Euphony, Rhythm, and Meter

Every work of literary art is, first of all, a series of sounds out of which arises the meaning. In some literary works, this stratum of sounds is minimized in its importance; and it becomes, so to speak, diaphanous, as in most novels. But even there the phonetic stratum is a necessary precondition of the meaning. The distinction between a novel by Dreiser and a poem like Poe's "The Bells" is in this respect only quantitative and fails to justify the setting-up of two contrasting kinds of literature, fiction and poetry. In many works of art, including, of course, prose, the sound-stratum attracts attention and thus constitutes an integral part of the aesthetic effect. This is true of much ornate prose and of all verse, which, by definition, is an organization of a language's sound-system.

In analyzing these sound-effects, we have to bear in mind two principles, important but frequently ignored. We must, initially, distinguish between performance and pattern of sound. The reading aloud of a literary work of art is a performance, a realization of a pattern which adds something individual and personal and, on the other hand, may distort or even entirely ignore the pattern. Hence a real science of rhythmics and metrics cannot be based only on the study of individual recitals. A second common assumption, that sound should be analyzed in complete divorce from meaning, is also false. It follows from our general conception of the integrity of any work of art that such a divorce is false; but it follows also from the demonstration that mere sound in itself can have no or little aesthetic effect. There is no "musical" verse without some general conception of its meaning or at least its emotional tone. Even listening to a foreign language which we do not understand at all, we do not hear pure sound but impose our phonetic habits on it as well as hear, of course, the meaningful intonation given to it by the speaker or

reader. In poetry, pure sound is either a fiction or an extremely simple and elementary series of relationships such as those studied in Birkhoff's *Aesthetic Measure*,[1] which cannot possibly account for the variety and importance possessed by the sound-stratum when seen as integral to the total character of a poem.

We must first distinguish between two very different aspects of the problem: the inherent and the relational elements of sound. By the former, we mean the peculiar individuality of the sound *a* or *o*, or *l* or *p*, independent of quantity, since there cannot be more or less *a* or *p*. Inherent distinctions in quality are the basis for the effects which are usually called "musicality" or "euphony." Relational distinctions, on the other hand, are those which may become the basis of rhythm and meter: the pitch, the duration of the sounds, the stress, the frequency of recurrence, all elements permitting quantitative distinctions. Pitch is higher or lower, duration shorter or longer, stress stronger or weaker, frequency of recurrence greater or smaller. This fairly elementary distinction is important, for it isolates a whole group of linguistic phenomena: those which the Russians have called "orchestration" (*instrumentovka*) in order to stress the fact that the sound-quality is here the element which is being manipulated and exploited by the writer. The term "musicality" (or "melody") of verse should be dropped as misleading. The phenomena we are identifying are not parallel to musical "melody" at all: melody in music is, of course, determined by pitch and hence is vaguely parallel to intonation in language. There are actually considerable differences between the intonation line of a spoken sentence, with its wavering, quickly changing pitches, and a musical melody with its fixed pitches and definite intervals.[2] Nor is the term "euphony" quite sufficient since, under "orchestration," "cacophony" needs to be considered in poets like Browning or Hopkins who aim at deliberately harsh, expressive sound-effects.

Among the devices of "orchestration" we have to distinguish between sound-patterns, repetition of identical or associated sound-qualities, and the use of expressive sounds, of sound-imitation. Sound-patterns have been studied by the Russian formalists with particular ingenuity; in English, W. J. Bate has recently analyzed the elaborate sound-figures in the verse of Keats, who himself rather curiously theorized about his practice.[3]

Osip Brik [4] has classified the possible sound-figures according to the number of repeated sounds, the number of repetitions, the order in which the sounds follow each other in the repeated groups, and the position of the sounds in the rhythmical units. This last and most useful classification needs further division. One can distinguish repetitions of sounds closely placed within a single verse, of sounds which occur in the beginning of one group and at the end of another, or at the end of one line and the beginning of the next, or at the beginning of lines, or simply in final position. The next to last group is parallel to the stylistic figure of anaphora. The last will include such a common phenomenon as rhyme. According to this classification, rhyme appears as only one example of sound-repetition and should not be studied to the exclusion of such analogous phenomena as alliteration and assonance.

