Larry Polansky

HIERARCHICAL TEMPORAL GESTALT PERCEPTION IN MUSIC: A "METRIC SPACE" MODEL

by

James Tenney

with Larry Polansky

York University, Toronto, August, 1978

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James Tenney

and

Larry Polansky

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I. Introduction.

For the historian, time is not the undifferentiated "continuum" of the theoretical physicist, but a structured network of moments, incidents, episodes, periods, epochs, eras, etc. -- i.e., temporal gestalt-units or "TGs") at several hierarchical levels. Similarly for the musician, a piece of music does not consist merely of an inarticulate stream of elementary sounds, but comprises a structured hierarchy of sounds, phrases, passages, sections, movements, etc. Not only do our casual descriptions and informal discussions of a piece of music generally take for granted the perceptual reality of such temporal gestalt-units; formal essays in musical analysis tend to do this too, and in both cases it is also taken for granted that the perceptual boundaries of these TGs are a matter of common experience -- i.e., that we all perceive the same gestalt-units, even when we understand or interpret or otherwise respond to them differently. The fact that there is so much common agreement has perhaps been one of the reasons why no one has ever bothered to ask certain questions as to why and how it is that these TGs are formed in perception in the first place. Now, however, with the recently accellerating expansion of the range and variety of musical styles currently in use or available to our ears, such questions take on an importance they may never have had before.

In the years that have elapsed since the early papers on gestalt perception by Wertheimer, Köhler, and others (many of these are reprinted in Ellis, 1955; but see also Köhler, 1947, and Koffka, 1935), considerable understanding of the visual perception of spatial gestalt-units has been acquired. Far less is known or has been written, however, about the perception of _temporal_ gestalt-units. It seems not to have been generally recognized, for example, that the mechanisms for determining the perceptual boundaries of a TG must be very different from those involved in the perception of a spatial gestalt. Except in memory, we cannot apprehend any but the very shortest TGs all-at-once , because our immediate sensory experience is confined to a one-dimensional "time-tunnel", through which we encounter a succession of stimulae whose sequential order is unalterable. In addition, whereas a visual gestalt-unit is defined by boundaries that divide the spatial field into two parts -- an inside and an outside, or a figure and a ground -- the boundaries of a temporal gestalt-unit divide the temporal field into _three_ parts, instead of just two -- the time before, the time during, and the time after the gestalt-unit occurs. Finally, the _shape_ of a visual gestalt-unit is determined by its own boundary, whereas the boundaries of a temporal gestalt-unit -- its beginning and its end -- can only define epoch and duration, not shape. Shape is determined, instead, by the changes in each parameter with time _within_ the TG (the analogue in the visual domain would be internal variations in brightness, color, texture, etc.).

These basic differences between spatial and temporal gestalt perception reflect the fundamental discrepancy between the _simultaneous_ nature of visual perception (or at least the "virtual" simultaneity of some sort of scanning process), on the one hand, and the _successive_ nature of auditory perception, determined by the very nature of time. They also suggest, however, that we should not be content to base our understanding of temporal gestalt perception merely on the analogies which may be drawn between the two perceptual modes.

What _are_ the mechanisms of temporal gestalt perception? How are the perceptual boundaries of a TG determined? Are the factors involved in temporal gestalt perception objective enough that we might be able to predict where those boundaries will be perceived, if we know the nature of the events or processes that will occur? Finally -- and more to the point of this paper -- can we simulate the mechanisms of temporal gestalt perception by means of a computer algorithm? The programme to be described here does this in the special case of musical perception, and I believe that it could be done in more general cases, provided only that the right parameters are chosen, and their values specified as functions of time. Moreover, the mechanisms involved are surprisingly simple -- or at least, simple mechanisms have turned out to be remarkably effective in identifying TG-boundaries that correspond to those that would be perceived "spontaneously".

The current algorithm is based on certain concepts and principles first adumbrated in the early 1960s, and gradually developed in the years since then (Tenney, 1961/64, 1969, 1971, 1975/77). As in that earlier work, I shall use the terms "element", "clang", and "sequence" to designate TGs at the first three hierarchical levels of perceptual organization. A clang consists of a unified succession of two or more elements, and a unified succession of two or more clangs constitutes a sequence. These are relative terms, but we may define an element more precisely as a TG which is not temporally divisible, in perception, into smaller parts. In my earlier writings I did not give names to TGs at levels higher than that of the sequence, although recently we have been using the terms "segment" and "section" for units at the next two higher levels. The TG at the highest level normally considered is, of course, the piece itself -- although situations are certainly conceivable where still larger gestalt-units might be of interest (e.g., the set of all pieces by a particular composer, or the series of pieces on a concert, etc.).

The model has certain limitations, in terms of the kind of music it can deal with, as well as the musical factors which it considers, and it is essential that these limitations be clearly understood, before proceding to a description of the algorithm. First of all, it can only work with monophonic music. Although in principle the same concepts and procedures should be applicable to polyphonic music, there are certain fundamental questions about how we actually hear polyphonic music which will have to be answered before it will be possible to extend the model in that direction. In addition -- and for the same reason -- the algorithm is not yet able to deal with what might be called "virtual polyphony" in the monophonic context -- that perceptual phenomenon which Bregman (1971) has called "stream segregation". Real as this phenomenon is, I think it can only be dealt with, algorithmically, by a more extended model designed for polyphonic music.

The next two limitations of the algorithm are related to each other, in that both have to do with factors which are obviously important in musical perception, but which the current algorithm does not even consider -- namely harmony (or harmonic relations between pitches or pitch-classes), and shape (pattern, motivic/thematic relations). What the algorithm is capable of doing now is done entirely without the benefit (or burden) of any consideration of either of these two factors. Thus, although it is by no means a comprehensive model of musical perception, the very fact that it does so much without taking these factors into account is significant.

Still another type of "limitation" is inherent in certain basic concepts on which the algorithm is based: for one, all higher-level TGs must contain at least two TGs at the next lower level (thus there can occur no one-element-clangs, or one-clang-sequences, etc.), and for another, no ambiguities regarding gestalt boundaries are allowed -- i.e., a terminal element might be the initial element in a clang or the final element in the preceding clang, but it cannot be both. This might seem unrealistic in a model of our perception of music, in which ambiguous or ambivalent gestalt-formations seem to occur so frequently, but I think this problem will appear less severe when the matter of varying parametric weightings is explained in detail, later on (see page 49).

Finally, the output of the programme says absolutely nothing about the musical function of the TGs it finds. It merely partitions the overall duration of the piece into its component TGs at the several hierarchical levels. Questions of function are left entirely up to us, to interpret as we will, but what the algorithm does purport to tell us is what or where the "real" gestalt-units are -- surely a prerequisite to any meaningful discussion of their musical "function".

The model is based on a fundamental hypothesis which, though very simple, involves some unfamiliar concepts and terms that will have to be explained before the hypothesis will be comprehensible. Some of these concepts were first stated -- albeit in rather "embryonic" form -- in META ≠ HODOS (1961/64), though these have evolved considerably in the intervening years. Others have emerged more recently, in the effort of organizing the more general music-theoretical ideas into algorithmic form. In the section which follows, though I will not recount the history of the development of the model, I will try to describe the conceptual transformations in the earlier ideas in a way which parallels their actual historical development.

II. The Fundamental Hypothesis of Temporal Gestalt Perception.

In Meta ≁ Hodos (1961), I designated proximity (in time) and similarity (with respect to any or all other parameters) as the two "primary factors of cohesion and segregation" involved in musical perception (or, more specifically, in clang-formation) as follows:

> "...in a collection of sound-elements, those which are simultaneous or contiguous will tend to form clangs, while relatively greater separations in time will produce segregation -- other factors being equal", and "...those which are similar (with respect to values in some parameter) will tend to form clangs, while relative dissimilarity will produce segregation -- other factors being equal."

Aside from certain other differences between these early formulations and my more recent ideas (e.g., that two or more simultaneous elements do not necessarily constitute a clang, but more likely what I would now call a "compound element" (cf. META Meta ≁ Hodos, 1975/77), several problems had to be solved before the current algorithm could be designed. First, the principles, as stated, were not "operational", but merely descriptive. That is, although they were able to tell us something about TGs whose boundaries were already determined, they could say nothing about the process by which that determination was made. They described the results of that process, but not its mechanism. Second, "similarity" was not defined in any precise way, except by reference to "values in some parameter". The assumption here, of course, was that the similarity of two elements is an inverse function of the magnitude of the interval by which they differ in some parameter. This remains a plausible assumption, though it was never made explicit -- but even such a correlation of similarity/dissimilarity with interval-magnitude does not, by itself, allow for the simultaneous consideration of more than one parameter at a time. This rather profound difficulty was implicit in the "other factors being equal" clause appended to the two statements. At the time, this qualification seemed necessary, in order to rule out cases where two or more parameters vary in conflicting ways, or where two or more "factors" function independently. Although this was a useful device for isolating and studying some important aspects of temporal gestalt perception, it imposed a very severe limitation on the range of musical examples whose gestalt structure might be predicted. In most real musical situations, other factors are manifestly not "equal", and our perceptual organization of the music is a complex result of the combination and interaction of several more-or-less independent variables.

Third (and finally), these early formulations referred to one hierarchical level only -- the grouping of elements into clangs -- although it was obvious to me even then that the similarity-factor, at least, was of great importance in the perceptual organization of TGs at all higher levels. In META Meta ≠ Hodos, an attempt was made to generalize these principles, re-stating them in a way that would be applicable to all hierarchical levels, thus (from Proposition II, p. 4):

> "The perceptual formation of TGs at any hierarchical level is determined by a number of factors of cohesion and segregation, the most important of which are proximity and similarity; their effects may be described as follows:....Relative temporal proximity..../and/....Relative similarities of TGs at a given hierarchical level will tend to group them, perceptually, into a TG at the next higher level....Conversely, relative temporal separation and/or differences between TGs....will tend to segregate them into separate TGs at the next higher level."

Although these later "propositions" served to extend the earlier formulations to higher levels, they suffered all of the other deficiencies of the latter -- their non-operational character, their imprecision with respect to the concept of "similarity", and their restriction to one parameter (or factor) at a time.

The first of these problems has been solved by a shift of emphasis from the unifying effects of proximity and similarity to the segregative effects of temporal separation and parametric dissimilarity, and by a more careful consideration of these effects as they must occur in real time. In the ongoing process of perception in time, TG-boundaries are determined by successive TG-initiations. This obviously applies to the beginning of a TG, but also to the end of it, since the perception that it has ended is determined (in the monophonic case, at least) by the perception that a new TG at that same hierarchical level has begun. In this new light, the effect of the proximity-factor (at the element/clang level) might be re-stated as follows:

> In a monophonic succession of elements, a clang will tend to be initiated in perception by any element which begins after a time-interval (from the beginning of the previous element -- i.e., after a delay-time) which is greater than those immediately preceding and following it -- ("other factors being equal").

Thus, in the following passage from Varèse's DENSITY 21.5 (ms. 24-28), where clang-initiations are determined almost entirely by the proximity-factor, it can be seen that the elements which initiate successive clangs are, in fact, invariably those whose delay-times are "greater than those immediately preceding and following" their own (delay-times associated with each element are indicated by the numbers below the staff, in triplet sixteenth-note units; those which are circled are for the clang-initiating elements). Note that the first occurrence of D (at the end of m. 25) does not initiate a new clang, in spite of its fairly long delay-time (12 units), because the delay-time which follows it is still longer (19 units).

insert Figure II.1 about here

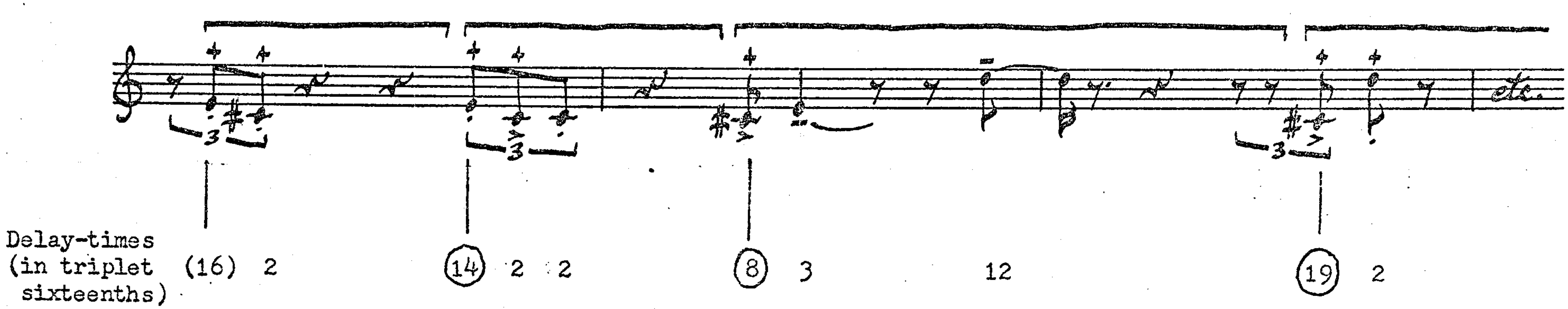

Figure II.1. Clang-initiations determined by delay-times.

As stated above, the proximity-factor begins to take on a form that is "operational". In a musical situation where no other parameters are varying (say, e.g., a drum solo, at constant dynamic level), this principle can provide an unambiguous procedure for predicting clang-boundaries.

In an analogous way, the effect of the similarity-factor (at the element/clang level) may be reformulated as follows (and note that this statement can actually include the previous one as a special case, if the parameter considered is time, and the "interval" is a delay-time):

> In a monophonic succession of elements, a clang will tend to be initiated in perception by any element which differs from the previous element by an interval (in some parameter) which is greater than those (inter-element intervals) immediately preceding and following it -- ("other factors being equal").

This, too, is "operational", in that it suggests an unambiguous procedure for predicting clang-boundaries, though it is limited to special cases where only one parameter is varying at a time. Consider, for example, the first 12 bars of Beethoven's *5th Symphony*. Figure II.2 shows the melodic line, abstracted from all contrapuntal/textural complications -- as it would be heard, say, in a piano transcription. Because of the considerable difference

insert Figure II.2 about here

in tempo here, compared to the Varèse example -- and thus in the actual duration of notated time-values -- relative weights are used that give the value of 1.0 to the eighth-note (as well as to the semitone, as before). The clang-initiations during the first six bars are obviously determined by the proximity-factor alone, but beginning in bar 6, the proximity-factor can have no effect on the clang-organization (except in m. 9), because the delay-times are all equal. This passage is not heard simply as two clangs, however, but as a succession of clangs (indicated by the brackets above the staff), each consisting of four elements. /And note that for every......../

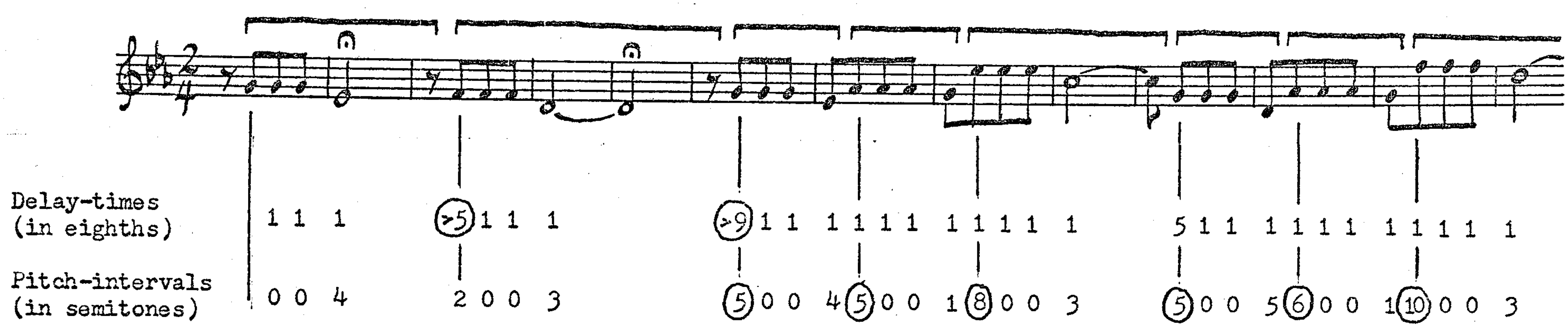

Figure II.2. Clang-initiations determined first by delay-times (ms. 1-5), then by pitch-intervals (ms. 6-12).

And note that, for every clang-initiating element, the pitch-interval associated with it is "greater than those immediately preceding and following it".

~~insert Figure II.2 about here~~

The parallelism of the proximity- and similarity-factors, as re-stated above -- and the fact that the second statement can be considered to include the first one as a special case -- is extremely important. In both, it is the occurrence of a local peak in interval magnitudes which determines clang-initiation. An interval is simply a difference, and whether this is a difference in starting-times, or pitch, or intensity -- or any other attribute of sound -- is not what is important. Rather, it is relative differences (in any parameter) that seem to be crucial. We live in a "universe of change" (more than of "chance", as has been alledged), but whether a particular change marks the beginning of a new temporal gestalt -- or simply another "turn" in the shape of the current one -- depends not only on its absolute magnitude, but on the magnitude of the changes which precede and follow it.

The restriction to one parameter (or factor) at a time, still implicit in the last formulation, remains to be overcome before our principle can be of much use in predicting clang-initiations in any but a very limited set of musical situations. What is needed is some way to combine or integrate the interval-magnitudes of all parameters into a single measure of change or difference. The solution to this problem involves a concept that has been employed by experimental psychologists for several decades now -- that of a multidimensional psychological or perceptual "space" (see Attneave, 1940; Shepard, 1962a, 1962b). The "dimensions" of this space are the several parameters involved in the perception and description of any sound -- namely, time (including both duration and "tempo", or temporal density), pitch, and intensity. Other parameters (e.g., timbre) could be added to this list, if they satisfy certain conditions, but I shall limit my discussion here to these four basic ones. The set of parametric values characterizing an element serve to locate that element at some "point" in this multidimensional space, and we can consider not only the intervals between two such points (one along each separate dimension), but also a distance between those points, which takes into account the contribution of intervals in each individual parameter, but effectively combines these into a single quantity. Such a distance, or distance-measure -- or what a mathematician would call a "metric" -- may now be used in place of the less precise notions of "similarity" and "proximity".*

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* It should be noted that Shepard uses the term "proximity" for what is here being called "distance".

In order to do this, however, two further questions had to be answered: first, how to weight the several parameters relative to each other (thereby "scaling" the individual dimensions) in a way that is appropriate to musical perception, and second, what kind of function to use in computing these distances.

The weightings referred to above are necessary for two reasons: first, because quantitative scales of values in the several parameters -- and thus the numbers used to encode these values as input data to the programme -- are essentially arbitrary, bearing no inherent relation to each other, and second, because we have no way of knowing, a priori, the relative importance of one parameter vs. another, in its effects on TG-formation. As yet, no clear principle has been discovered for determining what the weightings should be. The current algorithm requires that they be specified as input data, and the search for "optimum" weightings has so far been carried out purely on a trial-and-error basis. It now appears that such optimum weightings are slightly different for each piece analyzed, which suggests that there might be some correlation between these optimum weightings and statistical (or other) characteristics of a given piece, but such correlations have yet to be found.

Regarding the type of distance-measure to be used, there are many different functions which can satisfy the mathematical criteria for a metric, and therefore many distinct measures that might be used. A definitive answer to the question as to which of these metrics is the most appropriate to our musical "space" would depend on the results of psycho-acoustical experiments that, to my knowledge, have never been done, although studies of other multidimensional perceptual or psychological spaces provide a few clues toward an answer (e.g., Attneave, 1940; Shepard, 1962b). The best known metric, of course, is the Euclidean, but after trying this one, and noticing certain problems which seemed to derive from it, another was finally chosen for the algorithm. This second distance-measure is sometimes called the "city-block" metric, and an example of this metric vs. the Euclidean is shown graphically in Figure II.3, for the two-dimensional case.

insert Figure II.3 about here

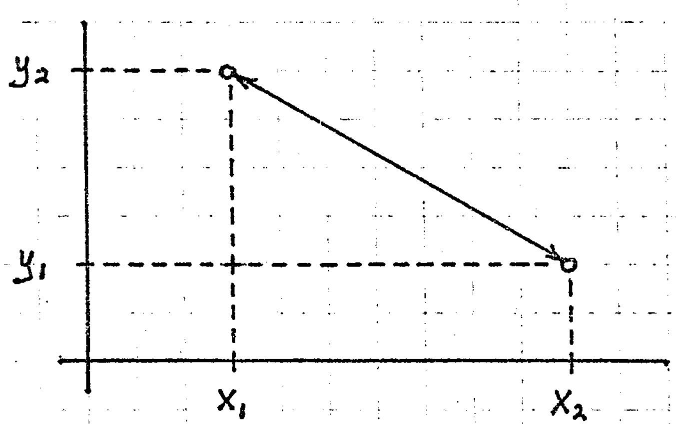
When three or more dimensions are involved, the relations become difficult -- and then impossible -- to represent graphically in two dimensions, but the relationships are the same. In the Euclidean metric, the distance between two points is always the square root of the sum of the squares of the distances (or "intervals") between them in each individual dimension (in two dimensions, this is equivalent to the familiar Pythagorean formula for the hypotenuse of a right triangle). In the city-block metric, on the other hand, the distance is simply the sum of the absolute values of the

Euclidean metric:

$$d = \sqrt{(y_2 - y_1)^2 + (x_2 - x_1)^2}$$

"City-block" metric:

$$d = |y_2 - y_1| + |x_2 - x_1|$$



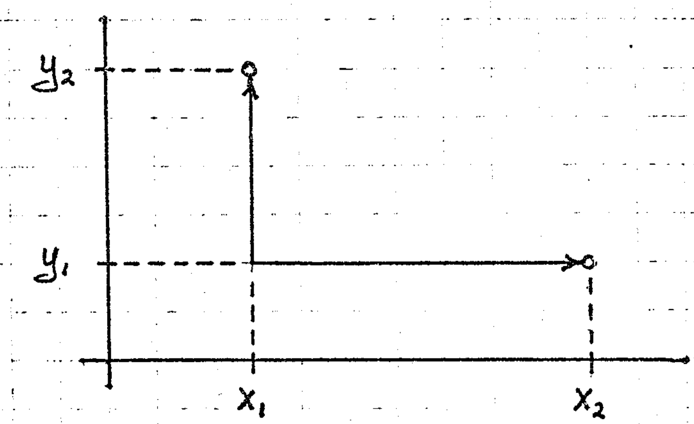


Figure II.3. Euclidean vs. "city-block" distances.

distances (or intervals) in each dimension.*

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* The Euclidean and city-block metrics are themselves special cases of a more general class of distance-functions sometimes called the Minkowski metric (Shepard, 1962a), which (in two dimensions) is of the form:

$$d = ((x_2-x_1)^R + (y_2-y_1)^R)^{1/R} \quad \text{for } R \geq 1.$$

Note that, when R = 1, this becomes the city-block distance-function, and when R = 2, it is equivalent to the Euclidean metric. It would be of interest to experiment with this parameter of the equation, in the context of the current algorithm. In particular, it might turn out that a value of R somewhere <u>between</u> 1 and 2 would be even more appropriate to the "space" of musical perception.

