid-thirties, will not be surprised to learn of the grotesque ideological turns taken by discussions of the so-called “twelve tone system” by concerned observers. “Was it or was it not ‘democratic’?” After all, since all twelve pitch classes were permitted and included in the series, the referential norm of such a work, the self-declared champions announced that, therefore, “all the notes were created free and equal,” “one note, one vote”; but there were those who demurred and declared the music, the “system” fascistic, since it imposed an “order,” and each work imposed “a new order” upon the pitch classes. This latter compares well in intellectual sophistication with

that pronouncement of a celebrated French intellectual that language is fascistic, because it contains “subjects,” “subordinate clauses,” and the like; and for those of you concerned with cultural lag, a Dutch composer recently revealed that serialism is socialistic, on the basis of the same old equivocation. It is a particularly distasteful reminder that in those countries which proclaimed themselves “socialist,” music which they labelled—accurately or otherwise—serial, atonal, or twelve tone was denounced and banned as “bourgeois modernism,” “imperialist formalism,” or . . . “degenerate Jewish music.” And those concerned with vocational lag might care to know that the more serious, or—at least—more pretentious misunderstandings and misrepresentations, offered in the form of putative “rules,” prescriptives, permissives, often accompanied by that most decisive term of dismissal, “mathematical” (“twelve tone” contains that recondite mathematical term “twelve,” for all that these twelve “tones” are the same ones which had been employed by composers since the time of Bach) persist until today in otherwise conscientious periodicals whose primary fields are literary, or political, or cultural. My concern is less that such misleading assertions have been and are being made than that they reflect how some apparently attempt to hear this music and misguide others in their hearing, understanding, and experiencing of the music. So, if you happen to encounter a reference to “Schoenberg’s twelve tone scale,” immediately cast the offending document into the Humean flames.

Given this congeries of conditions, one could not have expected a large audience to gather in 1937 when the Kolisch String Quartet, transplanted from Europe, presented Schoenberg’s latest work in its first New York performance. In a small, noisy room in the 42nd Street Library, the remarkable *Fourth String Quartet* was played. It was an extraordinary example of the profoundly new means and innovative ways of twelve tone composition, where the range and reach of reference they made available, the richness of relatedness they made obtainable were revealed as decisively as the implications and intimations for extension to other personal realizations, to satisfy other composers’ musical dispositions. There was no issue here of replacing or displacing “tonal” music, or of teaching old notes new tricks, but of creating another music, whose compositional instances already were and were to become even more distinguished and distinct, not just on the surface, but well beneath the surface.

When I began teaching at Princeton in 1938 there was little academic or pedagogical reason to flaunt my dodecaphonic involvement. The music department was new, and—strictly speaking—was not even a department but a section of the art and architecture department, and I did not wish to burden its beleaguered chairman with the presence of one who would have been certain to be viewed as a musical recusant, particularly by those many members of the academic community and their wives who made no effort to mute their claim to musical authority. Even so, the time came when I gave them occasion to give vent to their offended aesthetic. An innocent little String Trio of mine was performed on a concert sponsored by the section of music. Well, not exactly performed: it was a three-movement work, and the three members of a fairly well-known string quartet, also recently transplanted and no true believers in the abilities of an unknown American composer, decided—first—not to play the first movement, and—second—not to play the third movement, leaving a lonely little slow movement. But such were the times and place that the modest movement created some embarrassment for my chairman, who now was revealed as harboring a no longer latent musical anarchist. So, in an attempt to demonstrate my possession of other than deviant capacities, I wrote a post-Regerian work for *a cappella* chorus, entitled *Music for the Mass*, a setting of sections of the ordinary of the Latin mass, which may explain partially why, in a recent volume entitled *Serenading the American Eagle*, the author refers to that work as *Music for the Masses*, in pursuance of his thesis that in those times, no one—not even I—was above or below pursuing proletarian politics, and this when I was attempting merely to be academically politic. And *Music for the Mass* was awarded a prize by what would have been considered a very conservatively inclined Columbia University panel, long after MacDowell.