We should not forget that these sound-figures will vary in their effect from language to language, that each language has its own system of phonemes and hence of oppositions and parallels of vowels or affinities of consonants, and finally, that even such sound-effects are scarcely divorceable from the general meaning-tone of a poem or line. The Romantic and Symbolistic attempt to identify poetry with song and music is little more than a metaphor, since poetry cannot compete with music in the variety, clarity, and patterning of pure sounds.[5] Meanings, context, and "tone" are needed to turn linguistic sounds into artistic facts.

This can be demonstrated clearly through a study of rhyme. Rhyme is an extremely complex phenomenon. It has its mere euphonious function as a repetition (or near-repetition) of sounds. The rhyming of vowels is, as Henry Lanz has shown in his *Physical Basis of Rime*,[6] determined by a recurrence of their overtones. But, though this sound-side may be basic, it is obviously only one aspect of rhyme. Aesthetically far more important is its metrical function signaling the conclusion of a line of verse, or as the organizer, sometimes the sole organizer, of stanzaic patterns. But, most importantly, rhyme has meaning and is thus deeply involved in the whole character of a work of poetry. Words are brought together by rhyme, linked up or contrasted. Several aspects of this semantic function of rhyme

can be distinguished. We may ask what is the semantic function of the syllables which rhyme, whether rhyme is in the suffix (character: register), in the roots (drink: think), or in both (passion: fashion). We may ask from what semantic sphere rhyme-words are selected: whether, for example, they belong to one or several linguistic categories (parts of speech, different cases) or groups of objects. We might want to know what is the semantic relation between the words linked by rhyme, whether they belong to the same semantic context as do many of the common doubles (heart: part, tears: fears) or whether they surprise precisely by the association and juxtaposition of completely divergent semantic spheres. In a brilliant paper [7] W. K. Wimsatt has studied these effects in Pope and Byron, who aim at the shock of confronting "Queens" and "screens," "elope" and "Pope," or "mahogany" and "philogyny." Finally one can distinguish the degree to which rhyme is implicated in the total context of a poem, how far rhyme-words seem mere fillers or, at the opposite extreme, whether we could conjecture the meaning of a poem or stanza only from its rhyme-words. Rhymes may constitute the skeleton of a stanza or they may be minimized so much that one scarcely notices their presence (as in Browning's "Last Duchess").

Rhyme can be studied, as H. C. Wyld has done, [8] as linguistic evidence for the history of pronunciation (Pope rhymed "join" and "shine"); but for literary purposes we must bear in mind that standards of "exactness" have varied considerably with different poetic schools and, of course, in different nations. In English, where masculine rhyme prevails, feminine rhymes have usually burlesque or comic effects, while in Medieval Latin, in Italian or Polish, feminine rhymes will be obligatory in the most serious contexts. In English, we have the special problem of the eye-rhyme, the rhyming of homonyms which is a form of punning, the wide diversity of standard pronunciations in different ages and places, the idiosyncrasies of individual poets, all problems which have hitherto been scarcely raised. There is nothing in English to compare with Viktor Zhirmunsky's book on rhyme, [9] which classifies the effects of rhyme in even greater detail than this sketch and gives its history in Russia and in the main European countries.

From these sound-patterns where the repetition of a vowel or consonant-quality (as in alliteration) is decisive, we must distinguish the different problem of sound-imitation. Sound-imitation has attracted a great deal of attention, both because some of the most well-known virtuoso passages in poetry aim at such imitation and because the problem is closely connected with the older mystical conception which assumes that sound must in some way correspond with things signified. It is sufficient to think of some passages in Pope or Southey or to remember how the seventeenth century thought of actually intoning the music of the universe (e.g., Harsdörfer in Germany [10]). The view that a word "correctly" represents the thing or action has been generally abandoned: modern linguistics is inclined to grant, at the most, a special class of words, called "onomatopoeic," which are, in some respects, outside the usual sound-system of a language and which definitely attempt to imitate heard sounds (cuckoo, buzz, bang, miaw). It can be easily shown that identical sound-combinations may have completely different meanings in different languages (e.g., *Rock* in German means "jacket," in English, a large stone; *rok* in Russian means "fate," in Czech, "year"); or that certain sounds in nature are very differently represented in different languages (e.g., "ring," *sonner, läuten, zvonit*). It can be shown, as John Crowe Ransom has amusingly done, that the sound-effect of a line like "the murmuring of innumerable bees" is really dependent on the meaning. If we make only a slight phonetic change to "murdering of innumerable beeves" we destroy the imitative effect completely.