One of the most important steps in the development of our model involved the decision to treat musical space in this way -- as a metric space within which all the individual parametric intervals between two points might be integrated into a single measure of distance (or what Shepard calls "proximity"), and to use this distance, in turn, as a measure of similarity (or dissimilarity) between two musical events. This made it possible to reformulate the basic principle of TG-initiation in a new way, which can be applied to virtually any musical situation, without the old restriction to variations in just one parameter at a time (though it is still limited to the element/clang level, and to monophonic textures), as follows:

<u>A new clang will be initiated in perception by any element whose distance from the previous element is greater than the inter-element distances immediately preceding and following it.</u>

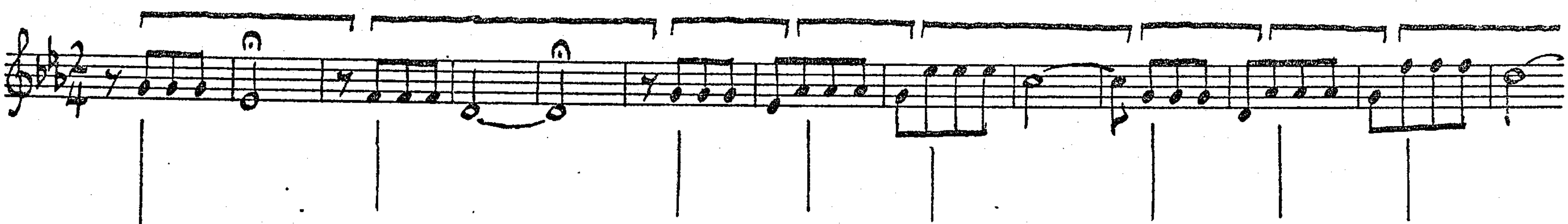
If we now apply this principle to the Beethoven example considered earlier, using (again) relative weightings for duration and pitch that give values of 1.0 for both the eighth-note duration and the semitone (Figure II.4), we see that this simple hypothesis serves to predict or locate all of the clang-initiations involved in the passage (note that each inter-element distance, listed in the bottom row of figures, is simply the sum of the two (weighted) intervals associated with each element).

insert Figures II.4 and II.5 about here

As a second example, consider the Varèse passage quoted earlier (Figure II.5). Although in this case delay-times alone were sufficient to determine clang-initiation, we see that peaks in the distance-function will predict the same boundaries. Again, our simple hypothesis regarding clang-initiation seems to determine clang-boundaries in a way that agrees with our spontaneous perception of the passage.

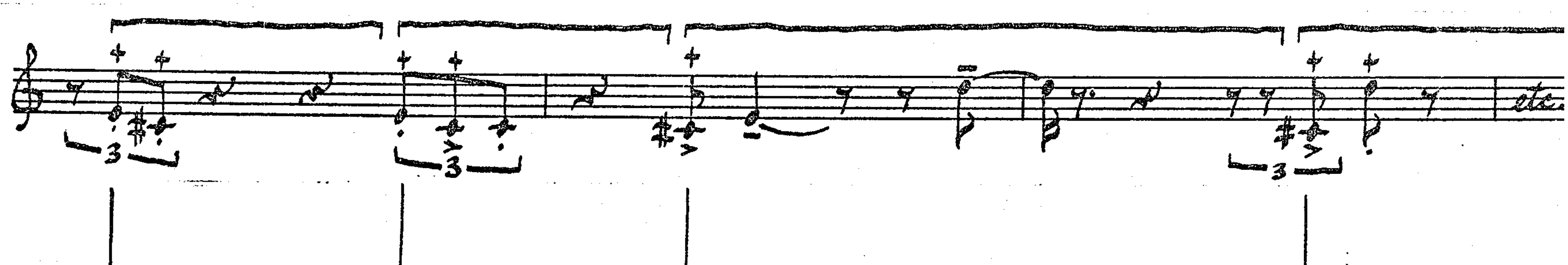
~~insert Figure II.5 about here~~

One final problem remained to be solved, before the current algorithm could be realized -- that of extending this basic principle of clang-formation to higher levels. The discussion so far has been limited to TG-initiations at the element/clang level because the notion of a "distance" in the musical space can only be used properly as a difference between two *points* in that space. How might the "differences" between two clangs, sequences, or still higher-level TGs -- which would correspond to clusters or *sets* of points -- be defined? It has seemed to me that such differences are of three basic kinds, corresponding to three distinct aspects of our perception (and/or description) of these higher-level TGs, namely, differences of *state*, *shape*, and *structure* (see Tenney, 1975/77). By "state" I mean the set of *mean values* of a TG (one for each parameter except time),



Delay-times	1 1 1	>5 1 1 1	>9 1 1	1 1 1 1	1 1 1 1 1	5 1 1	1 1 1 1	1 1 1 1 1
Pitch-intervals	0 0 4	2 0 0 3	5 0 0	4 5 0 0	1 8 0 0 3	5 0 0	5 6 0 0	1 10 0 0 3
Distances	1 1 5	>7 1 1 4	>14 1 1	5 6 1 1	2 9 1 1 4	10 1 1	6 7 1 1	2 11 1 1 4

Figure II.4. Clang-initiations determined by inter-element distances.



Delay-times	(16) 2	14 2 2	8 3	12	19 2
Pitch-intervals	(19) 3	3 3 0	0 3	10	13 13
Distances	(35) 5	17 5 2	8 6	22	32 15

Figure II.5. Clang-initiations determined by inter-element distances.

plus its starting-time. The state of a TG might thus be compared to the "centre of gravity" of an object in physical space, except that the temporal counterpart to mean parametric value is the beginning of the TG, rather than its "centre". "Shape" refers to the contour or profile of a TG in each parameter, determined by changes in that parameter with time, and "structure" is defined as "relations between subordinate parts" of a TG -- i.e., relations between its component TGs at the next lower level (or at several lower levels). Thus, the differences between any two TGs may be differences between their states, or between their shapes, or between their structures, or any combination of these. At the element-level, however, the differences that are reflected in the measure of distance are of the first kind only -- differences between states -- because we are not yet dealing with shape at the element-level, and because structure is assumed to be imperceptible at this level, by the very definition of "element" (as "not temporally divisible, in perception, into smaller parts" -- cf. p. 3).

It is not yet clear what role similarities and differences of shape and structure might have in temporal gestalt perception, but it is quite clear that state-differences have virtually the same effects at the higher levels that they have at the element-level. Consequently, shape and structure play no part in the current model, but state-differences (i.e., intervals and distances) are treated essentially the same way at all hierarchical levels, with just one additional refinement, not mentioned previously. Although the magnitude of change perceived when one element follows another is well-represented by the distance-measure defined above, the magnitude of change perceived in the succession of two clangs, sequences, or higher-level TGs is only partially accounted for by this distance.

In addition, the changes perceived at the boundary between two TGs have an important influence on TG-initiation at higher levels. In order to deal with this, a distinction is made between "mean-intervals" and "boundary-intervals", as follows:

> A mean-interval between two TGs at any hierarchical level, in any parameter except time, is the difference between their mean values in that parameter; for the time-parameter, a mean-interval is defined as the difference between their starting-times.
>
> A boundary-interval between two TGs is the difference between the mean values of their adjacent terminal components (i.e., the final component of the first TG and the initial component of the second).

Note that a boundary-interval at one hierarchical level is a mean-interval at the next lower level. The distinction between mean-intervals and boundary-intervals is actually an extrapolation to higher levels of a distinction already implicit at the element-level, though I have not yet described it in these terms. That is, the rest-duration of an element may be interpreted as a "boundary-interval" in the time-parameter, while "delay-time" or element-duration would be the "mean-interval" in the same parameter (a rest is thus considered, in effect, a "final component" of the element it follows). Similarly, the treatment of initial vs. final element-intensities described earlier obviously involves a distinction between mean-interval and boundary-interval in the intensity-parameter. Thus, what may have seemed to be a kind of ad hoc, special treatment of rests and intensities at the element-level was actually a first instance of this same distinction between the two kinds of interval.

An analogous distinction is made between "mean-distances" and "boundary-distances", as follows:

The *mean-distance* between two TGs at any hierarchical level is a weighted *sum of the mean-intervals* between them, and the *boundary-distance* between two TGs is a weighted *sum of the boundary-intervals* between them.

Finally, mean- and boundary-distances are combined into a single measure of change or "difference" which we call "disjunction", defined as follows:

The *disjunction* between two TGs, or the disjunction of a TG with respect to the preceding TG (at a given hierarchical level) is a weighted *sum of the mean-distance and the boundary-distances between them at all lower levels*.

Note that, whereas the weightings referred to in the definitions of mean- and boundary-distances are weightings across *parameters*, the weightings used in the computation of disjunction are weightings across *hierarchical levels*. These are set to decrease by a factor of 2 for each successively lower level considered. The disjunction between two sequences, for example, (or the disjunction of the second sequence with respect to the first) involves -- in addition to the mean-distance between them -- one-half of the mean-distance between their adjacent terminal *clangs*, and one-fourth of the mean-distance between the adjacent terminal *elements* of those clangs. The disjunction between two segments would be computed as the sum of the mean-distance between them, plus one-half of the mean-distance between their adjacent terminal sequences, one-fourth of the mean-distance between the adjacent terminal clangs of those sequences, and one-eighth of the mean-distance between the adjacent terminal elements of those clangs. Note that the sum of the weightings used to compute boundary-distances is always less than 1.0, but approaches this value as a limit when higher levels are being considered (i.e., $1/2 + 1/4 + 1/8 + \ldots < 1.0$).

Now, at last, it becomes possible to state the fundamental hypothesis of temporal gestalt perception, on which the current model is based:

A new TG at the next higher level will be initiated in perception whenever a TG occurs whose disjunction (with respect to the previous TG at the same hierarchical level) is greater than those immediately preceding and following it.

III. The Algorithm. III.A. General Features.

Input data to the programme are numbers representing the duration (figured from the beginning of one element to the beginning of the next), rest-duration, pitch, initial intensity and final intensity of each element in the score, plus weighting factors for each parameter, and certain constants for the particular piece or run (e.g., the total number of elements, a minimum clang-duration, the tempo of the piece, etc.). Note that only one input value is used to specify the pitch of an element, compared to two for both time and intensity (corresponding to -- and providing the computational basis for -- the distinction between mean- and boundary-intervals). In the music studied so far, pitch may be regarded as constant throughout each element, so that mean- and boundary-intervals in this parameter are identical at the element-level. For another kind of music, in which continuous changes of pitch are characteristic of individual elements (as in Indian vocal music, for example), it would be necessary to approximate these changes as is now done for intensity.

Numerical values for the three parameters listed above are encoded as follows: in order to avoid round-off errors, the value of 1.2 (rather than 1.0) is used for the quarter-note at the specified tempo for the piece, with other note-values proportional to this. Thus, an eighth-note = .6, a triplet-eighth = .4, etc. These values are re-scaled, internally, to units of a second (i.e., duration in seconds = input duration * 50.0/Tempo). Pitches are represented by integers, with the value of 1.0 usually assigned to the lowest pitch in the piece (although this is entirely arbitrary, since the programme's operations involve only the intervals between pitches, not the pitches themselves). For intensity, integer values from 1.0 through 8.0 are used for the notated dynamic levels, ppp through fff, with decimal fractions for intermediate values, as during a gradual crescendo or diminuendo. In transcribing the score, these fractional values are derived by simple linear interpolations between the integer values.

At the element-level, then, three basic parameters are involved: time (or "delay-time" -- i.e., "proximity"), pitch, and intensity, and weightings must be input for each of these. At the clang-level, however -- and carrying through to all higher levels -- a new parameter emerges which I had considered important in musical perception, namely temporal density (or, more strictly, "element-density") -- defined as the logarithm (to the base 2) of the average number of elements per second (or $\log_2$ of the reciprocal of the average element-duration).* Provision was therefore made in the programme for this parameter, although it has turned out to be unnecessary. Our best results on the four pieces analyzed have been obtained with a weight of zero for temporal density.

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* Even at the element-level, temporal density is used in a kind of partial way, as a measure of the difference between two elements with respect to duration (N.B. this is distinct from delay-time or "proximity"). That is, a mean temporal density interval (where temporal density is simply the log of the reciprocal of the element-duration) is used in the computation of distance at the element-level, as well as at higher levels (where it actually means "density"). See the description of Steps 3, 5 and 16 in the programme, below.

The programme also allows for input data (and a weighting-factor) to be given for one more parameter, which we call "timbre", but which could be used for any other attribute of sound that seemed appropriate in a particular piece. It should be noted, however, that meaningful results can only be expected if this additional parameter is one in which values may be specified (or at least approximated) on what S. S. Stevens (1951) has called an "interval scale". So far, it has only been used in a very primitive way, with scale values of either 0. or 1., to represent the "key-clicks" in measures 24-28 of Varèse's DENSITY 21.5.

In an effort to "normalize" the values used on input, nominal weightings for duration are re-scaled, internally, by a factor of 10. An input weight of 1.0 for duration thus implies a time unit of one-tenth of a second. The corresponding unit-intervals for pitch, intensity and temporal density are the semitone, one dynamic-level-difference (or DLD -- as between mf and f), and a "tempo"-ratio of 2:1, respectively. Provision was originally made for specifying the weighting factors in each parameter for mean- and boundary-intervals independently. As it turned out, however, the optimum weightings seemed to be the same -- in a given parameter -- for both types of interval, so they are now both given the same weightings.

The optimum weightings which have been determined for the four pieces analyzed so far are as follows:

	proximity	pitch	intensity	t.d.	timbre
Varèse	1.0	0.67	6.0	0.	20.0
Webern	1.0	0.5	6.0	0.	0.
Debussy	1.0	1.0	1.0	0.	0.
Wagner	1.0	0.03	1.0	0.	0.

These values may be taken to imply certain equivalences between intervals in the several parameters, at least in terms of their effects on TG-initiation. In the Debussy piece, for example, a delay-time of one-tenth of a second is equivalent to a pitch-interval of one semitone, and to one DLD. In the Varese piece, on the other hand, a delay-time of one-tenth of a second is equivalent to a pitch-interval of 1.5 semitones, and to one-sixth of one DLD. Note the relatively large pitch-weight for the Debussy piece, compared to that for the Wagner example, where the TG-initiating effect of pitch-intervals must be suppressed rather drastically in order to obtain a plausible segmentation, although it cannot be eliminated entirely without undesirable effects. The relatively large intensity-weights for both the Varese and the Webern pieces confirms what one would already have expected -- that both of these composers were using dynamics as a structural (rather than merely an "expressive") parameter in these pieces.

I have already mentioned the fact that the weightings assigned to each parameter were arrived at by a trial-and-error process, and I have promised to describe this process in more detail. Before I attempt to do this, however, I should also mention that the programme as described here was itself the result of a trial-and-error process. It did not come into being at one stroke, and is, in fact, just the most recent version of a long series of programmes that have been written and tested. Thus, even when a stage in the development of the model had been reached when it was clear that a multidimensional "metric" approach was the right one, the problem of determining appropriate weightings for the various parameters was still almost inextricably confused with more basic problems having to do with the design of the algorithm itself. The accuracy of its results has always depended not only on the weightings used, but on more fundamental aspects of the model. Sometimes a poor result might indicate simply that an adjustment in the weights was needed, but sometimes a more radical revision of the programme was called for. Once the basic outlines of the current algorithm had been worked out, however, the procedure for determining the weights was essentially this: first, to try one set of values, then to compare the results with our own musical-intuitive sense of what the gestalt-organization ought to be, and finally to adjust the weights to achieve a result that seemed more accurate, etc. . . . The difficulties in this procedure were numerous, but they included the fact that no less than eight variables were involved (mean- and boundary-interval weights for each of four different parameters), and the fact that an alteration of weightings made to correct the results for one point in a piece often had what seemed to be an adverse effect at some other point in that piece. Most of these difficulties were finally overcome, however, and the results we have been getting with the programme are -- at the very least -- plausible.

The algorithm is outlined in Flowchart 1, Figure III.1. This flowchart represents both the conceptual process and the general programme architecture involved. The theory of temporal gestalt formation outlined in the second section of this paper is rather simply implemented on the computer. The computations are in general of two types: (1) the computation of parametric intervals, distances, and disjunctions between successive TGs at a given hierarchical level, and (2) the computation of the parametric states of TGs at the next higher level, from their lower-level component states. The first of these processes involves finding simple differences (i.e., intervals) between starting-times, pitches, intensities, and temporal densities of successive TGs. The second of the two computational types is an equally simple process of finding the parametric mean-values of component TGs (usually weighted by duration), and storing those mean-values as the parametric states of the higher-level TG (e.g., the pitch-state of a clang is the sum of its elements' pitches multiplied by their respective durations, divided by the total duration of the clang).

insert Figure III.1 about here

The programme's architecture is a hierarchically replicating one -- i.e., the computations are identical for indefinitely many levels of gestalt organization. Thus, the main programming complexity is one of indexing. The portion of code that actually computes disjunctions and searches for TG-initiations (i.e., disjunction peaks) is quite short. The majority of the programme deals mainly with keeping track of the temporal and hierarchical positions at which the computations are taking place. To this end the programme's evolution has taken two rather contrasting structural forms. The first, and one that is no longer in use, involved making only one pass through the element data, during which

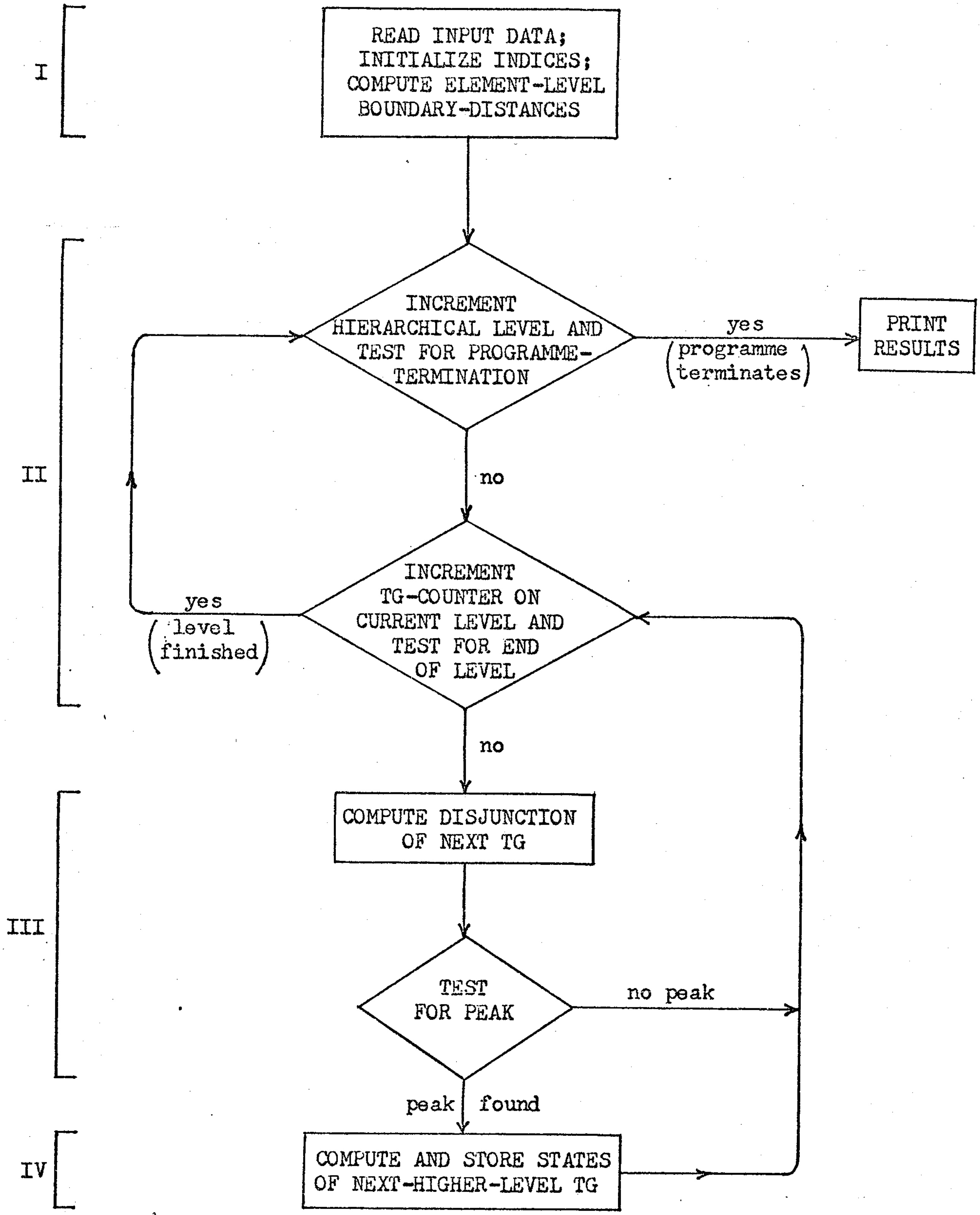

Figure III.i. Flowchart 1.