In my few years of teaching between my beginnings and the considerable interruption by World War II, instructing in one musical syntax and composing in yet another one was less schizophrenic than beneficially—dare I say it—symbiotic. The necessary examination and self-examination attending a venture into a new and largely untested domain, where still few composers had ventured, induced reconsiderations of aspects of music and their associated terminological

categories as they had figured in traditional music and theory, where terms had been allowed glibly and uncritically to slip through and slide about in a swamp of ambiguity. For instance: “register”; “pitch class and pitch member of such a class”; properties which had been treated as independent primitives proved to be derivable, and the compositional and perceptual susceptibilities to structuring of the four notationally independent musical dimensions: pitch, temporal, dynamic, timbral, each subject to different scalings, one of the unique and rich resources of fully conceived musical composition demanded thorough re-examination.

And there was another powerful influence on our thinking, our rethinking about the music of the past, an influence which landed and settled in this country at about the same time as Schoenberg’s, further affirming the United States as a musical melting and even melding pot at an unprecedented level of both theoreticity and musical actuality. I can best broach the subject anecdotally. The pianist and composer, Eduard Steuermann, who had been closely associated with Schoenberg in Europe as the pianist in many of the first performances of his music, settled in New York in 1939 and soon became a valuable friend. One evening, with that characteristic timidity whenever he spoke of his new country, he finally dared to say to me: “This is surely a strangely remarkable country. Back in Vienna there was this funny little man who haunted the back streets exposing his analytical graphs, which no one understood. Webern said he understood them, but everyone knew that Webern didn’t. Now, here he is a household name.” The “funny little man” was Heinrich Schenker, and the not entirely objective, mildly depreciatory characterization of him reflected the disjunction between the musical worlds inhabited by Steuermann, and those by Schenker and his students and disciples. That Schenker was a “household name” in this country was an exaggeration, but in some New York music circles he had become already an exalted name, as in Schoenberg’s case, known far more by name than by the content of his accomplishment. His writings, covering some three decades of evolving activity, were as little understood and as difficult to obtain as Schoenberg’s music, and all were only in German, but he—too—soon was represented here by those who knew his work by having studied with him or with his pupils. The ideological antagonisms that separated the composers of the Schoenberg circle from the theorists of the

Schenker circle were not imported to this country. For example, Roger Sessions, who was surely a contemporary composer, wrote a searching article on Schenker, as well as on the more speculative writings of the composers Krenek and Hindemith, and all of the articles appeared in a magazine named *Modern Music*, for all that for Schenker, music (or, at least or at best, great music) ended with Brahms, and he had dedicated his early, but already penetrating analysis of the Beethoven *Ninth Symphony* to “the last master of German composition,” which meant—for Schenker—all composition, and that last master composer was Brahms. Schenker never altered this judgment, for all that he lived and worked for another twenty-three years. I have lived to see Schenker’s analytical method change its status from the heretic to the nearly hieratic, from the revolutionary to the received. Here the notion of a paradigm shift is pertinent, for Schenker analysis has largely displaced, replaced, and subsumed analytical theories of the past. From Steuermann’s reference to a “graph” one might assume mistakenly some quasi-mathematical procedure, but it was nothing of the sort; it was an explanatory theory, the tracing of the pitch progression of a total work through successively more extensive and imbedded, but generatively parallel, structural levels. For me, it was, and is, among other of its achievements, the most powerful hypothesis as to the performance of musical memory, how an appropriately equipped listener perceives, conceptualizes a triadically tonal work. Previous theories, which had been the basis of compositional instruction from the time of Bach, have consisted mainly in the form of rules abstracted from past practice in the small, in the very local, often with the added fillip of compounding generality with causality. Then would come that enormous leap to those few context-free patterns of dimensionally synchronous repetitions which were taken normatively to define musical “form.” There was no such abruptness from the detail to the global in Schenker’s analytical theory. Its manifest explanatory scope and repleteness; its entailing of compositional constancies that were not revealed by other theories; its providing a framework for yet further insights not explicitly discerned by the theory; all these attributes made its eventual influence irresistible. Never before had there been even such an attempt, and therefore no such achievement. The later and continuing mountain of literature, mainly in this country, spawned by Schenker’s thought includes its