Still, it seems that the problem has been unduly minimized by modern linguists and is too easily dismissed by modern critics like Richards and Ransom.[11] One must distinguish between three different degrees. First there is the actual imitation of physical sounds, which is undeniably successful in cases like "cuckoo," though it may, of course, vary according to the linguistic system of a speaker. Such sound-imitation must be differentiated from elaborate sound-painting, the reproduction of natural sounds through speech-sounds in a context where words, in themselves quite devoid of onomatopoeic effects, will be drawn into a sound pattern like "innumerable" in the quotation from Tennyson or many words in passages in Homer and Virgil. Finally, there is

the important level of sound-symbolism or sound-metaphor, which in each language has its established conventions and patterns. Maurice Grammont has made the most elaborate and ingenious study of French verse [12] in regard to expressiveness. He has classified all French consonants and vowels and studied their expressive effects in different poets. Clear vowels, for example, can express smallness, rapidity, *élan*, grace, and the like.

While the study of Grammont is open to the charge of mere subjectivity, there is still, within a given linguistic system, something like a "physiognomy" of words, a sound-symbolism far more pervasive than mere onomatopoeia. There is no doubt that synaesthetic combinations and associations permeate all languages and that these correspondences have been, quite rightly, exploited and elaborated by the poets. A poem such as Rimbaud's well-known "Les Voyelles," which gives a one-to-one relationship between individual vowels and colors, though based on a widespread tradition,[13] may be purely wilful; but the fundamental associations between high vowels (*e* and *i*) and thin, quick, clear, and bright objects and, again, between low vowels (*o* and *u*) and clumsy, slow, dull, and dark objects can be proved by acoustic experiments.[14] The work of Carl Stumpf and Wolfgang Köhler shows also that consonants can be divided into dark (labials and velars) and bright (dentals and palatals). These are by no means mere metaphors but associations based on indubitable similarities between sound and color observable especially in the structure of the respective systems.[15] There are the general linguistic problem of "sound and meaning" [16] and the separate problem of its exploitation and organization in a work of literature. The last, especially, has been studied only very inadequately.

Rhythm and meter present problems distinct from these of "orchestration." They have been studied very widely, and a huge literature has grown up around them. The problem of rhythm is, of course, by no means specific to literature or even to language. There are the rhythms of nature and work, the rhythms of light-signals, the rhythms of music, and, in a rather metaphorical sense, the rhythms in the plastic arts. Rhythm is also a general linguistic phenomenon. We need not discuss the hundred and one theories about its actual nature.[17] For our pur-

poses, it is sufficient to distinguish between theories requiring "periodicity" as the *sine qua non* of rhythm and theories which, conceiving of rhythm more widely, include in it even non-recurrent configurations of movements. The first view definitely identifies rhythm with meter, and thus may require the rejection of the concept of "prose rhythm" as a contradiction or a mere metaphor.[18] The other and wider view is strongly supported by the researches of Sievers into individual speech rhythms and a wide variety of musical phenomena, including plainsong and much exotic music which, without periodicity, are still rhythmical. So conceived, rhythm allows us to study individual speech and the rhythm of all prose. It can easily be shown that all prose has some kind of rhythm, that even the most prosaic sentence can be scanned, that is, subdivided into groups of longs and shorts, stressed and unstressed syllables. Much was made of this fact even in the eighteenth century by a writer, Joshua Steele;[19] and there is a large literature today analyzing pages of prose. Rhythm is closely associated with "melody," the line of intonation determined by the sequence of pitches; and the term is frequently used so broadly as to include both rhythm and melody. The famous German philologist Eduard Sievers professed to distinguish personal rhythmical and intonational patterns, and Ottmar Rutz has associated these with specific physiological types of bodily posture and breathing.[20] Though attempts have been made to apply these researches to strictly literary purposes, to establish a correlation between literary styles and the types of Rutz,[21] these questions seem to us mostly outside the realm of literary scholarship.