TG-initiations at all successive hierarchical levels were considered whenever a lowest-level initiation was found. This process necessitated keeping track of data on all levels simultaneously, but allowed one to disregard all but a small temporal "slice" of the music at any one time. The computations were done within a narrow, vertical "window", moving through the piece from beginning to end. Although this process uses very little memory, its complex indexing makes it relatively slow and difficult to understand. For these reasons, we have adopted an alternative structure, one which might be described as "horizontal" rather than "vertical". In the programme architecture in current use, the algorithm makes a new pass for each higher level, computing TG-initiations for that level and global characteristics (i.e., states) for the TGs at the next higher level as it proceeds temporally through the piece. In other words, the programme begins by looking for TG-initiations at the element/clang level, computing and storing parametric states of the clangs as it does so. When there are no more elements to be considered, the programme returns to the (temporal) beginning of the piece, but one hierarchical level higher. It then goes through the clangs, computing and storing sequence-initiations and states. This procedure continues upward until a level is reached at which there are not enough TGs to make a next-higher-level grouping possible (i.e., less than four). This "horizontal" process is conceptually simpler and much faster than the former procedure, but does require more memory, as each level's organization must be retained in memory until all of the TG-initiations and states at the next higher level have been computed.* The question as to which of these two alternative

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* We have been able, however, to reduce memory considerably by utilizing the fact that the maximum number of TGs for all levels combined is less than or equal to twice the number of elements. Since each clang must

contain at least two elements, each sequence at least two clangs, etc., the number of TGs at any hierarchical level can never be more than half of the number of TGs at the next lower level. Thus, the total number of TGs at all levels must be less than (or at most, equal to) the quantity

$$X + X/2 + X/4 + X/8 + \ldots X/2^{n-1}$$

where X is the number of elements, and n is the number of hierarchical levels. Note that this sum is always strictly less than 2X. In this fashion, array size is minimized and efficiency of storage and indexing maximized.

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most accurately reflects perceptual processes is still an open one. Certainly, the first process corresponds more closely to a first listening, where memory is less of a factor, and foreknowledge not a factor at all. However, the second process reflects more closely the situation in which a listener knows something about the style of the piece, or has heard the piece before. Since the end results of these two programming structures are identical, the second was chosen for its greater conceptual and programming simplicity.

The operations of the programme are shown in more detail in Flowchart 2, Figure III.2. Larger blocks of the programme are indicated by the Roman numerals on the left, which correspond to those in the first flowchart. Arabic numerals designate smaller portions (or "steps") of the programme, as described individually in the text which follows.

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insert Figure III.2 about here

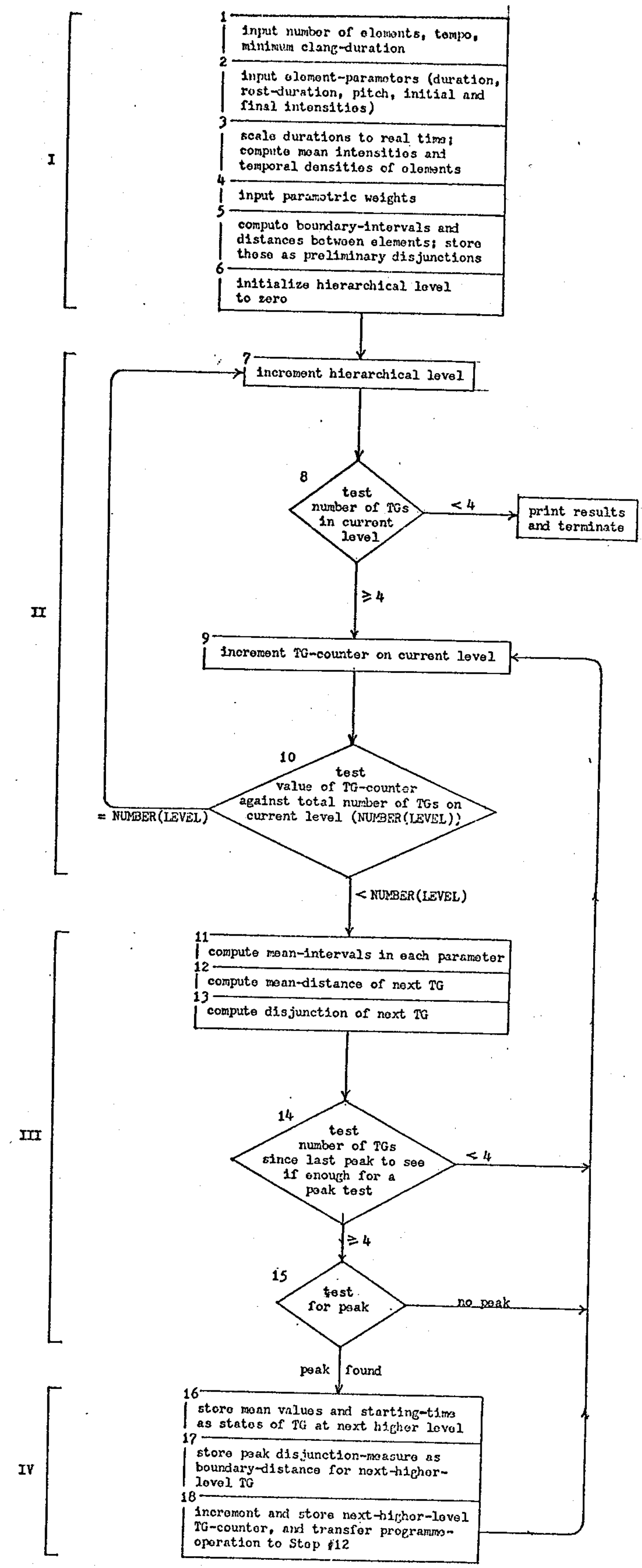

Figure III.2. Flowchart 2.

III.B. Programme Operation.

Block I. Steps 1 and 2: The programme's operation begins by inputing the data previously described.

Step 3: Durations are scaled to "real time" by the value input for tempo, which is first scaled to 50, since the quarter-note is usually coded as 1.2.

$$DUR(I) = DUR(I) * 50.0/TEMPO$$

$$RST(I) = RST(I) * 50.0/TEMPO$$

where DUR(I) and RST(I) are the duration and rest-duration of the I^{th} element, and TEMPO is the input value in metronome markings.

Mean intensities of elements are computed as follows:

$$AMP(I) = (A1(I) + A2(I))/2.0$$

where A1(I), A2(I), are the initial and final intensities of the I^{th} element.

Temporal densities of elements are computed logarithmically, and scaled to a maximum value of duration (8.0 seconds) to ensure that they are all positive values, as follows:

$$TD(I) = \log_2 (8.0/DUR(I)) = 3.0 - \log_2 (DUR(I))$$

Step 4: The weightings for the parameters are then input and summed, as:

$$WSUM = DW + PW + AW + TDW + TW$$

where DW, PW, AW, TDW, TW are the weights for proximity, pitch, intensity (or "amplitude"), temporal density, and "timbre", respectively.

Each individual weight is then divided by WSUM to make the sum of all the weights equal to one, serving to normalize the disjunction measure (step 13), thus:

$$DW = DW/WSUM$$

$$PW = PW/WSUM$$

etc.

Step 5: Weighted boundary-intervals for elements are computed in an initial first pass, as follows:

DI = DW * (RST(I-1))

PI = PW * P(I) - P(I-1)

AI = AW * (A1(I) - A2(I-1))

(or, if there was a rest at the end of element I-1)

AI = AW * (A1(I))

TDI = 0.0

TI = TW * T(I) - T(I-1)

where DI, PI, etc., are intervals in the parameters, time, pitch, intensity, temporal density, and "timbre".

Finally, the boundary-distance (DM) is computed as a simple sum of the absolute intervals, as follows (note that DI is always positive):

$$DM(I) = (DI + |PI| + |AI| + |TDI| + |TI|) * 2.0$$

This equation computes a "preliminary" disjunction measure for each element. The sum is multiplied by 2.0 because later on in the programme (step 13) a single equation is used to compute disjunction measures from mean- and boundary-intervals of TG's at all lower levels. The latter equation divides boundary-intervals by 2.0, so here, on the element level, it is first necessary to multiply by 2.0. Note that the boundary-interval for duration is the rest-duration (if there is one) of the previous element. The temporal density boundary-interval is always 0.0 at the element level.

Step 6: Next, the hierarchical level of computation is initialized to zero.

Block II. Step 7: From this point on, the programme begins its hierarchical loop structure. The hierarchical level is incremented by one, thus:

LEVEL = LEVEL + 1

Step 8: The programme tests to see if, on the current hierarchical level, there exist enough TG's to test for a peak. There must be at least four TGs on a given level in order for a peak test to be meaningful. When LEVEL = 1, the number of TGs is simply the number of elements. The number of TGs when LEVEL = 2 is computed while partitioning the first level, and so on up the hierarchical structure. If the number of TGs on the level being considered is less than four, then the programme has reached its highest hierarchical level, and it prints out the results and terminates.

Step 9: TGs on a given level are indexed by an integer variable IND, which is incremented here, signifying that the programme is "looking at" the next TG on the current level.*

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* It should be noted here that, in the programme itself, the indexing is slightly more complex than it would appear from the flowchart, partly because of the method of storage used. The maximum number of elements that the programme is designed to handle is 500. This value is an arbitrary one, but has sufficed for the pieces analyzed thus far. It was noted earlier that the number of TGs on all higher levels cannot be greater than the number of elements. This means that array lengths of 1000 are sufficient to store the total number of TGs in a given piece of fewer than 500 elements. The value of the variable IND is actually a resultant of two other variables: K1, and COUNT(LEVEL). K1 is an integer variable which takes on the values 0, 500, 750, 875, etc., positioning the operations in the right region of the horizontal array. The TG-counter, COUNT(LEVEL), runs from 1 to NUMBER(LEVEL) -- the number of TGs on a given level. By summing COUNT(LEVEL) and K1, the exact position in the array is arrive at. This number/position is called IND.

Step 10: The TG-counter (COUNT(LEVEL)) is then compared to the total number of TGs on the current level, which for all higher levels (i.e., LEVEL $\geq$ 2), is computed while looking for the initiations at that level (see step 18).

If the TG-counter is equal to that number, then the level has been completed. The programme then transfers operation to step 7, and begins looking at the next higher level.

Block III. Step 11: If the level is not completed, then weighted mean-intervals in each parameter are computed for the TG under consideration, as follows:

DI = DW * DUR(IND-1)

(or, if LEVEL > 1)

DI = 0.0

PI = PW * (P(IND) - P(IND-1))

AI = AW * (AMP(IND) - AMP(IND-1))

TDI = TDW * TD(IND) - TD(IND-1))

TI = TW * T(IND) - T(IND-1))

Thus, all intervals are simple differences. The proximity interval is a difference in starting-times of two successive TGs. On higher levels, however, this interval is not included as a factor of TG-initiation, except as a residue from element- and clang-level boundary-intervals, and its weight is reduced by a factor of 2.0 at each successively higher level being considered (see step 13).

Step 12: The mean-distance measure (ABSUM) is then computed, as the sum of the absolute values of the weighted mean-intervals (thus according to the "city-block metric" described earlier):

$$ABSUM = DI + |PI| + |AI| + |TDI| + |TI|$$

Step 13: Finally, the disjunction-measure is computed:

DM(IND) = ABSUM + DM(IND)/2.0

Note that the variable, DM(IND) on the right side of this "equation" has already been computed as a boundary-distance, or as the disjunction at the next lower level (see Step 17, or, for the case when LEVEL = 1, Step 5). Thus, the disjunction-measure for a TG on any level is a weighted combination of its mean-distance and its boundary-distance, which is itself a combination of mean-intervals of adjacent terminal components on all lower levels.

Step 14: Next follows a series of tests to make sure that there are enough TGs since the last peak, or since the beginning of the level (at least four) to test for a new TG-initiation. These tests are a matter of indexing, and they won't be dealt with here (see the programme itself and the comments within it for details). A test is also made here -- which is not shown in the flowchart -- to determine whether the time which has elapsed since the beginning of the current next-higher-level TG exceeds a certain minimum threshold value, the minimum clang-length input at the beginning of the programme (Step 1). This procedure was found necessary to avoid certain situations in which the algorithm would otherwise have predicted a clang-initiation after an unrealistically short time (as in the places marked x in the Varèse example, Figure IV.1.

Step 15: The disjunction-measure of the TG indexed IND-1 is then tested against the disjunctions immediately preceding and following it (DM(IND-2) and DM(IND)).

If: DM(IND-1) $\leq$ DM(IND-2)

Or: DM(IND-1) $\leq$ DM(IND)

Then: DM(IND-1) is <u>not</u> a peak, the programme transfers operation to Step 9, and looks at the next TG on the same level.

Note the "out-of-phase" nature of these operations. At the first level, for example, the element indexed IND is used to compute an interval (and a disjunction) indexed IND-1. The tests to determine whether a given element initiates a new clang require a comparison between three adjacent disjunction-measures, and this necessarily involves at least four elements, counting from the last clang-initiating element. The tests for clang-initiation are thus made on element IND-1 (not IND), and if it is found to initiate a new clang, then the last element of the preceding clang will have been element IND-2. These same relationships hold at all higher levels. Information must be known about two TGs beyond the one being tested. More will be said about these phase-relations in a later section of this paper.

Block IV. Step 16: When a peak has been found, in Step 15, the programme computes parametric states for the newly found higher-level TG, as follows:

$$DUR(HYIND) = \sum_{I=1}^{N} DUR(I)$$

$$P(HYIND) = \frac{\sum_{I=1}^{N} P(I) * DUR(I)}{DUR(HYIND)}$$

$$AMP(HYIND) = \frac{\sum_{I=1}^{N} AMP(I) * DUR(I)}{DUR(HYIND)}$$

$$TD(HYIND) = \frac{\sum_{I=1}^{N} TD(I) * DUR(I)}{DUR(HYIND)}$$

$$T(HYIND) = \frac{\sum_{I=1}^{N} T(I) * DUR(I)}{DUR(HYIND)}$$

where HYIND is the index used for TGs at the next higher level, and N is the number of lower-level TGs in the higher-level TG just found.

When LEVEL = 1, TD(HYIND) is computed as a simple mean value, without the duration weighting, as:

$$TD(HYIND) = \frac{\sum_{I=1}^{N} TD(I)}{N}$$

Step 17: The disjunction of the first component in this new TG is now stored as the preliminary disjunction-measure of the TG itself. This is actually the boundary-distance for the TG, which will later be used (while processing the next level) in combination with the mean-distance, in the computation of the complete disjunction-measure. Note that boundary-interval effects from all lower levels are retained in this way, though at successively diminishing weights (cf. the explanation of Step 13, above).

Step 18: Next, having found a TG on the next-higher level, the programme increments its TG-counter for that higher level. In this way, the total number of TGs can be computed for a given level while computing disjunctions and initiations at the next lower level. The programme then returns unconditionally to Step 9, resuming computations and peak-testing procedures for the next TG on that level.

IV. Results.

Final results of the programme for the four pieces analyzed so far, using what seem to be the optimum set of parametric weights for each piece (those listed on page 25), are displayed in the form of graphically annotated scores in Figures IV.1-4 and IV.6. In addition, one variant segmentation, using a different set of weights, is shown for Debussy's SYRINX. The partitioning given by the algorithm is indicated by the vertical lines above the staff-notation, each extending to a horizontal line corresponding to the hierarchical level of the TG initiated at that point. For the first two pieces, these results may be compared with analogous partitionings or segmentations to be found in the analytical literature. In the case of Varèse's DENSITY 21.5, a partitioning which is both explicit and complete is available, and will be used for comparison -- that given in a monograph of 1975 by Jean-Jacques Nattiez. For the Webern example (the CONCERTO, Op. 24, 2nd movement), an analysis of the first "period" by Leopold Spinner (1955) will be compared to the results of our programme. The Debussy and Wagner pieces are given without any such comparisons, because we have not found any published analyses of either of these pieces in which the segmentation is sufficiently explicit to justify a comparison.

IV.A. Varèse: DENSITY 21.5.

The partitioning given by Nattiez for the Varese piece is shown in the lower portion of Figure IV.1, so that a direct, point-by-point comparison can be made. Here the correlations between the two partitionings are quite close -- especially at the clang- and sequence-levels -- although they are not identical, of course, and the similarities diminish at higher levels. In fact, some 81% of the clang-initiations in our results, and 85% of the sequence-initiations (but only 44% of the segment-initiations) coincide with the corresponding boundaries in Nattiez's segmentation. There are no coincidences at any higher level. Some of the discrepancies between the two segmentations are fairly trivial, as where one or the other "model" simply interpolates an extra clang-break between two otherwise coincident boundaries (as at elements #8, 25, 54, 109, 117, 118, 140, 179, 224, 226, 233, and 241. A few differences result from the fact that Nattiez does not prohibit one-component TGs, as our model does. These occur in his partitioning in the form of "one-element clangs" beginning at elements #109, 117, and 118, and as sequences containing only a single clang, beginning at elements #22, 52, 74, and 97.

Even if we disregard such discrepancies as these, however, there will still remain a number of places where the two partitionings differ. Some of these probably have to do with the fact that -- as I pointed out in the Introduction -- neither harmonic nor motivic factors are considered by our algorithm. For example, the high-level TG-initiation which Nattiez locates at element #188 is clearly determined by the fact that the initial motivic idea of the piece suddenly returns at this point, and a model which included some consideration of motivic relations might well yield a result here more like Nattiez's. On the other hand, the strong element of surprise that this return of the initial motive evokes in _my_ perception of the piece suggests that this motivic factor is here working very much "against the grain" of most of the other factors of TG-organization, and that an important part of the musical effect of this event in the piece depends on the fact that the motive recurs at a point which would _not_ otherwise be a high-level boundary.

After all of the foregoing reasons for the differences between the two partitionings have been accounted for, a few discrepancies will remain which suggest that our weightings may not be quite "optimum" after all, or that they are simply different from those unconsciously assumed by Nattiez, or even that some aspect of the algorithm may need refining. Finally, however, I must say that I think our segmentation represents the perceptual "facts" here more accurately than Nattiez's at certain points. These would include the clang-initiations at elements #13, 20, and 75, and the sequence-initiations (and perhaps even the segment-breaks) at #177 and 238.

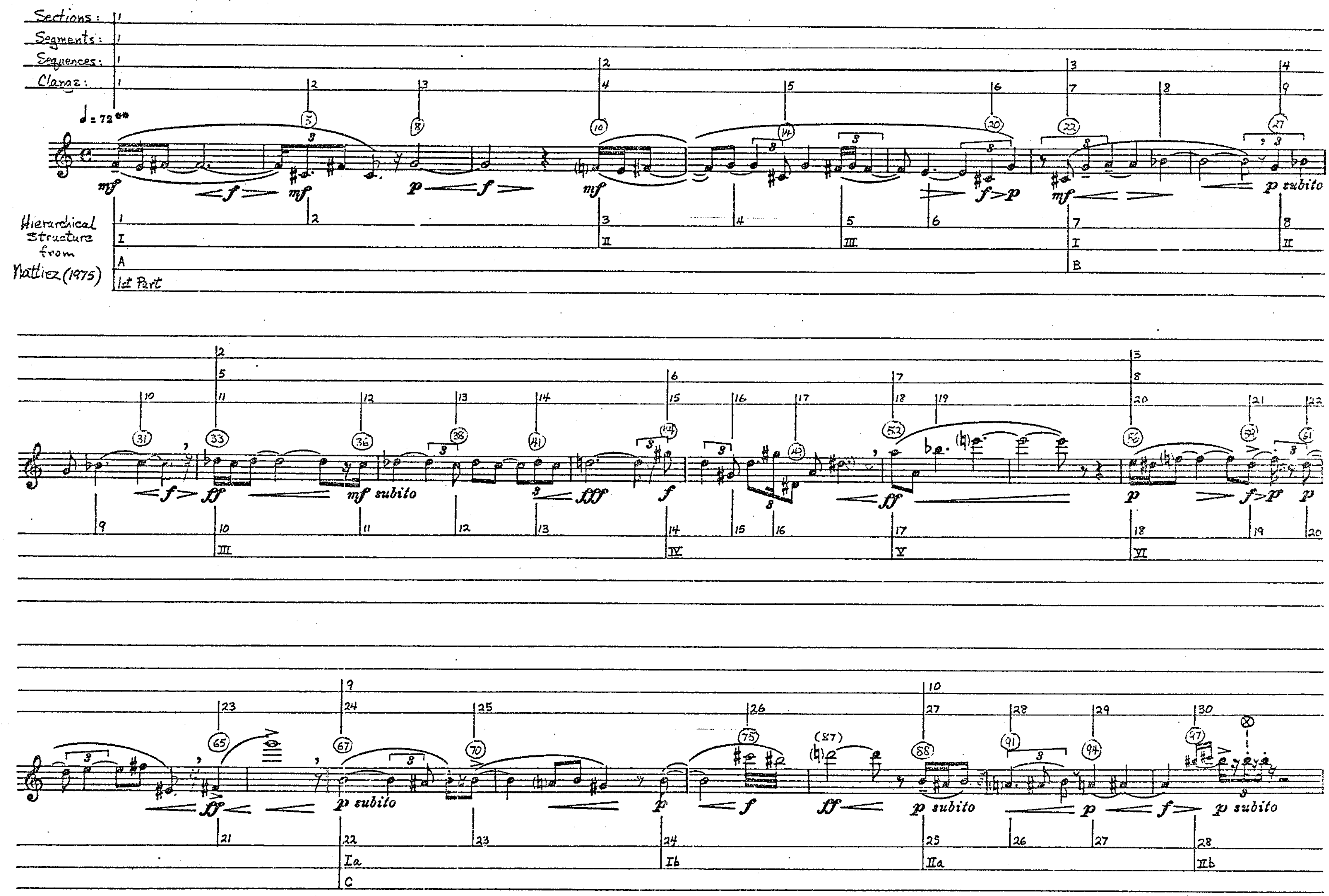

Figure IV.1. Edgard Varèse: DENSITY 21.5 -- final results with "optimum" weightings (above), and segmentation according to Nattiez (below).