applications to other compositions, its further methodological explication and refinement, revisionism, demurrers, concerns with a concealed derivation of the “should” from the “was” as post diction become dictum, as Schenker concentrated his analyses upon the few composers who constituted his pantheon, in yet but another instance of the Viennese “genius mystique.” His evaluatives never are coherently stated or even clearly inferrable, nor are the bases from which he derived the prediction that no further great music could be written, with which he dismissed even the aspirations of those who shared his ideological appetites.

Although today there is scarcely an elementary text which does not attempt to pay lip service, at least, to Schenker analysis (a method largely unknown half a century ago), the first generation of Schenker specialists entered the academic mainstream only slowly and against more opposition than did the composers from abroad. I was in the happy position of meeting and learning from Oswald Jonas, who was a private student of Schenker and the author of the first book expounding his method, and Ernst Oster, Jonas’s student and subsequently underground guru for many celebrated virtuosi who wished to conceal their intellectual aspirations. I remained close to both Jonas and Oster until their deaths, by never discussing music written after 1897.

This chronological disjunction between the music with which Schenker analysis was concerned, and the music (and soon, the musics) of post-1909 Schoenberg and others to follow did not conceal Schenker and Schoenberg’s cultural affinities. They both sought ties to bind them to the past by convincing themselves that they only minimally mutilated that past: Schenker by invoking the theories of the eighteenth century as his true predecessors, and Schoenberg by identifying himself with tradition by identifying tradition with himself. After all, Schenker and Schoenberg were both of Vienna, of a sort, in a competitive embrace with its past. So, when Schenker, in 1926, wrote to Hindemith: “You would do better to have the courage to declare that contemporary music is wholly new, rather than attempt to anchor it in the past,” this may have been self-serving, serving the covertly predictive aspect of his theory, but it is not without its sense and value, particularly if one understands “wholly new” as conceptually new. Yet, when we were

composing “new music” in the fifties while studying and teaching the music of the past, with a considerable component of Schenkerian thought in that teaching, we found, just as our thinking in the music of the present affected our thinking about the music of the past, so did our obligatory thinking about the music of the past deeply affect our thinking in our music of the present. While construing the structure of a total, tonal work as the ever-expanding and subsuming manifestation of parallel processes—just a few such processes which had been adumbrated in the often routine instruction of the eighteenth century—we were aware that such processes had operated only in the pitch dimension. The serial principle of formation, interpreted as order in time, ultimately suggested not just such intra-dimensional parallelism but interdimensional parallelism, with the realization that the temporal domain was (and always had been) susceptible to interval scaling, almost precisely analogous with the pitch domain. There were other, many other, leaps across the systematic boundaries, in the ways of translating means of compounding the retrospective and the proleptic in the course of a work, reinforcing and reflecting the epistemological condition of acquiring knowledge of a composition as it unfolds in time. Musical structure, necessarily, is in the musical memory of the beholder. The listener for whom the present event erases the memory of the past events creates for himself in a genuinely epistemic, non-journalistic sense, random music, music without inter-event influences.