We enter the realm of literary scholarship when we have to explain the nature of prose rhythm, the peculiarity and use of rhythmical prose, the prose of certain passages in the English Bible, in Sir Thomas Browne, and Ruskin or De Quincey, where rhythm and sometimes melody force themselves even on the unattentive reader. The exact nature of the artistic prose rhythm has caused very considerable difficulty. One well-known book, W. M. Patterson's *Rhythm of Prose*,[22] tried to account for it by a system of elaborate syncopation. George Saintsbury's very full *History of English Prose Rhythm* [23] constantly insists that prose rhythm is based on "variety," but leaves its actual nature com-

pletely undefined. If Saintsbury's "explanation" were correct there would be, of course, no rhythm at all. But Saintsbury doubtless was only stressing the danger of prose rhythm's falling into exact metrical patterns. Today, at least, we feel the frequent blank verse in Dickens as awkward and sentimental deviation.

Other investigators of prose rhythm study only one rather distinct aspect, "cadence," the concluding rhythm of sentences in the tradition of Latin oratorical prose for which Latin had exact patterns with specific names. "Cadence," especially in interrogatory and exclamatory sentences, is partly also a question of melody. The modern reader has difficulty in feeling the elaborate patterns of the Latin *cursus* when imitated in English, since English longs and shorts are not fixed with the same conventional rigidity as in the Latin system; but it has been shown that effects analogous to the Latin were widely attempted and occasionally achieved, especially in the seventeenth century.[24]

In general, the artistic rhythm of prose is best approached by keeping clearly in mind that it has to be distinguished both from the general rhythm of prose and from verse. The artistic rhythm of prose can be described as an organization of ordinary speech rhythms. It differs from ordinary prose by a greater regularity of stress distribution, which, however, must not reach an apparent isochronism (that is, a regularity of time intervals between rhythmical accents). In an ordinary sentence there are usually considerable differences of intensity and pitch, while in rhythmical prose there is a marked tendency toward a leveling of stress and pitch differences. Analyzing passages from Pushkin's "Queen of Spades," Boris Tomashevsky, one of the foremost Russian students of these questions, has shown by statistical methods [25] that the beginnings and ends of sentences tend toward greater rhythmical regularity than do the centers. The general impression of regularity and periodicity is usually strengthened by phonetic and syntactical devices: by sound-figures, by parallel clauses, antithetic balancings where the whole structure of meaning strongly supports the rhythmical pattern. There are all kinds of gradations from almost non-rhythmical prose: from chopped sentences full of accumulated stresses to rhythmical prose approaching the regularity of verse. The main transitional form

toward verse is called *verset* by the French and occurs in the English Psalms and in such writers who aim at Biblical effects as Ossian or Claudel. Every other accented syllable in the *verset* is stressed more strongly, and thus groups of two stresses are created similar to the groups in dipodic verse.

We need not enter into a detailed analysis of these devices. They clearly have a long history which has been most profoundly influenced by Latin oratorical prose.[26] In English literature, rhythmical prose climaxes in the seventeenth century with writers like Sir Thomas Browne or Jeremy Taylor. It gives way to a more simple colloquial diction in the eighteenth century, even if a new "grand style"—the style of Johnson, Gibbon, and Burke—arose toward the end of the century.[27] It was variously revived in the nineteenth century by De Quincey and Ruskin, Emerson and Melville, and again, though on different principles, by Gertrude Stein and James Joyce. In Germany, there is the rhythmical prose of Nietzsche; in Russia, there are famous passages in Gogol and Turgenev and, more recently, the "ornamental" prose of Andrey Byely.

The artistic value of rhythmical prose is still debated and debatable. In accordance with the modern preference for purity in the arts and genres, most modern readers prefer their poetry poetic and their prose prosaic. Rhythmical prose seems to be felt as a mixed form, as neither prose nor verse. But this is probably a critical prejudice of our time. A defense of rhythmical prose would presumably be the same as a defense of verse. Used well it forces us into a fuller awareness of the text; it underscores; it ties together; it builds up gradations, suggests parallelisms; it organizes speech; and organization is art.