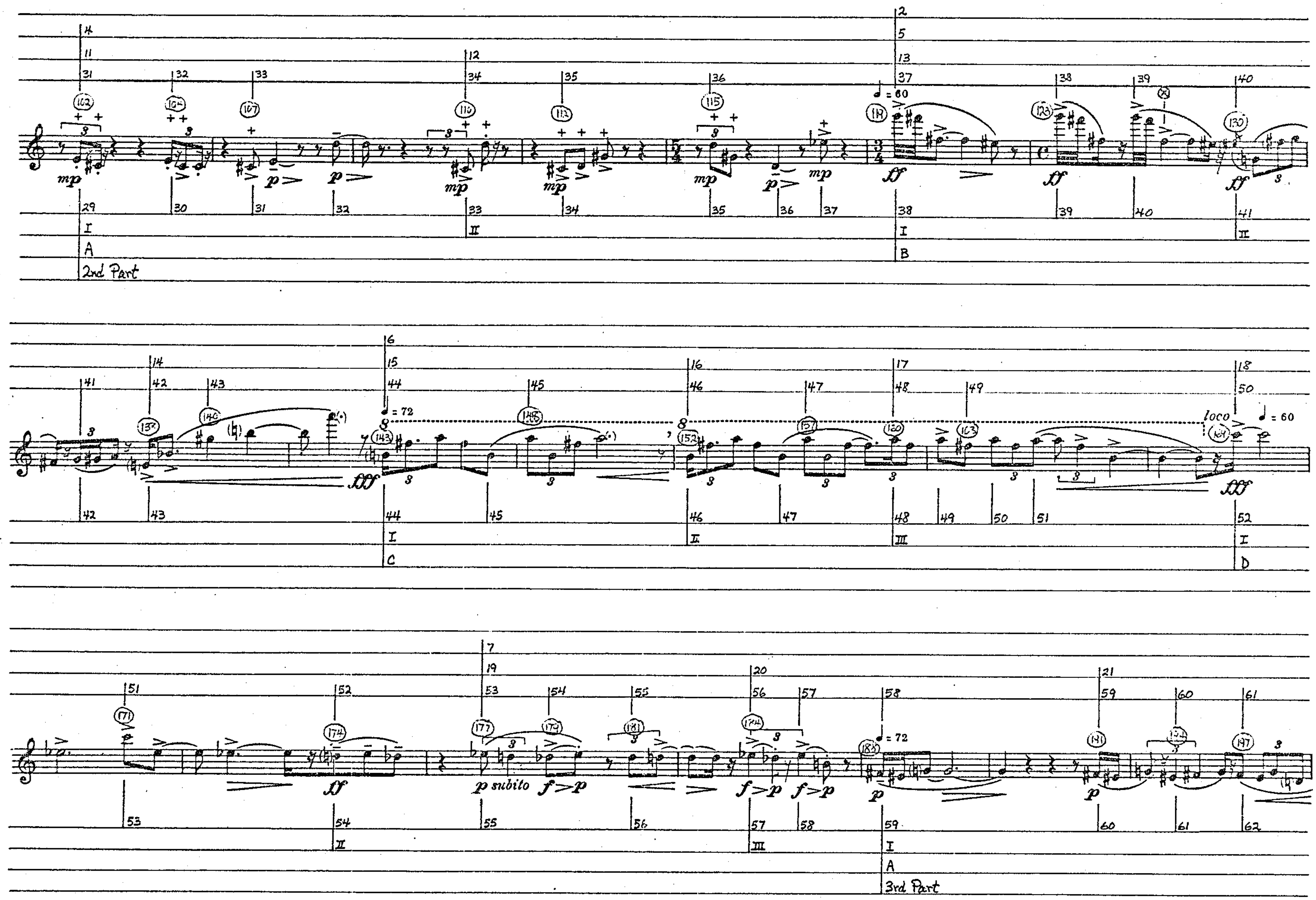

Figure IV.1 (p. 2 of 3).

Figure IV.1 (p. 3 of 3).

IV.B. Webern's CONCERTO, 2nd Movement (melodic line only).

The partitioning given by our programme for the first 28 bars of the 2nd movement of Webern's CONCERTO, Op. 24 (see Figure IV.2), is identical at every point but two with that assumed by Leopold Spinner in his "Analysis of a Period" (die Reihe, 1955).
Spinner's first "period" is equivalent to our first segment, and each of the three parts into which he divides this period ("antecedent", "consequent", and "prolongation of the consequent") begins at a point which coincides with one of our sequence-breaks (although the programme further divides Spinner's "consequent" into two sequences). Our clangs are coincident with his "phrases" everywhere except at elements 31-34 (marked ⓧ in the lower part of line 2 of the annotated score), but the discrepancy here is easily explained. Spinner's concern in the analysis is to demonstrate a cohesive unity in the music resulting from the recurrences of a limited set of rhythmic motives, in addition to that deriving from serial pitch-relations ("In a true masterpiece nothing occurs once only...." !). At the point in question, he notes the equivalence of a three-note motive beginning in bar 25 (element #31) with the motive which begins the movement (𝅗𝅥 ♩ ♩). To my ear, however, the oboe's high C in bar 25 sounds like the final element in the 3-element clang beginning in bar 23 (element #29), as our programme determines it, rather than an initial element, as Spinner would have it.

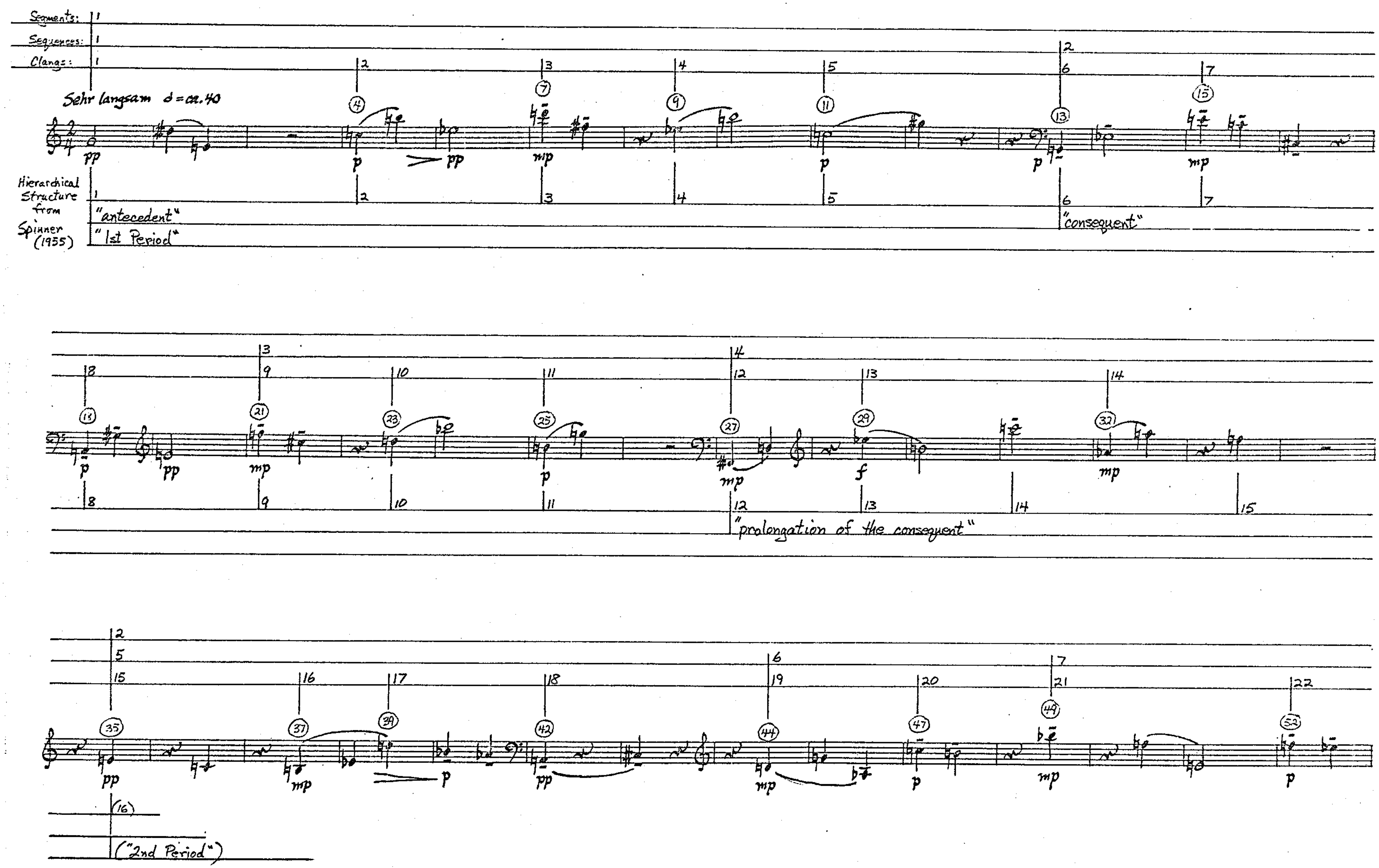

Figure IV.2. Anton Webern: CONCERTO, Op. 24, 2nd Movement (melodic line only) -- final results with "optimum" weightings (above), and segmentation according to Spinner (below).

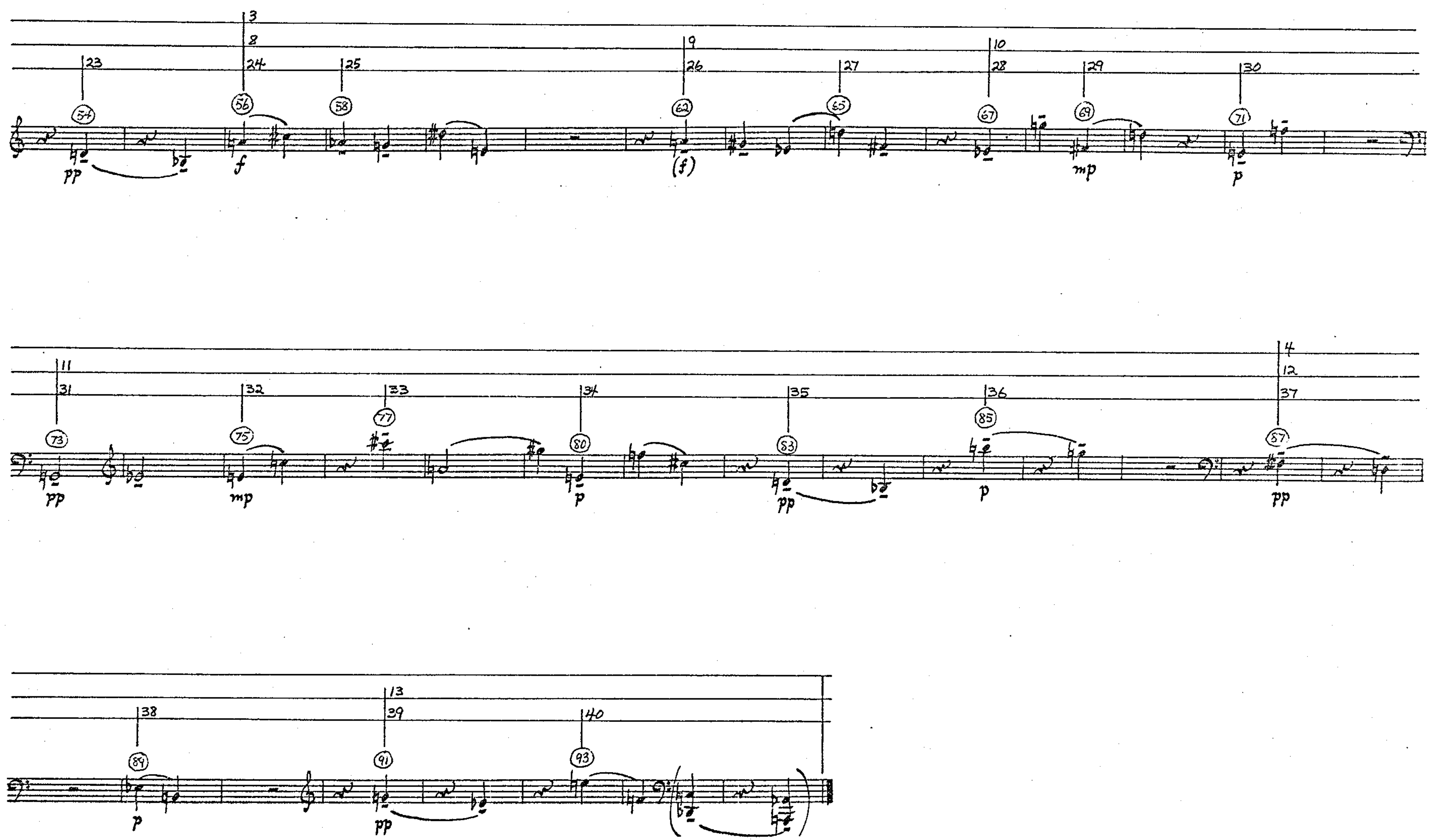

Figure IV.2 (p. 2 of 2).

IV. C. Debussy's SYRINX.

Figures IV.3 and IV.4 show the results for the Debussy piece, first with what we consider the optimum set of weights, and then with pitch weight doubled, producing an interesting variant. Note the differences -- at the points marked with an x in the variant -- between the two segmentations. These differences almost invariably involve a shift of just one TG -- an initiating component becoming a concluding component, or vice versa. In the Introduction, I listed as one of the "limitations" of our model the fact than no ambiguities are allowed, and suggested that this might seem less unrealistic after the matter of parametric weightings had been explained. Now it should be clear that such ambiguities of TG-boundaries in musical perception might simply be a result of variations in perceptual weight of the several parameters, between one hearing (or consideration) of a piece and another -- and/or differences in this respect between two different listeners. It is quite possible that these perceptual weights are variable -- over some small range, at least -- depending on various emotional or psychological or intellectual factors. Presumably, the temporal gestalt organization of a piece of music assumed or understood by any of us is some sort of amalgam of many different partitionings we have experienced, on many different occasions, and under many different circumstances. The implication that major differences in our analyses or descriptions or even interpretations of a piece may stem initially -- or even be utterly determined by -- nothing more nor less than differences in the relative weightings we unconsciously assign to the various parameters is not without significance for theories of musical "taste", "judgment", "value", etc.

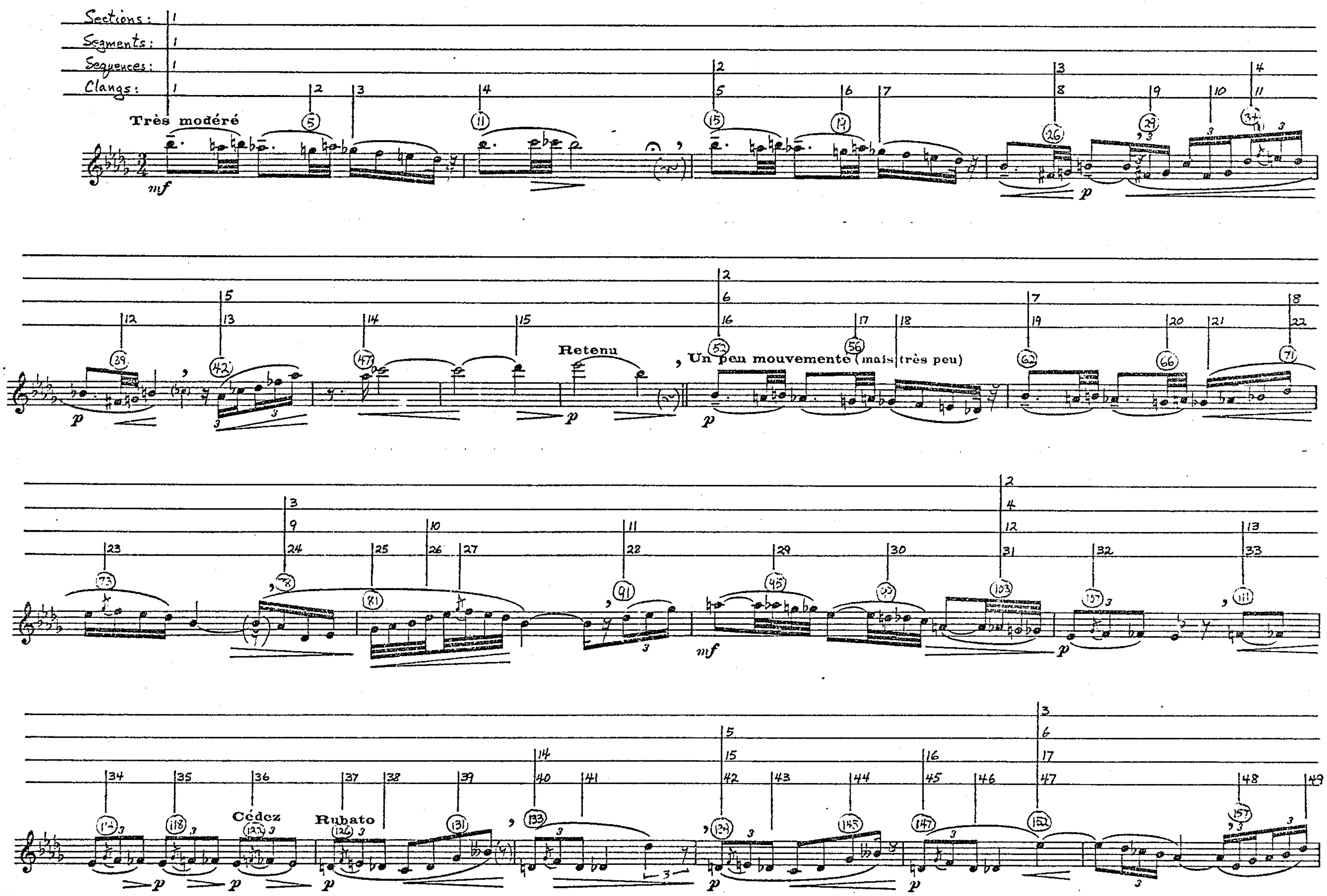

Figure IV.3. Claude Debussy: SYRINX -- final results with "optimum" weightings.