In the fifties discussions of these matters, these awarenesses, even these urgencies (for composers facing new and puzzling choices) took place privately, within a few classrooms, from a rare podium. There was not a single medium of printed professional communication for composers and theorists. My first article on twelve tone serialism, containing necessarily only brief discussions of such even then familiar, now “old-fashioned” concepts as combinatoriality, derivation, and generalized aggregates which I had developed during those war years and which had and have shaped my composition since that time, could not be published until 1955, and then only in Britain, footnoted for Britain, in a short-lived British periodical. But in 1957 the *Yale Journal of Music Theory* was founded, and within a few years was edited by Allen Forte, whose own writings (I note, I hope significantly) were strongly influenced by Schenker’s writings and by Schoenberg’s music. So, by the time only a few years later when *Perspectives of New*

Music began publication, the word gates were open; articles came out of the closets; responsible, informed thinking and writing about music changed the climate of non-popular musical society. A few years ago I addressed the annual meeting of the Society for Music Theory (now a great, flourishing society) and I thanked the assembled theorists for, among their many substantial accomplishments and therapeutic achievements, having made it possible for me to stop passing as a part-time theorist, and to return to my full-time vocation as a part-time composer. This was a self-protective, as well as grateful gesture, for the profession of theorist, replacing that of those teachers of theory who enforced rules and regulations from self-replicating textbooks, has become not just academically installed but musically influential. We are now, for the first time, in that state familiar to most of the rest of you. Publication of words has so proliferated that we not only cannot read everything that is relevant, but cannot even determine what we most profitably might read, even just as voraciously selfish composers. Writing on music is by no means confined to Schenkerian or serial issues. On the contrary, as one might expect of an essentially new—or young—field, there were successive attempts to seek guidance from other fields. Information theory, structural linguistics, machine intelligence, connectionism, philosophy of science, many of the fast changes of literary criticism, all were tapped for aid. But these attempts, even when stimulating, served primarily to reveal the limitations and even incongruities of such theories and techniques, designed for other functions, in attempting to capture the multi-dimensional ramifications of musical relations.

Although Schenker and Schoenberg were aware of each other's presence in Vienna, neither appears to have been aware that right around the Ring there was the Vienna Circle. Its letter and spirit, also, were transported here in the thirties, and formed the third side of our Vienna triangle, not the specific technicalities but the flavour and aim as imparted by the words of Israel Scheffler: "to affirm the responsibilities of assertion, no matter what the subject matter, to grant no holidays from such responsibilities to the humanities, etc., etc." For the first time in music's history, there is discourse about music which takes few such holidays, and has suffered the consequences.

Those of us who were unworldly enough to be trapped into traffic with

unprofessional organs of communication often were badly, even permanently, burned. I was. In the fifties, while teaching during the summer at Tanglewood, I was asked to give an informal talk on Friday afternoon for those visitors who arrived early in preparation for the heady cultural events presented by the Boston Symphony over the weekend. It was suggested that I speak about the unreal world of the contemporary composer: his milieu, his problems, his modes of support (the major problem), and I did. The talk was overheard by the editor of a magazine impudently entitled *High Fidelity*. He asked me to write it for publication; I resisted, he insisted, I capitulated, coward that I was and still am. My title for the article was “The Composer as Specialist,” not thereby identifying that role of the composer in which he necessarily revelled, but in which, necessarily, he found himself. The editor, without my knowledge and—therefore—my consent or assent, replaced my title by the more “provocative” one: “Who Cares if You Listen?” a title which reflects little of the letter and nothing of the spirit of the article. For all that the true source of that offensively vulgar title has been revealed many times, in many ways, even — eventually—by the offending journal itself, I still am far more likely to be known as the author of “Who Cares if You Listen?” than as the composer of music to which you may or may not care to listen. And, for all that the article, after many anthology appearances as “Who Cares if You Listen?” finally has been anthologized in English and German under my title, as recently as last week the attribution to me of “Who Cares if You Listen?” appeared in the nation’s most self-important newspaper.