Prosody, or metrics, is a subject which has attracted an enormous amount of labor through the centuries. Today, it might be supposed, we need do little more than survey new metrical specimens and extend such studies to the new techniques of recent poetry. Actually, the very foundations and main criteria of metrics are still uncertain; and there is an astonishing amount of loose thinking and confused or shifting terminology even in standard treatises. Saintsbury's *History of English Prosody,* which in its scale has never been surpassed or equaled, rests on completely undefined and vague theoretical foundations. In his

strange empiricism, Saintsbury is even proud of his refusal to
define or even to describe his terms. He speaks, for instance, of
longs and shorts, but cannot make up his mind whether his term
refers to distinctions in duration or stress.[28] In his *Study of
Poetry*, Bliss Perry speaks confusedly and confusingly of the
"weight" of words, "the relative loudness or pitch, by which
their meaning or importance is indicated." [29] Similar misconcep-
tions and equivocations could be easily quoted from many other
standard books. Even when correct distinctions are made, they
may be disguised under a completely contradictory terminology.
Thus T. S. Omond's elaborate history of English metrical
theories and Pallister Barkas' useful survey of recent theories [30]
must be welcomed as attempts to straighten out these confusions
though their conclusions support an unwarranted skepticism.
One must multiply these distinctions many times when we con-
sider the enormous variety of metrical theories on the Continent,
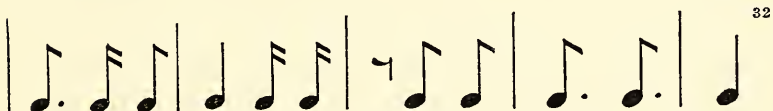especially in France, Germany, and Russia.

For our purposes it will be best to distinguish only the main
types of metrical theories without getting involved in the finer
differences or in mixed types. The oldest type can be called
"graphic" prosody and is derived from Renaissance handbooks.
It works with graphic signs of longs and shorts, which in English
usually are meant to represent the stressed and unstressed syl-
lables. Graphic prosodists usually attempt to draw up metrical
schemes or patterns which the poet is assumed to observe exactly.
We all have learned their terminology in school, have heard of
iambs, trochees, anapaests, and spondees. These terms are still
the most widely understood and the most useful for ordinary
descriptions and discussions of metrical patterns. Yet the insuf-
ficiency of the whole system is today widely recognized. It is
obvious that the theory pays no attention to actual sound and that
its usual dogmatism is completely mistaken. Everybody today
understands that verse would be the dullest of monotones if it
really fulfilled the graphic patterns exactly. The theory lingers
mostly in classrooms and elementary textbooks. It has, however,
its merits. It concentrates frankly on metrical patterns and ig-
nores the minutiae and personal idiosyncrasies of the performer,
a difficulty which many modern systems have been unable to
avoid. Graphic metrics knows that meter is not merely a matter

of sound, that there is a metrical pattern which is thought of as implied or underlying the actual poem.

The second type is the "musical" theory, based on the assumption, correct as far as it goes, that meter in poetry is analogous to rhythm in music and thus best represented by musical notation. An early standard exposition in English is Sidney Lanier's *Science of English Verse* (1880); but the theory has been refined upon and modified by recent investigators.[31] In America, at least among teachers of English, it seems the accepted theory. According to this system, each syllable is assigned a musical note, of undesignated height. The length of the note is determined rather arbitrarily by assigning a half-note to a long syllable, a quarternote to a semi-short syllable, an eighth-note to a short syllable, and so on. Measures are counted from one accented syllable to another; and the speed of reading is indicated rather vaguely by choosing either ¾ or ⅜, or in rare cases ½ measures. With such a system it is possible to arrive at the notation of any English text, e.g., an ordinary English pentameter line like Pope's

Lo, the poor Indian whose untutored mind

can be written out as ⅜ thus

According to this theory, the distinction of iamb and trochee will be completely reinterpreted, the iamb being merely characterized by an anacrusis, which is considered extrametrical or counted with the preceding line. Even the most complex meters can be written out in such a notation by a judicious introduction of rests and the handling of longs and shorts.[33]