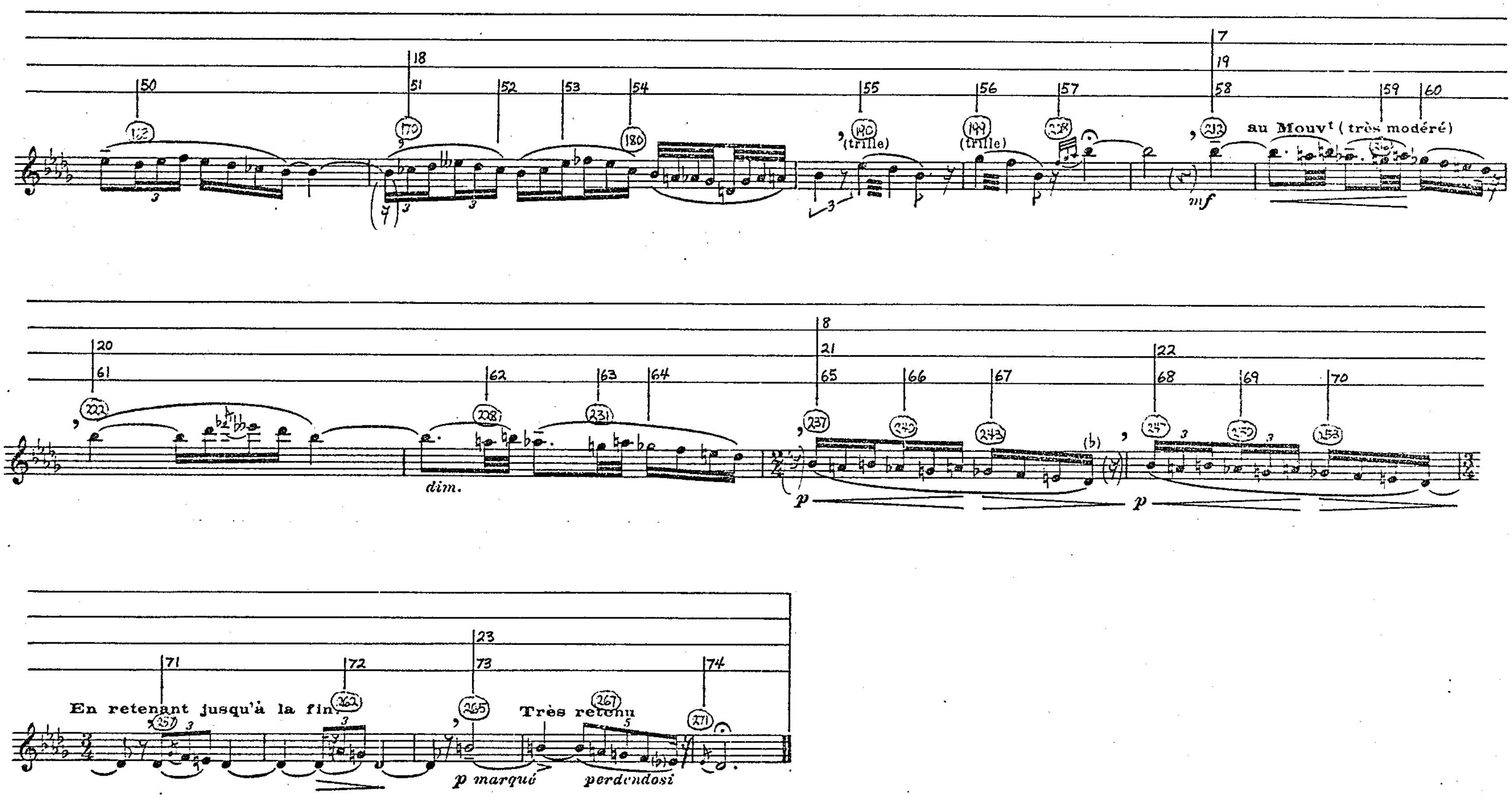

Figure IV.3 (p. 2 of 2).

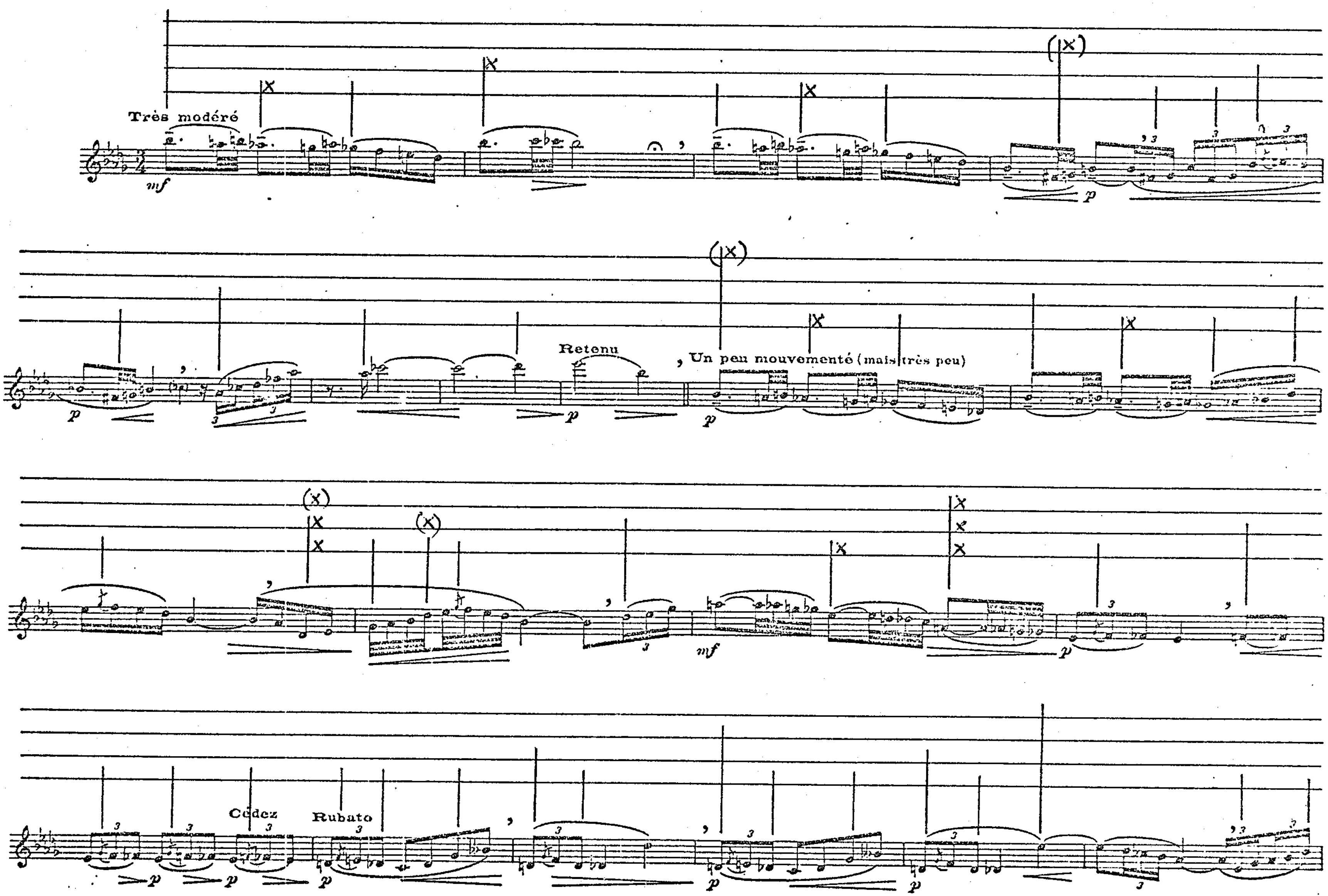

Figure IV.4 (p. 1 of 2). Claude Debussy: SYRINX. Variant segmentation with pitch-weight at twice the "optimum" value.

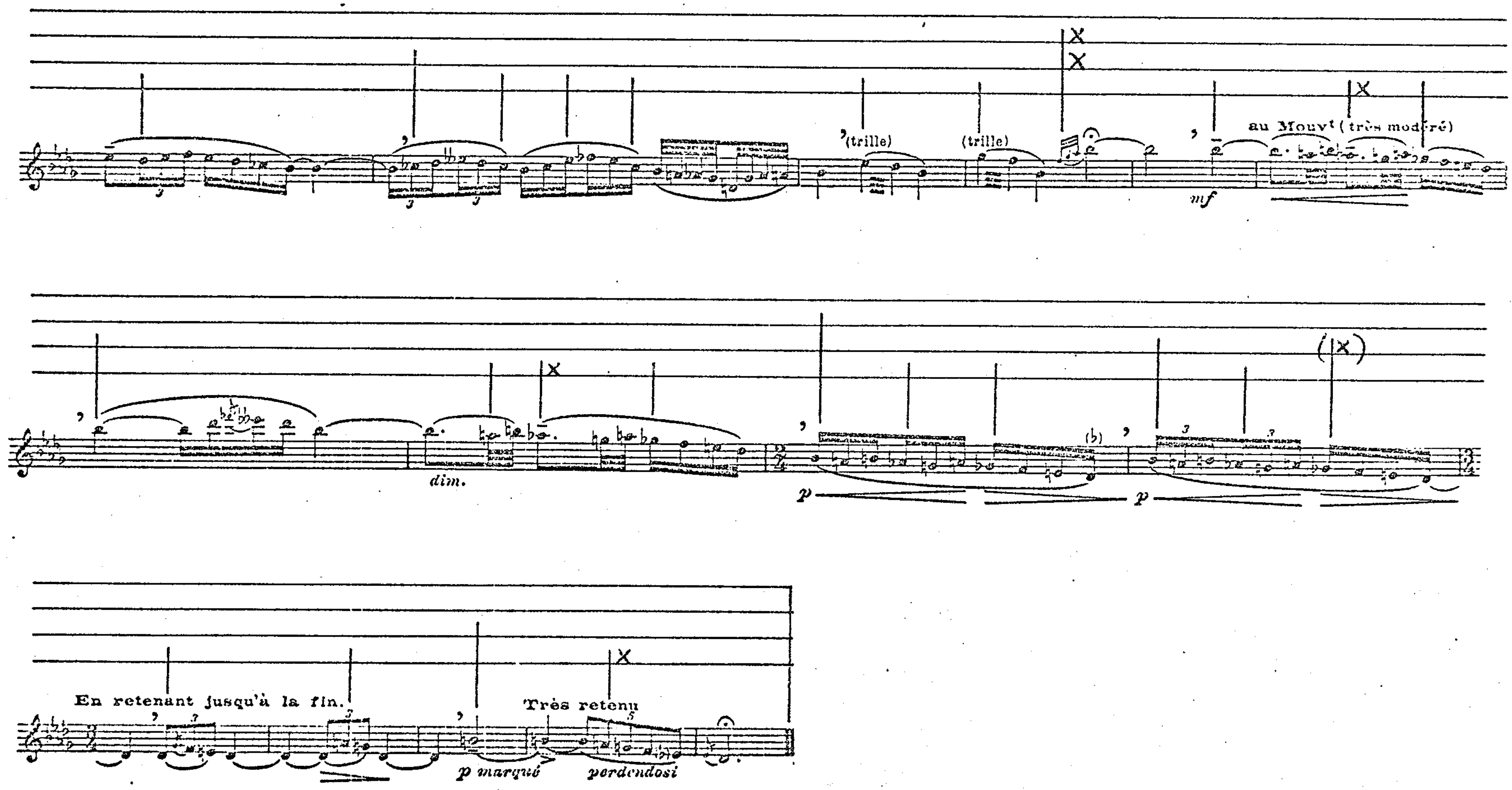

Figure IV.4 (p. 2 of 2).

A new way of dealing with ambiguous TG-boundaries has recently been sketched out, although we have not yet incorporated it into the algorithm. It will be described here, however, in case someone else might want to implement such changes in the current programme. These changes would require the simultaneous consideration of five (rather than three) disjunctions, and thus six (rather than four) TGs. They involve the notion of a "pivotal" TG -- i.e., a TG which might be either an initial or a final component of a TG at the next-higher level, depending on some small variation in weightings. Potential pivots of this kind frequently arise when a strong peak disjunction is immediately preceded or followed by a disjunction that is only slightly weaker than the peak itself, and both are considerably stronger than the disjunctions on either side of this central pair. Figure IV.5 gives a graphic representation of two examples of this type of configuration. For the discussion which follows, a simplified notation will be used, corresponding to the labels for points in the graphs. // insert Figure IV.5 about here

Let s_1 through s_6 be states in some parameter of the lower-level TGs being considered, S_1 and S_2 the states of the TGs at the next higher level, whose mutual boundary is about to be determined. Let d_1 through d_5 be the disjunction-measures for the second through sixth of these lower-level TGs, and D the boundary-disjunction between the two higher-level TGs. Now, let us consider the central disjunction-measure, d_3, and say that it is a peak (i.e., an initiator) if either of the following two conditions are true:

Either: $d_2 < d_3 > d_4$

Or: $d_2 < d_3 = d_4 > d_5$

If d_3 is not a peak, as defined above, the programme would continue as at present, but if d_3 is a peak, then the algorithm would test for the presence of a pivot, as follows (where the notation, "$dmax_{n,m}$" means the maximum value, d_m or d_n):

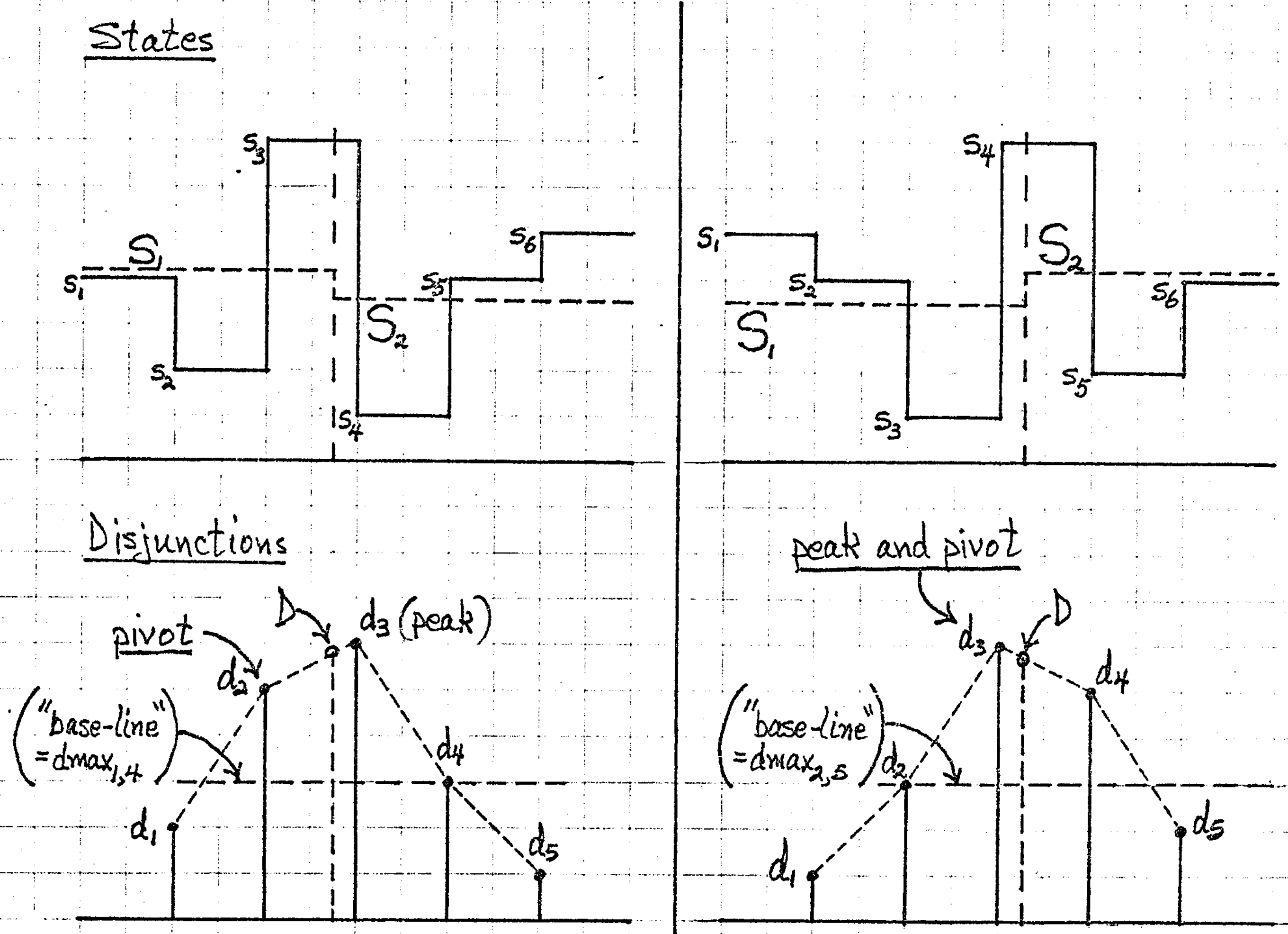

Figure IV.5. Disjunction configurations involving "pivotal TGs".

If: $d_2 > dmax_{1,4} + d_3 - d_2$ (i.e., $d_3 - d_2 < d_2 - dmax_{1,4}$)

then d_2 is a pivot (preceding the peak at d_3).

If: $d_4 > dmax_{2,5} + d_3 - d_4$ (i.e., $d_3 - d_4 < d_4 - dmax_{2,5}$)

then d_3 is a pivot (as well as a peak). In this case d_4 might be called a "secondary" or "potential" initiator. (If both d_2 and d_3 are pivots, the programme would skip the following and treat the peak at d_3 in the usual way).

When d_2 is a pivot, we would define the relative strength (R) of the peak with respect to the pivot and the "base-line" ($dmax_{1,4}$) as follows:

$$R = \frac{d_3 - dmax_{1,4}}{2(d_2 - dmax_{1,4})}$$

The boundary-disjunction (to be carried through to higher levels) would be computed as a weighted average of the two disjunctions (pivot and peak), as

$$D = (1. - R) * d_2 + R * d_3$$

and states at the next-higher level would be computed as though the point of initiation had occurred somewhere between the two disjunctions (i.e., sometime during the pivot), so that

$$S_1 = . . . + s_2 + R * s_3$$

and $$S_2 = (1. - R) * s_3 + s_4 + . . .$$

When d_3 is both a peak and a pivot, these computations would take a slightly different form, as follows:

$$R = \frac{d_3 - dmax_{2,5}}{2(d_4 - dmax_{2,5})}$$

$$D = R * d_3 + (1. - R) * d_4$$

$$S_1 = . . . + s_3 + (1. - R) * s_4$$

and $$S_2 = R * s_4 + s_5 + . . .$$

In the special case where $d_2 < d_3 = d_4 > d_5$, d_3 is still both peak and pivot (as when $d_2 < d_3 > d_4 > d_5$), and the above variables will assume the following values:

$$R = .5$$

$$D = d_3 = d_4$$

$$S_1 = \ldots + s_3 + .5s_4$$

and $$S_2 = .5s_4 + s_5 + \ldots$$

The output of such a modified programme might look essentially the same as that of the current programme, except that the value of R would be printed out, showing the presence and relative strength of each pivot TG. In addition, of course, the higher-level segmentations for a given set of weights might be different from those produced now, because of the different way of computing higher-level states and disjunctions. The algorithm would be much more stable, however, if modified in this way, and such increased stability would be a considerable advantage.

IV.D. Wagner: English Horn Solo from TRISTAN AND ISOLDE.

The results on this passage (from the beginning of the 3rd Act) are shown in Figure IV.6. I shall not comment any further on these results of our model, however, but leave it to the reader to decide whether -- and to what extent -- they correspond to the temporal gestalt organization he or she would make of these pieces "spontaneously". I should point out, however, that the intention behind these analyses -- at this stage in the development of the model -- has not been to discover any new formal relationships in the music analyzed. Rather, the music has been used primarily to test the model, and what I would expect the results to show are aspects of the structure of these pieces that we all more-or-less "take for granted". No effort has yet been made to check these results out by means of any sort of psychological testing procedures. At present, we have no clear idea how this might be done. We have proceeded, instead, on a sort of faith in the commonality of our (all of our) perceptual "structurings" in this respect, and the validity of our model may ultimately stand or fall according to whether this faith was justified or not.

Figure IV.6. Richard Wagner: English Horn Solo from TRISTAN AND ISOLDE -- final results with "optimum" weightings.

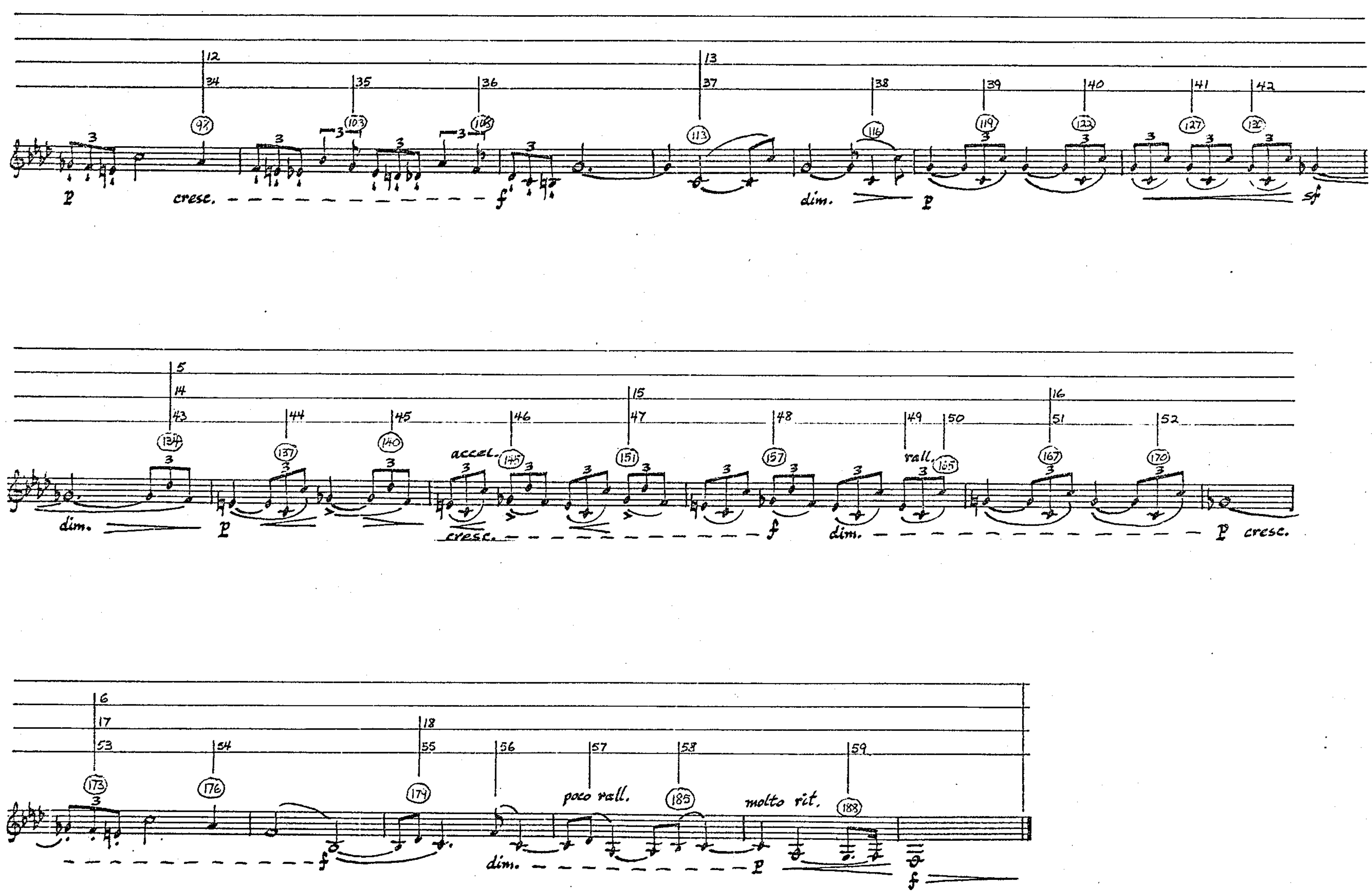

Figure IV.6 (p. 2 of 2).