In my life, the learning process was never so demanding and edifying as during my years as the master of my music’s fate, in the Columbia-Princeton Electronic Music Center, and although they did not begin until 1959, when the Rockefeller Foundation placed its substantive blessing upon us, I had cast longing eyes and ears toward the electronic medium some twenty years earlier, when I attempted to work in the medium of the handwritten soundtrack, which had been developed in the twenties in Europe—mainly in Germany—as the result of an awareness that originated with recording itself: that, unless you are a firm believer in musical ghosts in the talking machine, whatever was recorded of musical instruments, the voice, or any source of sound could be implanted on the disc, or on film, without

such acoustical sources. This was accomplished on film by a mixture of drawing and photography; all that was missing were composers who needed the medium sufficiently to apply themselves to mastering a new, refractory instrument. But for most composers it appeared to be only an almost unbelievable possibility, technologically mysterious while providing resources which did not yet correspond to needs. So, the technology did not effect a revolution in music; the revolution in musical thought was yet to demand the technological means.

My short, and not particularly happy life with the handwritten soundtrack ended with World War II. Although that war enforced compositional abstinence upon me, I was able to think myself through a new compositional phase, a series of musical *Gedanken Experimente* centered about the remarkable isomorphism—not just formal but empirical and experimental—between the temporal and pitch domains. These necessarily carried me beyond the imagined composition to the imagined performance, to— at that time—the impossible performance. For the production of pitch by the performer is a very different act from the production of successive durations, successive temporal intervals. The mental imagery involved in “measuring” a duration has subverted too many performances of rhythmically complex contemporary works, as contrasted with the semi-automatic means of pitch production by pressing a key, or covering a hole, or depressing a valve. So, when I, as a member of the mathematics department at Princeton during a part of the war-time period, was privy to John von Neumann’s first semi-public thoughts on the computer world to come, with its emphasis on “intelligence amplification,” it was not stretching a point to imagine ahead to a performer of amplified intelligence in the computer, even if it reduced only to mechanical amplification, as the temporal world of the computer already was far ahead of any values one could imagine would be needed or used in music.

But immediately after the war, the computer was not yet ready for the task of controlled sound production. What was available was the tape machine. Although this was basically a storage medium closely akin to the handwritten soundtrack, it was much more easily manipulable sound from electronic and other sources could be stored on the tape which could be spliced into segments, and those segments represented precisely measurable temporal durations. For all that, the medium was

only too susceptible to trivial tricks with sounds and words, as the early motion picture revelled in automobiles racing backward as fast as forward, divers leaping out of the water onto the diving board, and on and on; but there were soon works on tape by knowing composers, works that reflected musical needs that could not be satisfied in any other way. One of these needs, I must emphasize, was not the desire merely to produce “new sounds.” However unsatisfactory were and are many aspects of, for example, symphony orchestra performance—above all, those “practicalities” which make it impossible for an important part of the contemporary orchestral repertory to be performed by American orchestras—no composer was dissatisfied with the sheer sound of the orchestra. Nor did composers turn to those technically demanding new media because they did not know musically what else to do; they knew precisely what they wished to do and knew that it could be done precisely only by the use of electronic media.

For me, that meant not employing the tape medium, but waiting for an instrument of greater scope, flexibility, and efficiency. I had to wait over a decade, meanwhile composing works for instruments and voices that represented for me my new beginning, and those works from the late forties and early fifties are still virtually the only ones quoted in the textbooks. In the mid-fifties, engineers at the David Sarnoff Laboratories of RCA somehow learned that there were composers who were tediously cutting up tape to create compositions which could not be realized by acoustical instruments and their performers. So, as a birthday gesture to General Sarnoff, they proceeded to demonstrate what a covey of engineers and some half million dollars in material and labour could produce. It was the Mark I Electronic Sound Synthesizer, with which they created a record of electronic emulations of standard instruments playing mainly sub-standard music. The understandable reaction of the casual listeners was similar to that of Samuel Johnson’s to the acrobatic dog. But when someone at RCA discovered that there were composers of whom even they at RCA had heard who could penetrate beyond the engineers’ concoctions to the potentials of such an artifact, RCA quietly constructed a far more elaborate, “universal” machine, the Mark II, and it was this which eventually was installed in the Columbia-Princeton Electronic Music Center in 1959, and which I employed to

produce, after four years of research with it and on it, my first electronic work and all my other electronic works.