The theory has the merit of strongly stressing the tendency of verse toward subjectively felt isochronism, the ways in which we slow down or speed up, lengthen or shorten the reading of words, introduce pauses to equalize measures. The notation will be most successful with "singable" verse, but it seems highly in-

adequate in dealing with colloquial or oratorical types of verse and is usually helpless when it has to deal with free verse or any verse which is not isochronic. Some propounders of the theory simply deny that free verse is verse.[34] Musical theorists can handle ballad meter as "dipodic," or even double compound measures successfully,[35] and can account for some metrical phenomena by the introduction of the term "syncopation." In Browning's verses

> *The gray sea and the long black land*
> *And the yellow half-moon large and low*

"sea" and "black" in the first line and "half" in the second can be noted as syncopated. The merits of the musical theory are obvious: it did much to defeat the usual schoolroom dogmatism; and it allowed the handling and notation of meters unprovided for in textbooks, e.g., some of the complex meters of Swinburne, Meredith, or Browning. But the theory has serious deficiencies: it gives free reign to arbitrary individual readings; it levels out distinctions between poets and schools of poetry by reducing all verse to a few types of monotonous beats. It seems to invite or imply chant-like oral performance of all poetry. And the iso-chronism it establishes is little more than subjective, a system of sound and rest sections perceived as equalized when compared with each other.

A third metrical theory, acoustic metrics, is today widely respected. It is based on objective investigations, frequently employing scientific instruments such as the oscillograph, which allows the recording and even photographing of the actual events in the reading of poetry. The techniques of scientific sound-investigation were applied to metrics by Sievers and Saran in Germany, by Verrier, who used mostly English materials, in France, and, in America, by E. W. Scripture.[36] A brief statement of some basic results can be found in Wilbur L. Schramm's *Approaches to a Science of English Verse*.[37] Acoustical metrics has clearly established the distinct elements constituent of meter. Today, therefore, there is no excuse for confusing pitch, loudness, timbre and time, since these can be shown to correspond to the physical, measurable factors of frequency, amplitude, form, and duration of the sound-waves emitted by the speaker. We can

photograph or draw the findings of the physical instruments so clearly that we can study every minute detail of the actual events of any recitation. The oscillograph will show us with what loudness, and what time, with what changes of pitch, a given reader recited this or that line of poetry. The first line of *Paradise Lost* will appear as a figure similar to the violent oscillations on a seismograph during an earthquake.[38] This is indubitably an achievement; and many scientifically inclined people (among whom, of course, are many Americans) conclude that we cannot go beyond these findings. Yet laboratory metrics obviously ignores, and has to ignore, meaning: thus it is concluded that there is no such thing as a syllable, since there is a continuum of voice; that there is no such thing as a word, since its limits cannot appear on the oscillograph; and that there is even no melody in the strict sense, since pitch, carried only by the vowels and a few consonants, is constantly interrupted by noises. Acoustic metrics also shows that there is no strict isochronism, since the actual duration of measures varies considerably. There are no fixed "longs and shorts," at least in English, for a "short" syllable may be physically longer than a "long"; and there are even no objective distinctions of stress, for a "stressed" syllable may be actually pronounced with less intensity than an unstressed one.

But while one may acknowledge the usefulness of these results, the very foundations of this "science" are open to grave objections which greatly minimize its values for literary students. The whole assumption that the findings of the oscillograph are directly relevant to the study of metrics is mistaken. The time of verse-language is a time of expectation.[39] We expect after a certain time a rhythmical signal, but this periodicity need not be exact nor need the signal be actually strong so long as we feel it to be strong. Musical metrics is indubitably correct in saying that all these distinctions of time and stress as well as pitch are only relative and subjective. But acoustic and musical metrics share one common defect or, rather, limitation: they rely exclusively on sound, on a single or many performances of reciters. The results of acoustic and musical metrics are conclusive only for this or that particular recitation. They ignore the fact that a reciter may or may not recite correctly, that he may add elements or may distort or completely disregard the pattern.