V. Regarding "Decision-Delays" in the Model.

One of the most surprising aspects of our model has had to do with the delay between the moment of initiation of a TG and the moment at which this TG-initiation can be perceptually determined or "known". This is the result of several basic conditions inherent in the model: the fact that the TG-initiating effect of a given disjunction is dependent upon the disjunction which follows it (as well as the one which precedes it); the fact that the measure of disjunction involves intervals between mean parametric values of those TGs, and that these mean values can only be determined after that TG has ended, and that this, in turn, is determined by the perception that a new TG has begun, etc. The nature of these delay-processes may perhaps be clarified by considering the following series of inter-related "propositions":

(1) We cannot compute the disjunction between two TGs at a given level until their mean- (as well as boundary-) intervals are known;

(2) We cannot determine these mean-intervals until the mean parametric values of the second TG (at that same level) have been found;

(3) We cannot find these mean parametric values of the second TG until it is complete;

(4) We do not know that this second TG is complete until a third TG has been initiated (at that same level);

(5) We cannot decide that a third TG has been initiated until its second component is complete, which cannot be known until its third component has been initiated, which cannot be known until the third component at the next lower level has been initiated, which cannot be known until ....the third element (of the third clang of the third....component of that TG) has been initiated. Therefore,

(6) We cannot compute the disjunction between two TGs at a given hierarchical level until the beginning of the third element of the third clang of the third....component of the following TG -- i.e., the third TG at the same level. (!)

These relations are shown schematically in Figure V.1, where it can be seen that the delays are cumulative at progressively higher levels, and become quite long fairly quickly. The implications of this for musical perception are significant, especially for what they tell us about the importance and function of memory and anticipation. Clearly, the higher the level concerned, the greater will be the demands on short-term memory, if the TG-boundaries are to be determined at all, and the less certain these boundary determinations must be on a first hearing. On second and later hearings -- i.e., with gradually increasing familiarity with a piece -- these delays may be diminished, or finally eliminated altogether, to the extent to which TGs which have not yet occurred can be anticipated, via longer-term memory. Thus, while the indispensible importance of memory to musical perception is a matter of common agreement, and the anticipation of what is about to be heard in a familiar piece is surely a common experience, our model goes one step further and suggests that the primary function of both memory and anticipation is to diminish the delay between the moment of occurrence of a TG and the moment of recognition of its gestalt boundaries, and eventually to bring these into synchrony.

[insert Figure V.1 about here]

The extent to which our temporal gestalt perception might be confused -- if not utterly confounded -- by these phase-shifting "decision-delays" might appear to throw into question the efficacy of the model described here, if it were not for the very considerable information-reduction implicit in the model. That is, the information that is retained, at a given hierarchical level, for determining TG-initiations at that level, is always less than (or at most, equal to) half of the information that was needed at the next lower level. The ratio of information-reduction here depends on the average number of components per higher-level TG, which is -- by definition -- at least two. In fact, the average, for the

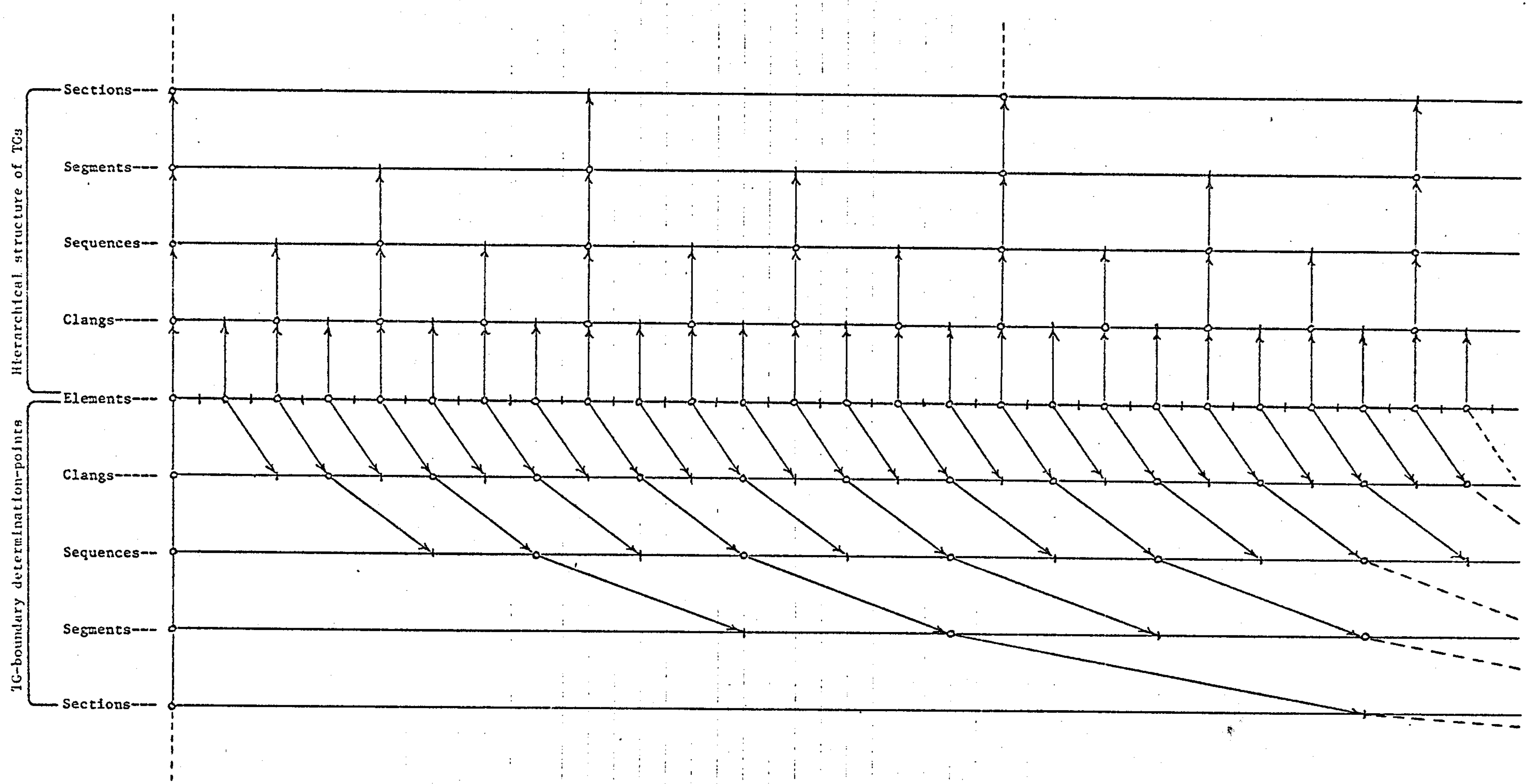

Figure V.1. Schematic diagram of decision-delays implied by the model.

four pieces we have analyzed so far, turns out to be slightly larger than three.*

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* The perceptual "computation" of mean parametric values, assumed by the model, might be considered a manifestation of that phenomenon which Miller (1956) has called "chunking", and the implications of this process as a device for information-reduction would be essentially the same as those ascribed to it by that author.

The algorithm described here has so far only been used to analyze these four pieces, and it obviously needs to be tested with other musical examples.** Considerable work thus remains to be done with the programme

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** Mr. Polansky is currently engaged in an extensive analysis of the primary melodic line of Carl Ruggles' PORTALS, using the algorithm as a first stage in an analytical process that will eventually incorporate morphological (and perhaps even harmonic) factors as well. Although this project is not yet finished, the preliminary results that have been obtained with the programme are encouraging, and provide further confirmation that our algorithm is, in fact, applicable to a wide range of musical examples.

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in its present form. In addition, there are several extensions of the model which ought to be possible, and which promise to be important to the growth of our understanding of musical perception, and perceptual processes in general. One area in which such extensions are most immediately needed would involve the incorporation of harmonic and motivic factors in the workings of the algorithm. Another would be whatever elaborations might be necessary to enable it to deal with polyphonic music.

Third, it should be possible to extend the model "downward" to sub-element levels. Such an extension would not only eliminate the tedious process of transcription now used to specify input values to the programme; it would be far more _accurate_ than this process can ever be, in representing the sounds as we actually hear them. This possibility is discussed -- though in only the most preliminary way -- in the next (and final) section of this paper.

VI. Possible Extension of the Model to Sub-Element Levels.

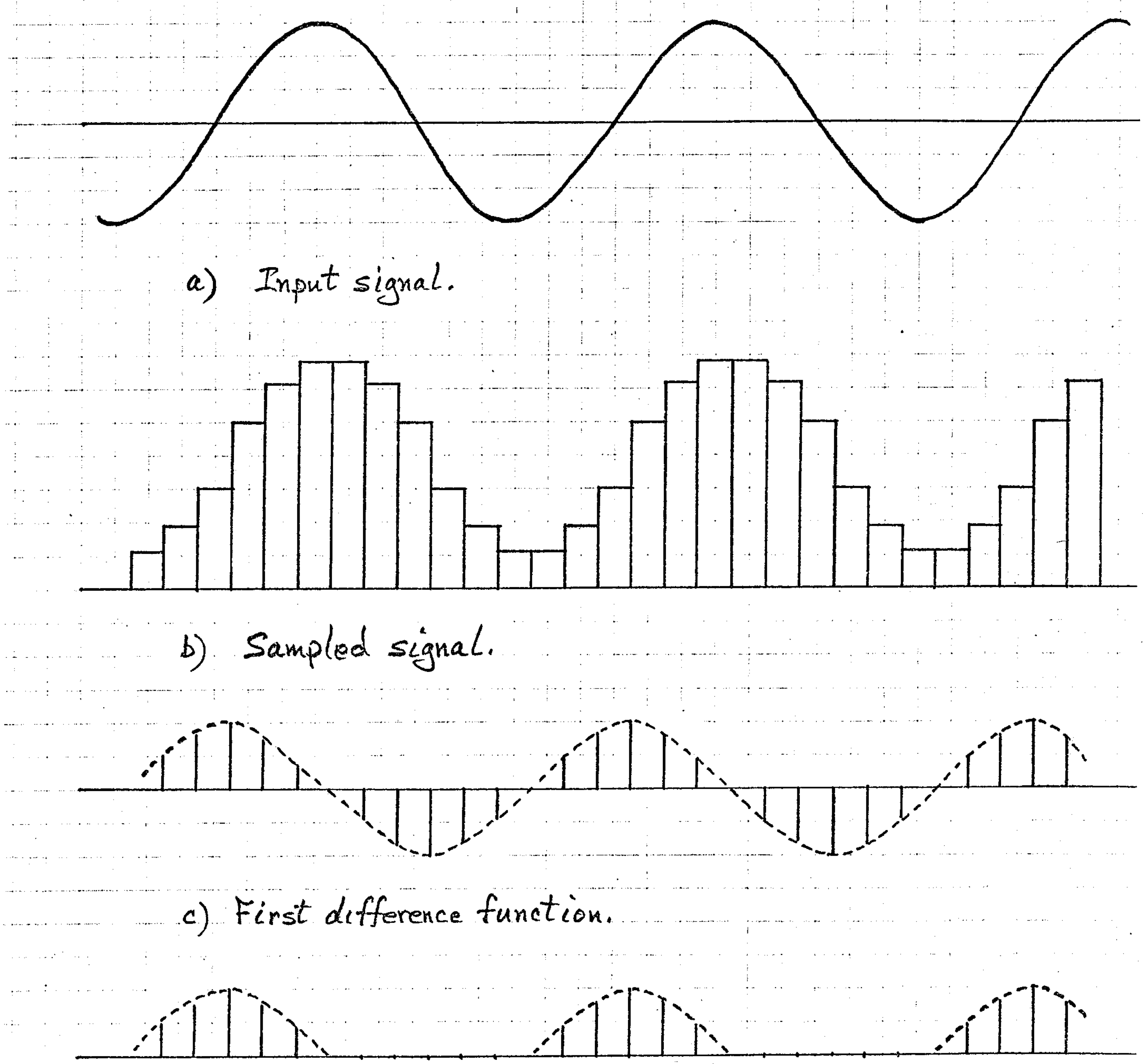
Input data to the current program are numbers specifying the parametric values of each "note" in a score. This means that the gestalt boundaries of TGs at the element-level are not derived by the algorithm, but simply "given" to it. What if there were no score? Would it be possible to extrapolate the procedures of the program "downward" to sub-element levels -- as would be necessary, for example, if the algorithm had to deal directly with the signal itself -- i.e., if the input to the program were acoustical, rather than numerical? I suggest that this extension to sub-element levels is quite possible, and that its consideration may help throw some light on the algorithm as it stands now, and perhaps lend it still more credibility.

In its most primitive form, any acoustical signal is nothing but a fluctuation of amplitude with time. What we call "frequency" is already a higher-order "parameter" that must be derived or extracted from the signal by the ear and brain. It has been known for some time that this is achieved by a combination of "place" and "time" mechanisms -- the first determined by the region of maximum displacement of the travelling wave along the basilar membrane (a spatial ordering of frequencies which is preserved in the "tonotopic" organization at the cortical level), the second by the timing of synchronized "volleys" of neural discharges in the organ of Corti. In addition, recent experiments suggest that these neural discharges occur only in a uni-polar way -- i.e., only during the periods of unidirectional movement of the basilar membrane (see Roederer, 1973, pages 47-51, for a review of some of these experiments, and a discussion of their implications for auditory theory). The "signal" transmitted through the auditory nerve to the brain might thus be considered (to a first approximation, at least) a "half-wave rectified" version of the first derivative of the original signal.

Suppose now that we sample the signal we wish to analyze, by means of an analog-to-digital converter, so that it is represented by a series of discrete numbers (amplitude samples) suitable for input to a computer programme. Since the current algorithm is limited to monophonic configurations, we shall consider a sinusoidal wave-form only, but imagine this wave-form to be modulated in a variety of ways, analogous to the kinds of changes we encounter at higher levels. The multidimensional "space" at those higher levels is here reduced to just two dimensions -- amplitude and time -- but we can use the same procedures as before to determine TG-initiation. The "elements" (or micro-elements) here are the individual amplitude samples, and the disjunction between two consecutive micro-elements will be the weighted sum of the time- and amplitude-intervals between them. Note that a series of such amplitude-intervals constitutes the first difference function of the sampled signal -- the digital counterpart of the first derivative.

Next -- in line with what was said above about the timing of neural discharges in the auditory system -- we "half-wave rectify" this difference-function, by setting to zero all values less than or equal to zero (or some differential "threshold"). Since the time-intervals between successive samples are all equal, the only variable involved in the computation of disjunction is amplitude, and the points of initiation of primitive "clangs" (or micro-clangs) will be indicated by peaks in this (rectified) first difference function itself. These peaks will in fact correspond to the beginnings (the points of positive zero-crossings) of successive fundamental periods of the original signal, as can be seen in Figure VI.1, which shows the results of this initial processing on a simple sine wave with constant amplitude and frequency. insert Figure VI.1 about here

The parametric states of each micro-clang are (1) its starting-time, (2) some measure of its mean amplitude (probably RMS values would be the most appropriate here), and (3) its temporal density -- here equivalent to the sampling rate of the A-D converter. Mean-distances between these micro-clangs will be the differences between their states, boundary-distances the differences



a) Input signal.

b) Sampled signal.

c) First difference function.

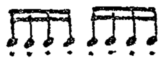
d) Half-wave rectified first difference function.

Figure VI.1. Initial processing on a sine wave.

between the states of "adjacent terminal components" –– just as at higher levels –– and disjunction would be computed as the weighted sums of these mean- and boundary-distances. When this is done, we shift to the next higher level, and look for primitive "sequences" (or micro-sequences). In this example, however, because of the constancy of both amplitude and frequency, the disjunction-measures between successive micro-clangs will all be equal, so that no higher-level TG-organization will occur. If, however, we modulate these sine waves with a series of amplitude-envelope functions, micro-sequence-initiations will be found which correspond to the beginnings of successive <u>tones</u> –– the "elements" we have been <u>starting</u> with in the current programme. The component <u>temporal density</u> of each of these micro-sequences will turn out to be the <u>fundamental frequency</u> of each tone, and taking the logarithm of this (as is now done to compute temporal density at the "macro"-clang level) translates it into a measure of <u>pitch</u>. Similarly, the intensity-levels of these micro-sequences –– computed logarithmically in decibels –– will provide values corresponding to the "dynamic" levels used as input to the current programme.

In computing the intensity-levels of micro-sequences, it would be necessary to specify some threshold value, below which any amplitudes output by the A-D converter would be considered indistinguishable from the noise-level of the system. This would provide a means of identifying the actual <u>rests</u> in the course of a piece –– and incidentally, a means far more accurate than is provided by ordinary musical notation (e.g., a series of staccato notes is actually interspersed with a series of rests, although the notation does not make this explicit). If, in addition, we define the <u>beginning</u> of a rest as the starting-time of any micro-clang (whether alone or as the first of a series of similar micro-clangs) whose mean (RMS) amplitude is below this threshold, we hit upon a useful clarification of –– or rationale for –– what might have appeared to be a rather ad hoc treatment of rests in the current algorithm. there, the duration of an element was defined in such a way that it included the duration of any rest intervening between it and the following element (including none at all, or a "rest" of zero-duration). At the same time, the "boundary-interval" between two elements -- in the time-parameter -- was defined as the duration of any such rest separating the two elements -- as though this rest were some sort of "temporal gestalt-unit" in its own right. Now we see that this is, in fact, the case. That is, a rest is simply the last micro-clang in the set of micro-clangs (the preceding members of which are the individual periods of the signal) constituting one micro-sequence (our "macro"-element).

Now it will be necessary to make explicit a "rule" that was taken for granted at higher levels -- namely, that the mean values (in amplitude or frequency) of a TG whose final component is a rest are to be computed only through regions of non-zero amplitude. That is, both the average amplitude and the average frequency of such a micro-sequence is, in effect, "sustained" through a rest.

If, in addition to an overall envelope, the sine wave is subjected to steady-state amplitude or frequency modulations ("tremolo" or "vibrato"), micro-sequences will be detected which correspond to successive periods of the modulating function -- thus interpolating an extra hierarchical level between those of the fundamental periods, on the one hand, and the overall tonal envelope, on the other. In these cases, what we normally call an "element" (at higher levels) would be analyzed as a micro-segment, instead of a micro-sequence. This discrepancy in hierarchical level suggests that the TGs that would be derived by an algorithm designed to deal directly with the acoustical signal might occasionally result in a partitioning different from that derived as we do now from the score. This is not necessarily a drawback, however, because there are important instances when the <u>notational</u> gestalt-units in the score (i.e., the "notes") do <u>not</u> accurately represent the element-level organization actually perceived by the ear. For example, the perceptual difference between a series of repeated-notes (notated as ) and a sustained tone () played with the usual flute "vibrato" (which is actually an amplitude-modulation, or "tremolo") is probably not nearly as great as the difference in notation would imply. Even so, any such discrepancies that seemed inappropriate to the perceptual realities here could probably be handled by (and would probably require) a procedure analogous to that used in the current programme which sets a limit on the minimum clang-duration. TG-articulations shorter than this minimum duration might either be disregarded or referred to the category of timbre (one aspect of which is determined by such steady-state modulations -- see Tenney, 1965).

I have said that -- at sub-element levels -- frequency is a "higher-order parameter", whose values would have to be extracted from the signal by the algorithm, and I have suggested how this might be done by way of operations virtually identical to those carried out by the current program at higher levels. <u>Timbre</u>, too, is such a higher-order parameter, derived or extracted by the ear and brain from the acoustical signal in ways that are probably analogous to those involved in the perception of polyphony and harmony. But just as the present model is not yet able to deal with either polyphony or harmony, I am not yet ready to say anything more about the problem of timbre, except that I suspect that its solution depends a great deal on the solution of the problems of polyphonic and harmonic perception -- and vice versa.

Many of the details of any "downward" extrapolation of the procedures of the model are still unclear, but I am convinced that such an extension to sub-element levels is an area of investigation well worth pursuing. Moreover, the conclusion seems justified that the basic procedures in this model will work -- with perhaps only minor revisions -- at <u>any level</u> of perceptual organization. Thus, extrapolations of the model "upward" to TGs larger than individual pieces should also be possible, as well as what might be described as extrapolations "outward" to gestalt-units involving other modes of perception, or several _different_ modes of perception simultaneously. The complexity of these more general, "experiential" gestalt-units might seem to prohibit a realistic application of a model as simple as the one proposed here, but consider the fact that this complexity -- including the multiplicity of parameters involved -- might develop _gradually_ as we move from lower to higher levels, just as it does in the case of musical perception. That is, at the _lowest_ level -- in every sense modality -- the situation _may_ be as simple as we find it to be acoustically -- where the only parameters involved are amplitude and time, with other parameters "emerging", step-by-step, at progressively higher levels. If this is indeed the case, then -- ironically -- it will turn out that the best way of dealing with these more complicated situations will be to deal with them _thoroughly_ -- from the ground up -- rather than partially, as by trying to simplify things (or neglect them) at the outset. Thus we may find that "reality" is not, after all, as complicated as it sometimes seems to be.