This enormous machine, which resembled in size and even in outward appearance, the largest of the main-frame computers of its time, was nevertheless in no sense a computer; it could not crunch numbers; it had no memory (for which it probably is grateful). It was purely and entirely a sound synthesizer in the most complete possible sense. It was not and could not be employed as a performance instrument; it was a programmable device, whereby every aspect of the musical event (pitch, envelope, spectrum, loudness) and the mode of succession to the next so specified event were introduced into the machine in binary code by the operator (in my case, by me, the composer) to control the most elaborate of analog cosmos. An event could be specified at any time point, and a succession of events was simply stored on tape, eventually to be combined with any number of other so synthesized successions. The eventual music could be heard only as it issued from speakers. Any specifiable musical event or complex of events could be made to occur at any designated time. The machine, as the most passive and extensive of media, did no “composing,” not even to the extent that the performer may be said to do so even with the most completely notated of compositions. The machine has no biases with regard to degree of musical complexity, or idiom, or style—whatever those ill-defined terms may purport to suggest. Therefore, to speak of electronic music is to speak only of music produced by electronic means, the most admittant of means, and nothing more, or less. What the synthesizer provided and posed were those vast and mysterious musical resources beyond what could be produced by conventional instruments and the only human performer. The hand is never faster than the ear, but electronic instruments are capable of speeds, as well as of temporal discriminations, loudness and timbral differentiations which can far exceed any listener’s capacities. What the learned composer had to learn, and still is learning as he creates music from sonic and temporal scratch, are the limits of the new musical boundaries, the intricate abilities of the human auditor with respect to the perception and conceptualization of every musical dimension and their compounds. With the electronic medium, the role of the composer and performer became inextricably fused, and only the loudspeaker intervenes between the human composer and the human auditor, while

the composer could experience the particular pleasure of entering the studio with a composition in his head and eventually leaving the studio with a performed work in the tape in his hand. There may have been weeks, months, even years between the entrance and the exit, filled with trials, errors, and tribulations, but also with singular satisfactions.

My friends at Bell Laboratories, who wished to induce me to use the computer for musical production, insisted that I was willing to do battle with the synthesizer only because I possessed the mechanical aptitude of Thomas Edison. I certainly did not, but I may have had the patience of Job.

Logistic and ecological pressures made it necessary for me to abandon my work with the synthesizer too many years ago, and—since I was unwilling to begin again at the beginning with computer sound synthesis—I returned to exclusively non-electronic media. Of course, I had continued to write for conventional instruments and the voice during my electronic career, and I had combined the two media in a half dozen works. As I had learned much about music from my life with the synthesizer, so had I learned and continue to learn from my life with performers, and the sometimes alleged performance difficulty of my music often derives from my wish to transport the flexibilities of the electronic medium to conventional instruments and instrumental ensembles. The obstructing, inhibiting element is our traditional, inappropriate, clumsy notation which imposes the visual appearance of complexity upon easily apprehended musical phenomena. Therefore, I am multiply grateful to those performers who have overcome this, and many other obstacles to make my music heard.

As revealed this evening, my life in musical learning would appear to have begun significantly with my bright college years, but it began more importantly at the age of five in the public schools of Jackson, Mississippi, where every school day, in every one of the six grades, we received musical instruction, not with stories about Mozart the Wunderkind, or by music poured over us from a phonograph (yes Virginia, there were phonographs), but by music to be read, sung, and played, all to the end of our acquiring, at least, minimal musical literacy. Such forces of formal musical conditioning either have vanished or are being banished rapidly. For instance, I happened to have discovered

that whereas in 1974 there were some 2,200 music teachers for the 920,000 public school students of New York City, ten years later there were just 793 such teachers; and I dare not conjecture how even that number has declined in the past seven years, and in how many other cities, towns, and villages. Our young students are left to the merciless informal musical conditioning in which they and we are daily drowned and suffocated at the most critical moments in their musical maturation.