A line like

Silent upon a peak in Darien

can be read by imposing the metrical pattern: "Sílent upón a péak ín Daríen"; or it may be read as prose: "Sílent upón a péak in Daríen"; or it may be read in various ways reconciling the metrical pattern and the prose rhythm. In hearing "sílent" we shall, as English speakers, feel the violence done to "natural" speech; in hearing "sílent" we still shall feel the "carry-over" of the metrical pattern from the preceding lines. The compromise of a "hovering accent" may be anywhere between the two extremes; but in all cases, whatever the reading, the specific performance of a reciter will be irrelevant to an analysis of the prosodic situation, which consists precisely in the tension, the "counterpoint," between the metrical pattern and the prose rhythm.

The pattern of verse is inaccessible and incomprehensible to merely acoustic or musical methods. The meaning of verse simply cannot be ignored in a theory of metrics. One of the best musical metrists, George R. Stewart, formulates, for example, that "verse can exist without meaning," that since "meter is essentially independent of meaning, we may with propriety attempt to reproduce the metrical structure of any particular line entirely apart from its meaning." [40] Verrier and Saran have formulated the dogma that we must take the viewpoint of a foreigner who listens to the verse without understanding the language.[41] But this conception, which in practice is quite untenable and is actually deserted by Stewart,[42] must result in disastrous consequences for any literary study of metrics. If we ignore meaning, we give up the concept of word and phrase and thus give up the possibility of analyzing the differences between the verse of different authors. English verse is largely determined by the counterpoint between the imposed phrasing, the rhythmical impulse, and the actual speech rhythm conditioned by phrasal divisions. But the phrasal division can be ascertained only upon familiarity with the meaning of the verse.

The Russian formalists [43] have therefore tried to put metrics on an entirely new basis. The term "foot" seems to them inadequate, since there is much verse without "feet." Isochronism, though subjectively applicable to much verse, is also limited to particular types and, furthermore, is not accessible to objective investigation. All these theories, they argue, wrongly define the fundamental unit of poetic rhythm. If we see verse merely as segments grouped around some stressed syllable (or long syllable, in quantitative systems), we shall be unable to deny that the same groupings, and even the same order of groupings, can be found in types of linguistic pronouncements not describable as poetry. The fundamental unity of rhythm is, then, not the foot but the whole line, a conclusion which follows from the general *Gestalt* theory which the Russians embrace. Feet have no independent existence; they exist only in relation to the whole verse. Each stress has its own peculiarities according to its position in the verse, that is, whether it is the first, the second, or the third, etc., foot. The organizing unity in verse varies in different languages and metrical systems. It may be "melody," that is, the sequence of pitches which, in certain free verse, may be the only mark distinguishing it from prose.[44] If we do not know from the context, or the arrangement of print which serves as a signal, that a passage of free verse is verse, we could read it as prose and indeed not distinguish it from prose. Yet it can be read as verse and, as such, will be read differently, i.e., with a different intonation. This intonation, they show in great detail, is always two-part, or dipodic; and if we eliminate it, verse ceases to be verse, becoming merely rhythmical prose.

In the study of ordinary metrical verse, the Russians apply statistical methods to the relation between the pattern and the speech rhythm. Verse is conceived as an elaborate contrapuntal pattern between the superimposed meter and the ordinary rhythm of speech, for, as they strikingly say, verse is "organized violence" committed on everyday language. They distinguish "rhythmical impulse" from pattern. Pattern is static, graphic. "Rhythmical impulse" is dynamic, progressive. We anticipate the signals which are to follow. We organize not only the time but all the other elements of the work of art. Rhythmical im-

pulse, so conceived, influences the choice of words, the syntactical structure, and hence the general meaning of a verse.

The statistical method used is very simple. In each poem or section of a poem to be analyzed, one counts the percentage of cases in which each syllable carries a stress. If, in a pentameter line, the verse should be absolutely regular, the statistics would show zero percentage on the first syllable, 100 per cent on the second, zero on the third, 100 on the fourth, etc. This could be shown graphically by drawing one line for the number of syllables and another, vertically opposed to it, for the percentages. Verse of such regularity, is of course, infrequent, for the simple reason that it is extremely monotonous. Most verse shows a counterpoint between pattern and actual fulfillment, e.g., in blank verse the number of cases of accents on the first syllable may be rather high, a well-known phenomenon described either as the "trochaic foot," or "hovering" accent, or "substitution." In a diagram, the graph may appear flattened out very considerably; but if it is still pentameter and intended as such, the graph will preserve some general tendency toward culmination points on syllables 2, 4, 6, and 8. This statistical method is, of course, no end in itself. But it has the advantage of taking account of the whole poem and thus revealing tendencies which may not be clearly marked in a few lines. It has the further advantage of exhibiting at a glance the differences between schools of poetry and authors. In Russian, the method works especially well, since each word has only a single accent (subsidiary accents are not stresses but matters of breathing), while in English good statistics would be fairly complex, taking into account the secondary accent and the many enclitic and proclitic words.