VII. A GLOSSARY OF SPECIAL TERMS.

BOUNDARY. A point in time marking the beginning or end of a TG; often the point of junction between two successive TGs.

BOUNDARY-INTERVAL. See INTERVAL.

BOUNDARY-DISTANCE. See DISTANCE.

CLANG. A TG at the second hierarchical level. In Meta ≠ Hodos, the clang was defined as "any sound or sound-configuration which is perceived as a primary musical unit -- a singular aural Gestalt". In META Meta ≠ Hodos, in order to distinguish the clang more precisely from an ELEMENT, it was further described as "a TG at the lowest hierarchical level within which still-lower-level TGs are perceived".

CITY-BLOCK METRIC. See METRIC.

COMPONENT. A TG which is contained by a TG at the next-higher level.

DISJUNCTION. A measure of the Gestalt-segregation between two successive TGs, and the central concept on which is based the "fundamental hypothesis of temporal gestalt perception" stated on page 22 . It is computed as a weighted sum of the mean-distance and the boundary-distances (at all lower levels) between two TGs. The concept of DISJUNCTION, defined in this way, both incorporates and replaces the earlier notions of PROXIMITY and SIMILARITY as the "primary factors of cohesion and segregation" involved in musical perception.

DISTANCE. The conception of a measurable separation between two "points" in a multidimensional "space" -- whether physical or psychological/perceptual. In the context of our model, the dimensions of this space are the individual parameters of sound, and a particular DISTANCE-MEASURE, or METRIC is used to compute the distance between any two points in this (musical) space.

DISTANCE-MEASURE. See METRIC.

ELEMENT. A TG at the first (or lowest) hierarchical level. An element is assumed to be "not temporally divisible, in perception, into smaller (i.e., shorter) parts (or COMPONENT TGs).

HIERARCHICAL LEVEL (or simply LEVEL). A descriptive category for TGs, incorporating the ideas of relative length, inclusion, and structural complexity. That is, a TG at a "higher" level is generally <u>longer</u> than TGs at "lower" levels; it must <u>include</u> two or more TGs at the next-lower level; and thus it manifests a structural <u>complexity</u> which is greater than that of lower-level TGs. The terms that we use to designate TGs at the first five hierarchical levels are (in "ascending" order) ELEMENT, CLANG, SEQUENCE, SEGMENT, and SECTION.

INTERVAL. A difference between two values in some parameter. A MEAN-INTERVAL between two TGs -- in any parameter except time -- is the difference between their mean (i.e., average) values in that parameter (in the time-parameter, it is the difference between their starting-times). A BOUNDARY-INTERVAL between two TGs (in any parameter except time) is the difference between the mean values (in that parameter) of their <u>adjacent terminal components</u> (in the time-parameter, it is the duration of the final component in the first TG -- or, at the element-level, the duration of any rest separating the two elements).

LEVEL. See HIERARCHICAL LEVEL.

MEAN-INTERVAL. See INTERVAL.

MEAN-DISTANCE. See DISTANCE.

METRIC (also DISTANCE-MEASURE). A specific rule or formula for computing a distance between two points in a multidimensional space (also see DISTANCE). Our algorithm uses what is called the CITY-BLOCK (rather than the more familiar Euclidean) METRIC, in which a distance between two points is computed as the (weighted) sum of the intervals in each individual dimension (or parameter).

PARAMETER. Any distinctive attribute of sound, in terms of which one sound may be perceived as different from another, or a sound may be perceived to change in time. The parameters which are considered in our model are pitch, intensity, duration, and temporal density.

PROXIMITY. The "nearness" in time of two events (or two TGs) -- earlier conceived as one of the two "primary factors of cohesion and segregation", but now incorporated into the measure of disjunction. The term, "proximity" has also been used by some of the most important authors referred to in this paper (e.g., Shepard) to mean what we are here calling "distance".

SECTION. A TG at the fifth hierarchical level, containing two or more segments.

SEGMENT. A TG at the fourth hierarchical level, containing two or more sequences.

SEQUENCE. A TG at the third hierarchical level, containing two or more clangs.

SHAPE. The contour or profile of a TG in some parameter, determined by changes in that parameter (from one component of that TG to another) with time.

SIMILARITY. The "nearness" of two events (or two TGs) in some parameter other than time -- earlier conceived as one of the two "primary factors of cohesion and segregation", but now incorporated into the measure of disjunction.

STATE. Earlier defined as the "global properties" of a TG, with respect to each relevant parameter; now including (in the context of our model) the starting-time of a TG, and its mean values in the parameters pitch, intensity, and temporal density.

STRUCTURE. Relations between subordinate parts of a TG -- i.e., relations between its component TGs at the next lower level (or at several lower levels).

TEMPORAL DENSITY. One of the four basic parameters (with pitch, intensity, and duration) used in the computations of distance and disjunction in our model; proportional to the logarithm (base 2) of the average number of elements per second in a higher-level TG (or, at the element-level, to the $\log_2$ of the reciprocal of the element-duration).

TEMPORAL GESTALT-UNIT (abbreviated TG). A span of time apprehended as both internally cohesive and externally segregated from time-spans preceding and following it. Also, the perceptual "objects", processes, or events which mark and/or "occupy" these time-spans. In the latter sense, and in the context of musical perception, we distinguish and label TGs at five hierarchical levels: ELEMENT, CLANG, SEQUENCE, SEGMENT, and SECTION. A TG at any level above the first is assumed to consist of two or more TGs at the next-lower level, and these are called COMPONENTS of the larger TG.

TG. See TEMPORAL GESTALT-UNIT.

WEIGHT, WEIGHTING, WEIGHTING-FACTOR. A numerical value used (when taken "across parameters") to increase or decrease the effective magnitude of the parametric intervals used in the computations of distance and disjunction, or (when taken "across hierarchical levels") to diminish the effect on the disjunction-measure of boundary-distances at lower levels.

VIII. REFERENCES.

Attneave, F., "Dimensions of Similarity," Amer. J. Psychol., 1950, 63, 516-556.

Austin, W. W., Music in the Twentieth Century, W. W. Norton, New York, 1966.

Beckenbach, E. & Bellman, R., An Introduction to Inequalities, New Mathematical Library, 1961.

Bregman, A. S., "On the Perception of Sequences of Tones," a paper presented to the AAAS meeting, December 28, 1971.

Ellis, W. D. (editor), A Source Book of Gestalt Psychology, Routledge and Kegan Paul Ltd., London, 1955.

Koffka, K., Principles of Gestalt Psychology, Harcourt, Brace, New York, 1935.

Köhler, W., Introduction to Gestalt Psychology, New American Library, 1959.

Lipschutz, S., General Topology, McGraw-Hill, New York, 1965.

Miller, G. A., "The Magical Number Seven, Plus or Minus Two: Some Limits on Our Capacity for Processing Information," Psychol. Rev., 1956, 63, 81-97.

Nattiez, J.-J., "Densité 21.5" de Varèse: Essai d'Analyse Sémiologique (monograph), Groupe de Recherches en Sémiologie Musicale, Faculté de Musique, Université de Montréal, Québec, 1975.

Roederer, J. G., Introduction to the Physics and Psychophysics of Music, Springer-Verlag, New York, 1973.

Shepard, R. N., "Attention and the Metric Structure of the Stimulus Space," Bell Telephone Laboratories Technical Memorandum, October 19, 1962 (a).

Shepard, R. N., "The Analysis of Proximities: Multidimensional Scaling with an Unknown Distance Function" I and II, Psychometrika, 1962 (b), 27, #2, 125-140, and #3, 219-246.

Spinner, L., "Analysis of a Period", die Reihe #2, 1955, English Edition, 1958.

Stevens, S. S., "Mathematics, Measurement, and Psychophysics", Handbook of Experimental Psychology, John Wiley and Sons, Inc., New York, 1951.

Tenney, J. C., *Meta ≠ Hodos -- A Phenomenology of 20th Century Music and an Approach to the Study of Form*, privately circulated monograph, 1961, later published by the Inter-American Institute for Musical Research, Gilbert Chase, editor, Tulane University, New Orleans, 1964 (this has long been out of print, and is now available only from the author, c/o Music Dept., York University, Downsview, Ontario).

Tenney, J. C., "The Physical Correlates of Timbre", *Gravesaner Blätter*, 1965, *26*, Studio Hermann Scherchen, Gravesano, Switzerland.

Tenney, J. C., "Computer Music Experiences, 1961-64", *Electronic Music Reports*, 1969, *1*, Utrecht, Holland.

Tenney, J. C., "Form in 20th Century Music", in *Dictionary of Contemporary Music*, E. P. Dutton, New York, 1971.

Tenney, J. C., "META Meta ≠ Hodos" (1975), *J. Experimental Aesthetics*, 1977, *1*, 1-10, ARC Publications, Vancouver, B. C.

IX. A. Programme Listing.

```
$JOB   WATFIV  YFAFA018MUS,LINES=60,PAGES=175,T=180
         REAL P(1000),DUR(1000),RST(1000),AMP(1000),
     1   TIM(1000),TD(1000)
         REAL LOLEV,HILEV
         REAL TITLE(15)
         REAL A1(1000),A2(1000),P1(1000),P2(1000),TD1(1000)
     1,TD2(1000)
      REAL DM(1000),DMST(1000),DMD1(1000),DMD2(1000)
         REAL DMIN
      INTEGER ISTART(1000),IEND(1000)
      INTEGER NEXT(10),COUNT(10),NUMBER(10)
      INTEGER HICNT,FLAG,TEMPO1
C
C            INITIALIZE AND READ IN SCORE
      TLOG(A)=ALOG(A)/ALOG(2.0)
      READ(5,39)TITLE
 39   FORMAT(15A4)
      READ(5,40)NUMBER(1),CMIN,TEMPO1
 40   FORMAT(I5,F5.2,I4)
         TEMPO=FLOAT(TEMPO1)/50.0
C        ROUNDS OFF CMIN TO PREVENT FORTRAN ACCURACY ERRORS.
         CMIN=CMIN+.001
      WRITE(6,41)TITLE
 41   FORMAT(1H1,15A4)
C
         WRITE(6,55)TEMPO1
 55      FORMAT(1H0,'TEMPO (MM) =',I8)
         WRITE(6,38)CMIN
 38      FORMAT(1H0,'CMIN=    ',F5.2)
C
      EPS1=0.0001
      N=NUMBER(1)
      WRITE(6,59)
  59  FORMAT(1H1,2X,'N',4X,'DUR',5X,'RST',4X,'PITCH',6X,'A1',7X,'A2',3X,'
     1'TMBR',/)
      DO 67 I=1,N
        READ(5,60)DUR(I),RST(I),P(I),A1(I),A2(I),TIM(I)
 60     FORMAT(5X,6F5.0)
      WRITE(6,66)I,DUR(I),RST(I),P(I),A1(I),A2(I),TIM(I)
  66  FORMAT(I5,6F8.2)
 67   CONTINUE
C
        DO 9725 I=1,N
                P1(I)=P(I)
                DUR(I)=DUR(I)/TEMPO
                        TD(I)=3.0-TLOG(DUR(I))
                        TD1(I)=TD(I)
                RST(I)=RST(I)/TEMPO
                AMP(I)=(A1(I)+A2(I))/2.0
 9725           P2(I)=P(I)
                CMIN=CMIN/TEMPO
        READ(5,70)NPASS
 70     FORMAT(I4)
        DO 9600 ILOOP=1,NPASS
                        N=NUMBER(1)
      READ(5,72)DW,PW,AW,TDW,TW
 72     FORMAT(5F6.2)
      WRITE(6,74)DW,PW,AW,TDW,TW
 74   FORMAT(1H0,'WEIGHTINGS: PROXIMITY=',
     1  F5.2,' PITCH=',F5.2,' INTENSITY=',F5.2,' TEMPORAL DENSITY=',
```

```
     2  F5.2,' TIMBRE=',F5.2)
        WSUM=PW+DW+TDW+AW+TW
        PW=PW/WSUM
        DW=DW/WSUM
        TDW=TDW/WSUM
        AW=AW/WSUM
        TW=TW/WSUM
        DO 76 K=1,10
76              COUNT(K)=0
        DO 78 K=1,1000
            DM(K)=0.0
      DMST(K)=0.
        DMD1(K)=0
        DMD2(K)=0
                IEND(K)=0
78              ISTART(K)=0
C
                        DW=DW*10.0
C
C               INTIALIZES BOUNDARIES ON FIRST LEVEL
      DO 1777 I=2,N
                PI=PW*(P1(I)-P2(I-1))
                TDI=0.0
                DI=DW*(RST(I-1))
                IF (RST(I-1).EQ.0.)ALAST=A2(I-1)
                IF(RST(I-1).GT.0.)ALAST=0.
                AI=AW*(A1(I)-ALAST)
                DM(I)=(ABS(DI)+ABS(PI)+ABS(TDI)+ABS(AI))
        DM(I)=DM(I)*2.0
C
1777    CONTINUE
        DO 80 I=501,1000
                P(I)=0
                DUR(I)=0
                AMP(I)=0
                TD(I)=0
                TIM(I)=0
                RST(I)=0
80      CONTINUE
C
        LEVEL=0
C
C
C               MAIN PROGRAM
C
C
C       SETS NEW LEVEL,CLEARS COUNTER(CHECK), AND INITIALIZES
C       FLAG, WHICH TELLS YOU IF YOU'VE FINISHED ON A LEVEL.
C       CHECK IS A VARIABLE WHICH SEES IF THERE ARE ENOUGH
C       TG'S CURRENTLY TO COMPUTE FOR INITIATION.
C
100     CHECK=0
        ET=0.
        FLAG=0
        LEVEL=LEVEL+1
C
C
C               SETS ARRAY INDICES.
        LOLEV= (2.0**(LEVEL-1))
        HILEV= (2.0**(LEVEL))
```

```
            K1=1000.0-((1.0/LOLEV)*1000.0)
            K2=1000.0-((1.0/HILEV)*1000.0)
            WRITE(6,9375)
C
C           IF NUMBER<4, THEN NOT ENOUGH TG'S ON THIS HIGHEST LEVEL
C           TO TRY AND MAKE DISTINCTIONS. SO PROGRAM TERMINATES.
            IF (NUMBER(LEVEL).LT.4) GO TO 9000
            HICNT=1
            ISTART(K2+1)=K1+1
C
C                    SPECIFIC >LANAR COMPUTATION
C     500   COUNT(LEVEL)=COUNT(LEVEL)+1
            TCOUNT=COUNT(LEVEL)
            CHECK=CHECK+1
            IF(TCOUNT.LE.NUMBER(LEVEL))GO TO 550
            FLAG=1
            GO TO 700
C
C
C           KEEPS TRACK OF ELAPSED TIME IN TG.
  550       ET=ET+DUR(TCOUNT+K1)
C
C           CHECKS FOR 'ONE ELEMENT CLANGS'.
            IF(CHECK.LT.2)GO TO 500
C
C                    COMPUTE INTERVAL (DISJUNCTION MEASURE)
            IND=(TCOUNT+K1)
C
C                    MEAN INTE3VALS
            PI=PW*(P(IND)-P(IND-1))
            DI=DW*DUR(IND-1)
            IF (LEVEL.GT.1)DI=0
            TDI=TDW*(TD(IND)-TD(IND-1))
            AI=AW*(AMP(IND)-AMP(IND-1))
            TI=TW*(TIM(IND)-TIM(IND-1))
C                    SUMS MEAN INTERVALS.
            ABSUM=ABS(PI)+ABS(TDI)+ABS(AI)+ABS(TI)+DI
C
C
C                    "CITY-BLOCK" METRIC.
            DM(IND)=.5*DM(IND)+ABSUM
C
            IF(TCOUNT.LT.4)GO TO 650
C
C           COMPUTES DIFFERENCE OF PEAK WITH SURROUNDING DM'S TO GIVE
C           ROUGH IDEA OF STRENGTH OF INITIATOR.
            DMD1(IND-1)=1.0-(DM(IND-2)/DM(IND-1))
            DMD2(IND-1)=1.0-(DM(IND)/DM(IND-1))
C
  650       IF (CHECK.LT.4) GO TO 500
C
C           CHECKS MINIMUM TG LENGTH.
            ETCHK=ET-(DUR(IND-1)+DUR(IND))
            IF(ETCHK.LE.CMIN)GO TO 500
C
C                    TESTS FOR PEAK.
            IF ((DMD1(IND-1).LT.EPS1).OR.(DMD2(IND-1).LT.EPS1))
         1  GO TO 500
C
C           IF DMST POSITIVE, THEN PEAK. IF ZERO, THEN NOT PEAK.
```

```
      C                COMPUTE PEAK STRENGTH.
            DMST(IND-1)=(DMD1(IND-1)+DMD2(IND-1))/2.
      C
      C                IF PEAK, VALUES ARE STORED FOR NEXT LEVEL STATES.
      700   PITSUM=0
            TIMSUM=0
            AMPSUM=0
            DURSUM=0
            TDSUM=0
            JEND=TCOUNT+K1-2
            IF(FLAG.EQ.1)JEND=TCOUNT+K1-1
            HYIND=HICNT+K2
            JBEGIN=ISTART(HYIND)
      C
      C
            DO 800 I=JBEGIN,JEND
                   DURSUM=DURSUM+DUR(I)
                   TIMSUM=TIMSUM+(DUR(I)*TIM(I))
                   AMPSUM=AMPSUM+(DUR(I)*AMP(I))
                   PITSUM=PITSUM+(DUR(I)*P(I))
                   IF(LEVEL.EQ.1)TDSUM=TDSUM+TD(I)
                   IF (LEVEL.NE.1)TDSUM=TDSUM+(DUR(I)*TD(I))
      800   CONTINUE
      C
      C     ADJUSTS ELAPSED TIME W.R.T NEW TG JUST COMPUTED.
      C
            ET=ET-DURSUM
      C
      C                STORE  VALUES AS NEXT LEVEL STATES.
      C
            DUR(HYIND)=DURSUM
            P(HYIND)=PITSUM/DURSUM
            AMP(HYIND)=AMPSUM/DURSUM
            TIM(HYIND)=TIMSUM/DURSUM
            IF (LEVEL.EQ.1)TD(HYIND)=TDSUM/(JEND-JBEGIN+1)
            IF (LEVEL.NE.1)TD(HYIND)=TDSUM/DURSUM
            P1(HYIND)=P(JBEGIN)
            P2(HYIND)=P(JEND)
            RST(HYIND)=DUR(JEND)
            A1(HYIND)=AMP(JBEGIN)
            A2(HYIND)=AMP(JEND)
            TD1(HYIND)=TD(JBEGIN)
            TD2(HYIND)=TD(JEND)
            DM(HYIND)=DM(JBEGIN)
      C
      C     RESETS COUNTERS FOR NEW TG, REMAINING ON CURRENT LEVEL.
      C
            NUMBER(LEVEL+1)=HICNT
            IEND(HYIND)=TCOUNT+K1-2
            IF (FLAG.EQ.1)IEND(HYIND)=TCOUNT+K1-1
            IF (FLAG.EQ.1) GO TO 100
            HICNT=HICNT+1
            CHECK=2
            HYIND=HICNT+K2
            ISTART(HYIND)=TCOUNT+K1-1
            GO TO 500
      C
      C
      C                PRINTING SUBROUTINE.
      9000  K1=LEVEL
```

```
                J=NUMBER(1)
                        DO 9010 K=1,10
      9010                      NEXT(K)=1
      C
      C         PRINTS ELEMENTS.
      C
                DO 9500 I=1,J
                        WRITE(6,9050)I,DUR(I),RST(I),P(I),TD(I),
           1            A1(I),A2(I),TIM(I),DM(I),DMST(I),DMD1(I),DMD2(I)
      9050              FORMAT(1H ,I4,9F6.2,5X,2F6.2)
      C
                IREF=I
      C
                DO 9400 M=2,K1
                N=NEXT(M)
                W5=INT(2.0**(M-1))
                K6=1000-((1/W5)*1000)
                INDX=N+K6
                INDX=1000-((1/W5)*1000)+N
                IF (IEND(INDX).NE.IREF)GO TO 9500
              GO TO (9500,9100,9150,9200,9250,9300),M
      C
      C
      C
      C
      C         CLANGS
      9100      WRITE(6,9125)
           1    NEXT(M),DUR(INDX),RST(INDX),P1(INDX),P2(INDX),
           2    P(INDX),TD1(INDX),TD2(INDX),TD(INDX),
           3    A1(INDX),A2(INDX),AMP(INDX),TIM(INDX),
           4    DM(INDX),DMST(INDX),DMD1(INDX),DMD2(INDX)
      9125      FORMAT(1H0,8X,I4,14F6.2,4X,2F6.2)
                IREF=NEXT(M)+K6
                NEXT(M)=NEXT(M)+1
                WRITE(6,9375)
                GO TO 9400
      C
      C
      C         SEQUENCES
      9150       WRITE(6,9175)
           1    NEXT(M),DUR(INDX),RST(INDX),P1(INDX),P2(INDX),
           2    P(INDX),TD1(INDX),TD2(INDX),TD(INDX),
           3    A1(INDX),A2(INDX),AMP(INDX),TIM(INDX),
           4    DM(INDX),DMST(INDX),DMD1(INDX),DMD2(INDX)
      9175      FORMAT(1H0,16X,I4,14F6.2,4X,2F6.2)
                IREF=NEXT(M)+K6
                NEXT(M)=NEXT(M)+1
                WRITE(6,9375)
                GO TO 9400
      C
      C
      C         SEGMENTS.
      9200      WRITE(6,9225)
           1    NEXT(M),DUR(INDX),RST(INDX),P1(INDX),P2(INDX),
           2    P(INDX),TD1(INDX),TD2(INDX),TD(INDX),
           3    A1(INDX),A2(INDX),AMP(INDX),TIM(INDX),
           4    DM(INDX),DMST(INDX),DMD1(INDX),DMD2(INDX)
      9225      FORMAT(1H0,24X,I4,14F6.2,4X,2F6.2)
                IREF=NEXT(M)+K6
                NEXT(M)=NEXT(M)+1
```

```
      WRITE(6,9375)
      GO TO 9400
C
C
C     SECTIONS.
 9250 WRITE(6,9275)
     1 NEXT(M),DUR(INDX),RST(INDX),P1(INDX),P2(INDX),
     2 P(INDX),TD1(INDX),TD2(INDX),TD(INDX),
     3 A1(INDX),A2(INDX),AMP(INDX),TIM(INDX),
     4 DM(INDX),DMST(INDX)
 9275 FORMAT(1H0,I5,14F6.2)
      IREF=NEXT(M)+K6
      NEXT(M)=NEXT(M)+1
      WRITE(6,9375)
      GO TO 9400
C
C
 9300 WRITE(6,9325)
     1 NEXT(M),DUR(INDX),RST(INDX),P1(INDX),P2(INDX),
     2 P(INDX),TD1(INDX),TD2(INDX),TD(INDX),
     3 A1(INDX),A2(INDX),AMP(INDX),TIM(INDX),
     4 DM(INDX),DMST(INDX)
 9325 FORMAT(1H0,I5,14F6.2)
      IREF=NEXT(M)+K6
      NEXT(M)=NEXT(M)+1
      WRITE(6,9375)
      GO TO 9400
C
C
 9375 FORMAT(' ')
C
 9400 CONTINUE
 9500 CONTINUE
 9600 CONTINUE
 5080 STOP
      END

$ENTRY
```