And with musical literacy so little rewarded and so lightly regarded, there is little inducement for anyone to ascend from such musical lower depths.

When I entered the academic world, it was with the hope that I, like my colleagues in other fields of creative intellection, would be permitted and—even, on occasion—encouraged to pursue the most responsibly advanced, the most informedly problematical professional ventures, and, as a teacher (particularly in a primarily arts and science university) to attempt to train professional listeners rather than amateur critics. But this task has not been reinforced by the example of many of my fellow academics, who scarcely serve as role models for musical modesty. I have documented at other times, in other places, the cavalier presumption with respect to music of a roguish gallery, including a historian of culture, a mighty computermite, a self-declared polymath, a sociologist, a linguist, a barrister, all of whom are regarded as academically respectable in some field. Time does not permit a display of these sadly laughable arrogances, and I only can hope that, did it, you would have laughed. But permit me to offer just one example which, unlike the others, does not affect expertise, only precognition. It is from Sir Ernst Gombrich, who gratuitously, without being asked, asserted, in a volume on the philosophy of Sir Karl Popper, that he was “likely to stay away (from a concert) when a modern work is announced.” What, indeed, is a modern work in this most pluralistic and fragmented of musical times? Nothing beyond the property of chronology is likely to be shared by any two works written even in the same month, or on the same day, or even by the same composer. Consequently, I am obliged to conclude that Sir Ernst must subscribe to an academic dating service, which provides him with the chronological provenance of every announced work.

I once suspected that this wealth and range of presumption was induced by the admittedly confusing and, perhaps, even confused picture that the world of contemporary music may present to the outsider, particularly the dilettante, but I was mistaken; it appears to be music itself that brings out the worst even in the best intentioned. A few years ago I was to be on a panel where I was to respond to a paper presented by an aesthete. I received the paper only a very short time before the event, and found that it dealt exclusively with visual art, with not a word about music. But there were constant references to John Stuart Mill. In desperation, I clutched at that clue, and was pleased to discover, first, this uplifting statement of intellectual probity by Mill on the occasion of an address at Saint Andrews: "It must be our aim in learning not merely to know the one thing which is to be our principal occupation as well as it can be known, but to do this and also know something of all the great subjects of human interest, taking care to know that something accurately, marking well the dividing line between what we know accurately and what we do not." Then, second, in his autobiography, this standard of behaviour is applied to music thusly as he instructs us in the fundamentals: "The octave consists only of five tones and two semitones" (a terminologically amateurish statement of a falsehood) "which can be put together in only a limited number of ways" (computably in error) "of which but a small proportion are beautiful—most of them, it seems to me, must already have been discovered." So, by applying some pre-Birkhoffian measure of beauty, Mill—in 1873—provided Gombrich with a scientific basis for extending the extension of "modern music" back to the middle of Brahms' creative life.

If we composers required any further evidence of our position in the cultural hierarchy of our time, we would need but consult that professorially peddled "culture list" which purports to compile "the shared knowledge of literate Americans" (I overlook the only slightly concealed circularity). No living composer appears on that list. Nor do such non-living composers as Schoenberg, Webern, or Berg. As for American composers, I merely point out that the list contains Will Rogers, but not Roger Sessions; Hank Aaron, but not Aaron Copland; Jimmy Carter, but not Elliott Carter; Babbitt (the title), but not . . .

The late Paul Fromm, one of the few true musical amateurs and one of the rare private benefactors of contemporary American music wrote: “I have a profound longing to live in a community where the significance of music is recognized as an integral part of cultural and intellectual life, where the sustenance and development of the music of our time is a deeply-felt responsibility.” So do I.

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