Great stress is laid by Russian metrists on the fact that different schools and different authors fulfill ideal patterns differently, that each school or sometimes author has its own metrical norm, and that it is unfair and false to judge schools and authors in the light of any one particular dogma. The history of versification appears as a constant conflict between different norms, and one extreme is very likely to be replaced by another. The Russians also stress, most usefully, the vast differences between linguistic systems of versification. The usual classification of verse systems into syllabic, accentual, and quantitative is not only insufficient

but even misleading. For instance, in Serbo-Croat and Finnish epic verse, all three principles—syllabism, quantity, and accent—play their part. Modern research has shown that the supposedly purely quantitative Latin prosody was, in practice, considerably modified by attention to accent and to the limits of words.[45]

Languages vary according to the element which is the basis of its rhythm. English is obviously determined by stress, while quantity, in English, is subordinated to accent, and the word limits also play an important rhythmical function. The rhythmical difference between a line made out of monosyllables and one entirely made out of polysyllabic words is striking. In Czech, the word limit is the basis of rhythm, which is always accompanied by obligatory stress, while quantity appears as merely an optional diversifying element. In Chinese, pitch is the main basis of rhythm, while in ancient Greek, quantity was the organizing principle, with pitch and the limits of words as optional diversifying elements.

Within the history of a specific language, though systems of versification may have been replaced by other systems, we should not speak of "progress" or condemn the older systems as mere clumsy doggerel, mere approximations to the later established systems. In Russian, a long period was dominated by syllabism, in Czech, by quantitative prosody. The study of the history of English versification from Chaucer to Surrey could be revolutionized were it realized that poets such as Lydgate, Hawes, and Skelton did not write imperfect verse but followed conventions of their own.[46] Even a reasoned defense of the much-ridiculed attempt to introduce quantitative meter into English by men of such distinction as Sidney, Spenser, and Gabriel Harvey could be attempted. Their abortive movement was at least historically important for the breaking down of the syllabic rigidity of much earlier English verse.

It is also possible to attempt a comparative history of metrics. The famous French linguist, Antoine Meillet, in his *Les Origines indoeuropéennes des mètres grecs,* compared ancient Greek and Vedic meters for the purpose of reconstructing the Indo-European metrical system;[47] and Roman Jakobson has shown that the Yugoslav epic verse is very close to this ancient pattern which combines a syllabic line with a curiously rigid quantitative

clause.[48] It is possible to distinguish and to trace the history of different types of folklore verse. The epic recitative and the "melodic" verse used in the lyric must be sharply differentiated. In every language, epic verse seems to be far more conservative, while song verse, which is most closely associated with a language's phonetic features, is liable to far greater national diversity. Even for modern verse, it is important to keep in mind the distinctions between oratorical, conversational, and "melodic" verse, distinctions ignored by most English metrists, who, under influence of the musical theory, are preoccupied with song verse.[49]

In a valuable study of nineteenth-century Russian lyrical verse,[50] Boris Eikhenbaum has attempted to analyze the role of intonation in "melodic," "singable" verse. He shows strikingly how the Russian romantic lyric has exploited tripodic measures, intonation schemes such as exclamatory and interrogatory sentences, and syntactical patterns such as parallelism; but, in our opinion, he has not established his central thesis of the forming power of intonation in "singable" verse.[51]

We may be doubtful about a good many features of the Russian theories, but one cannot deny that they have found a way out of the impasse of the laboratory on the one hand, and the mere subjectivism of the musical metrists on the other. Much is still obscure and controversial; but metrics has today restored the necessary contact with linguistics and with literary semantics. Sound and meter, we see, must be studied as elements of the totality of a work of art, not in isolation from meaning.