59	0.60	0.00	16.00	5.00	2.00	0.00
60	0.80	0.60	18.00	2.00	2.00	0.00
61	0.80	0.00	16.00	2.00	2.00	0.00
62	1.40	0.00	17.00	2.00	2.00	0.00
63	0.60	0.00	19.00	2.00	4.00	0.00
64	1.20	0.30	6.00	4.00	6.00	0.00
65	1.20	0.00	7.00	6.00	7.00	0.00
66	4.80	0.60	32.00	7.00	7.50	0.00
67	3.20	0.00	12.00	2.00	2.00	0.00
68	0.40	0.00	11.00	2.00	2.00	0.00
69	0.60	0.30	12.00	2.00	2.00	0.00
70	1.80	0.00	12.00	3.00	2.00	0.00
71	0.60	0.00	10.00	2.00	2.50	0.00
72	0.60	0.00	12.00	2.50	3.00	0.00
73	1.80	0.60	9.00	3.00	3.00	0.00
74	3.00	0.00	12.00	2.00	5.00	0.00
75	0.20	0.00	26.00	5.00	5.00	0.00
76	0.20	0.00	25.00	5.00	5.00	0.00
77	0.20	0.00	26.00	5.00	5.00	0.00
78	0.20	0.00	25.00	5.00	5.00	0.00
79	0.20	0.00	26.00	5.00	5.00	0.00
80	0.20	0.00	25.00	5.00	5.00	0.00
81	0.20	0.00	26.00	5.00	5.00	0.00
82	0.20	0.00	25.00	5.00	5.00	0.00
83	0.20	0.00	26.00	5.00	5.00	0.00
84	0.20	0.00	25.00	5.00	5.30	0.00
85	0.20	0.00	26.00	5.30	5.60	0.00
86	0.20	0.00	25.00	5.60	5.90	0.00
87	3.60	0.60	27.00	6.00	7.00	0.00
88	0.30	0.00	12.00	2.50	2.00	0.00
89	0.30	0.00	11.00	2.00	2.00	0.00
90	0.60	0.15	12.00	2.00	2.00	0.00
91	1.20	0.00	10.00	2.00	2.50	0.00
92	0.40	0.00	11.00	2.50	3.00	0.00
93	0.80	0.40	12.00	3.00	3.00	0.00
94	1.20	0.00	10.00	2.00	3.50	0.00
95	1.20	0.00	11.00	3.50	5.00	0.00
96	0.90	0.00	11.00	5.00	2.00	0.00
97	0.15	0.00	25.00	2.00	2.00	0.00
98	0.15	0.00	26.00	2.00	2.00	0.00
99	0.40	0.20	25.00	3.00	3.00	0.00
100	0.40	0.20	25.00	2.00	2.00	0.00
101	3.20	3.00	25.00	2.00	2.00	0.00
102	0.40	0.20	5.00	3.00	3.00	1.00
103	2.80	2.60	2.00	3.00	3.00	1.00
104	0.40	0.20	5.00	3.00	3.00	1.00
105	0.40	0.00	2.00	3.50	3.00	1.00
106	1.60	1.40	2.00	3.00	3.00	0.00
107	0.60	0.00	2.00	3.50	3.00	1.00
108	2.40	1.20	5.00	3.00	2.50	0.00
109	3.80	2.90	15.00	2.00	1.00	0.00
110	0.40	0.00	2.00	3.50	3.00	1.00
111	2.40	2.10	15.00	3.00	3.00	1.00
112	0.60	0.00	2.00	3.50	3.00	1.00
113	0.60	0.00	3.00	3.50	3.00	1.00
114	2.80	2.20	9.00	3.50	3.00	1.00
115	0.40	0.00	15.00	3.00	3.00	1.00
116	1.60	1.20	9.00	3.00	3.00	1.00
117	1.80	0.60	3.00	2.00	1.00	0.00
118	1.80	1.20	16.00	3.50	3.00	1.00

119	0.18	0.00	32.00	6.50	6.00	0.00
120	0.18	0.00	31.00	6.00	6.00	0.00
121	2.52	0.00	19.00	6.50	5.00	0.00
122	1.44	0.72	18.00	5.00	5.00	0.00
123	0.18	0.00	32.00	6.50	6.00	0.00
124	0.18	0.00	31.00	6.00	6.00	0.00
125	0.72	0.36	19.00	6.00	6.00	0.00
126	0.18	0.00	32.00	6.50	6.00	0.00
127	0.18	0.00	31.00	6.00	6.00	0.00
128	2.16	0.00	19.00	6.50	6.00	0.00
129	0.54	0.18	18.00	6.00	6.00	0.00
130	0.18	0.00	18.00	6.00	6.00	0.00
131	0.48	0.00	8.00	6.00	6.00	0.00
132	0.48	0.00	19.00	6.00	6.00	0.00
133	0.48	0.00	20.00	6.00	6.00	0.00
134	0.48	0.24	7.00	6.00	6.00	0.00
135	0.24	0.00	8.00	6.00	6.00	0.00
136	0.24	0.00	9.00	6.00	6.00	0.00
137	0.48	0.24	10.00	6.00	6.00	0.00
138	0.36	0.00	5.00	6.50	6.00	0.00
139	1.08	0.00	11.00	6.50	6.00	0.00
140	1.44	0.00	21.00	6.00	6.50	0.00
141	2.16	0.00	24.00	6.50	7.00	0.00
142	2.16	0.72	34.00	7.00	7.00	0.00
143	0.20	0.00	24.00	7.00	7.00	0.00
144	0.60	0.00	31.00	7.00	7.00	0.00
145	0.40	0.00	34.00	7.00	7.00	0.00
146	0.60	0.00	31.00	7.00	7.00	0.00
147	0.60	0.00	24.00	7.00	7.00	0.00
148	0.40	0.00	34.00	7.00	7.00	0.00
149	0.40	0.00	24.00	7.00	7.00	0.00
150	0.40	0.00	31.00	7.00	7.00	0.00
151	3.60	0.60	34.00	7.00	7.50	0.00
152	0.20	0.00	24.00	7.00	7.00	0.00
153	0.60	0.00	31.00	7.00	7.00	0.00
154	0.40	0.00	34.00	7.00	7.00	0.00
155	0.60	0.00	31.00	7.00	7.00	0.00
156	0.60	0.00	24.00	7.00	7.00	0.00
157	0.40	0.00	34.00	7.00	7.00	0.00
158	0.40	0.00	24.00	7.00	7.00	0.00
159	1.00	0.20	31.00	7.00	7.00	0.00
160	0.20	0.00	34.00	7.00	7.00	0.00
161	0.40	0.00	31.00	7.00	7.00	0.00
162	0.60	0.00	34.00	7.50	6.50	0.00
163	0.60	0.00	31.00	7.00	7.00	0.00
164	0.40	0.00	34.00	7.00	7.00	0.00
165	0.40	0.00	31.00	7.00	7.00	0.00
166	0.80	0.00	34.00	7.00	7.00	0.00
167	0.80	0.00	31.00	7.50	6.50	0.00
168	3.12	0.54	24.00	7.50	7.00	0.00
169	3.60	0.00	25.00	7.50	7.00	0.00
170	4.32	0.00	16.00	7.50	7.00	0.00
171	0.72	0.00	25.00	7.50	7.00	0.00
172	1.44	0.00	16.00	7.50	7.00	0.00
173	2.88	0.36	16.00	7.50	6.00	0.00
174	0.72	0.00	15.00	6.00	6.00	0.00
175	0.72	0.00	16.00	6.00	6.00	0.00
176	2.16	1.44	14.00	6.00	6.00	0.00
177	0.48	0.00	16.00	2.00	2.00	0.00
178	0.96	0.00	15.00	2.00	2.00	0.00

179	0.72	0.00	14.00	5.00	2.00	0.00
180	1.20	0.48	16.00	2.00	2.00	0.00
181	0.48	0.00	14.00	2.00	3.00	0.00
182	1.20	0.00	15.00	4.00	3.00	0.00
183	0.72	0.36	15.00	3.00	3.00	0.00
184	0.96	0.00	16.00	5.00	2.00	0.00
185	0.96	0.00	14.00	2.00	2.00	0.00
186	0.96	0.00	16.00	5.00	2.00	0.00
187	1.44	0.72	12.00	2.00	2.00	0.00
188	0.30	0.00	7.00	2.00	2.00	0.00
189	0.30	0.00	6.00	2.00	2.00	0.00
190	8.40	3.00	8.00	2.00	1.00	0.00
191	0.30	0.00	7.00	2.00	2.00	0.00
192	0.30	0.00	6.00	2.00	2.00	0.00
193	0.80	0.20	8.00	2.00	2.00	0.00
194	0.80	0.00	6.00	2.00	2.00	0.00
195	0.80	0.00	7.00	2.00	2.00	0.00
196	0.60	0.20	8.00	2.00	2.00	0.00
197	0.60	0.00	7.00	2.00	2.00	0.00
198	0.40	0.00	6.00	2.00	2.30	0.00
199	0.40	0.00	8.00	2.30	2.60	0.00
200	0.40	0.00	3.00	2.60	2.90	0.00
201	2.40	0.30	9.00	3.00	3.00	0.00
202	1.20	0.00	10.00	4.00	4.00	0.00
203	0.60	0.00	17.00	5.00	4.00	0.00
204	1.80	0.00	23.00	5.00	5.00	0.00
205	4.00	0.40	26.00	5.50	6.00	0.00
206	0.40	0.00	39.00	6.50	6.00	0.00
207	1.00	0.00	36.00	6.50	6.00	0.00
208	2.20	0.20	39.00	6.50	6.00	0.00
209	0.40	0.00	36.00	6.50	6.00	0.00
210	0.40	0.00	39.00	6.50	6.00	0.00
211	1.20	0.00	39.00	6.50	6.00	0.00
212	0.80	0.00	36.00	6.00	6.00	0.00
213	0.80	0.00	39.00	6.00	6.00	0.00
214	2.00	0.36	36.00	6.00	6.00	0.00
215	0.80	0.00	36.00	6.50	6.00	0.00
216	1.60	0.30	39.00	6.50	6.00	0.00
217	0.80	0.00	36.00	6.00	6.00	0.00
218	2.20	0.30	39.00	6.00	6.00	0.00
219	0.60	0.00	36.00	6.00	6.00	0.00
220	1.80	0.00	39.00	6.00	6.00	0.00
221	3.60	0.00	39.00	6.00	7.00	0.00
222	1.44	0.00	9.00	7.00	7.00	0.00
223	1.44	0.00	9.00	7.00	7.00	0.00
224	0.72	0.00	9.00	7.00	2.00	0.00
225	0.96	0.24	9.00	2.00	4.00	0.00
226	0.96	0.00	10.00	5.50	2.00	0.00
227	0.96	0.24	8.00	2.00	2.00	0.00
228	0.18	0.00	25.00	2.00	2.00	0.00
229	2.70	0.00	19.00	4.00	2.00	0.00
230	1.44	1.08	18.00	2.00	2.00	0.00
231	0.18	0.00	25.00	2.00	2.00	0.00
232	1.26	0.00	19.00	4.00	2.00	0.00
233	0.96	0.00	18.00	2.00	2.00	0.00
234	0.96	0.00	25.00	2.00	2.00	0.00
235	0.96	0.24	19.00	2.00	2.00	0.00
236	0.72	0.00	18.00	3.00	2.00	0.00
237	0.72	0.36	25.00	2.00	2.00	0.00
238	2.88	0.00	5.00	6.50	6.00	0.00

239	1.44	0.00	3.00	6.50	6.00	0.00
240	2.16	0.00	2.00	6.50	6.00	0.00
241	0.72	0.00	5.00	6.50	6.00	0.00
242	0.96	0.00	2.00	6.50	5.00	0.00
243	0.96	0.00	5.00	5.00	4.00	0.00
244	0.96	0.00	7.00	4.00	3.00	0.00
245	1.44	0.36	8.00	3.00	3.00	0.00
246	0.72	0.00	5.00	2.00	2.00	0.00
247	2.16	0.00	8.00	2.00	1.00	0.00
248	2.88	0.36	22.00	1.00	1.00	0.00
249	0.96	0.00	11.00	3.00	3.00	0.00
250	0.48	0.00	5.00	3.00	4.00	0.00
251	1.44	0.36	11.00	4.00	5.00	0.00
252	0.72	0.00	1.00	6.50	6.00	0.00
253	1.44	0.00	5.00	6.50	6.00	0.00
254	4.32	0.00	15.00	6.00	6.00	0.00
255	0.72	0.00	5.00	6.50	6.00	0.00
256	1.44	0.00	1.00	6.50	6.00	0.00
257	0.96	0.00	15.00	6.50	6.00	0.00
258	0.96	0.00	1.00	6.50	6.00	0.00
259	0.96	0.00	5.00	6.50	6.00	0.00
260	1.44	0.00	11.00	6.00	6.00	0.00
261	0.72	0.00	15.00	6.00	6.00	0.00
262	1.44	0.00	19.00	6.50	6.50	0.00
263	2.16	0.36	26.00	7.00	6.50	0.00
264	1.44	0.00	28.00	6.50	6.50	0.00
265	2.88	0.00	30.00	7.00	7.00	0.00
266	5.76	0.00	36.00	7.00	8.00	0.00

WEIGHTINGS: PROXIMITY= 1.00 PITCH= 0.67 INTENSITY= 6.00 TEMPORAL DENSITY= 0.00 TIMBRE=20.00

Output data: Varèse

```
 1  0.21  0.00  6.00  5.26  4.50  4.00  0.00  0.00  0.00        0.00  0.00
 2  0.21  0.00  5.00  5.26  4.00  4.00  0.00  0.18  0.00        0.00  0.00
 3  1.67  0.00  7.00  2.26  4.00  5.00  0.00  0.28  0.00        0.37 -1.15
 4  1.39  0.00  7.00  2.53  5.00  4.00  0.00  0.60  0.00        0.53 -0.42

        1  3.47  1.39  6.00  7.00  6.82  5.26  2.53  3.83  4.25  4.50  4.45  0.00  0.00  0.00     0.00  0.00

 5  0.42  0.00  2.00  4.26  4.00  4.00  0.00  0.85  0.42        0.29  0.54
 6  0.28  0.00  7.00  4.85  4.00  4.00  0.00  0.39  0.00       -1.17  0.13
 7  0.83  0.21  2.00  3.26  4.00  4.00  0.00  0.34  0.00       -0.15 -2.53

        2  1.53  0.83  2.00  2.00  2.91  4.26  3.26  4.12  4.00  4.00  4.00  0.00  0.62  0.00     0.00  0.00

 8  1.67  0.00  8.00  2.26  2.00  5.00  0.00  1.21  0.61        0.72  0.50
 9  2.50  0.83  8.00  1.68  5.00  2.00  0.00  0.60  0.00       -1.01 -2.78

        3  4.17  2.50  8.00  8.00  8.00  2.26  1.68  1.97  3.50  3.50  3.50  0.00  0.84  0.00     0.26 -0.52

                1  9.17  4.17  6.82  8.00  6.70  3.83  1.97  3.03  4.45  3.50  3.95  0.00  0.00  0.00     0.00  0.00

10  0.21  0.00  6.00  5.26  4.00  4.00  0.00  2.28  0.84        0.74  0.95
11  0.21  0.00  5.00  5.26  4.00  4.00  0.00  0.12  0.00      -17.41 -0.39
12  0.83  0.00  7.00  3.26  4.00  4.00  0.00  0.17  0.00        0.28 -1.03
13  0.97  0.00  8.00  3.04  4.00  4.00  0.00  0.35  0.00        0.51 -0.84
```

```
         4  2.22  0.97  6.00  8.00  7.16  5.26  3.04  4.21  4.00  4.00  4.00  0.00  1.27  0.51       0.34  0.69

14  0.28  0.00  2.00  4.85  4.00  4.00  0.00  0.64  0.42        0.46  0.39
15  0.83  0.00  8.00  3.26  4.00  4.00  0.00  0.39  0.00       -0.64  0.11
16  0.14  C.00  7.00  5.85  4.00  4.00  0.00  0.35  0.00       -0.12  0.72
17  C.14  C.00  8.00  5.85  4.00  4.00  0.00  0.10  0.00       -2.54 -0.00
18  0.97  0.00  7.00  3.04  4.00  4.00  0.00  0.10  0.00       -0.00 -4.64
19  1.81  C.00  5.00  2.15  4.00  3.00  0.00  0.56  0.00        0.82 -1.21

         5  4.17  1.81  2.00  5.00  6.03  4.85  2.15  4.17  4.00  3.50  3.78  0.00  0.40  0.00      -2.21 -1.23

20  0.56  C.00  2.00  3.85  5.00  2.00  0.00  1.23  0.44        0.55  0.34
21  0.83  C.28  8.00  3.26  2.00  2.00  0.00  0.82  0.00       -0.51 -1.51

         6  1.39  0.83  2.00  8.00  5.60  3.85  3.26  3.56  3.50  2.00  2.60  0.00  0.88  0.00       0.55 -0.71
               #  Dw   Rst   P1   P2   P   TD1   TD2   TD    A1    A2   Amp   D..
               2  7.78  1.39  7.16  5.60  6.28  4.21  3.56  4.07  4.00  2.60  3.63  0.00  0.71  0.00       0.00  0.00

22  0.28  C.00  2.00  4.85  4.00  4.50  0.00  2.05  0.68        0.60  0.76
23  0.56  0.00  8.00  3.85  4.50  5.00  0.00  0.50  0.00       -3.10  0.30
24  1.39  0.00 10.00  2.53  5.00  4.00  0.00  0.35  0.00       -0.42 -1.18

         7  2.22  1.39  2.00 10.00  8.50  4.85  2.53  3.74  4.25  4.50  4.53  0.00  1.51  0.51       0.42  0.61

25  0.83  0.00 11.00  3.26  4.00  3.00  0.00  0.77  0.50        0.54  0.47
26  2.22  C.28 11.00  1.85  3.00  5.00  0.00  0.41  0.00       -0.87 -3.68

         8  3.06  2.22 11.00 11.00 11.00  3.26  1.85  2.56  3.50  4.00  3.86  0.00  0.59  0.00      -1.57 -1.36

               3  5.28  3.06  8.50 11.00  9.95  3.74  2.56  3.05  4.53  3.86  4.14  0.00  0.96  0.00       0.26 -0.11

27  0.56  0.00  8.00  3.85  2.00  2.00 -0.00  1.92  0.80        0.79  0.82
28  0.56  C.00 11.00  3.85  2.00  2.00  0.00  0.35  0.00       -4.54 -0.00
29  0.42  C.00  8.00  4.26  2.00  2.00  0.00  0.35  0.00       -0.00  0.15
30  1.25  0.00 11.00  2.68  2.00  2.00  0.00  0.30  0.00       -0.17 -1.95

         9  2.78  1.25  8.00 11.00  9.95  3.85  2.68  3.66  2.00  2.00  2.00  0.00  1.39  0.49       0.58  0.40

31  0.83  0.00 13.00  3.26  2.00  5.00  0.00  0.87  0.66        0.66  0.66
32  0.83  0.21 13.00  3.26  5.00  2.00  0.00  0.30  0.00       -1.90 -6.53

        10  1.67  0.83 13.00 13.00 13.00  3.26  3.26  3.26  3.50  3.50  3.50  0.00  0.84  0.00      -0.66 -1.14
                                         PM
               4  4.44  1.67  9.95 13.00 11.09  3.66  3.26  3.51  2.00  3.50  2.56  0.00  1.06  0.00       0.10 -0.56
                                               PM
                    1 26.67  4.44  6.70 11.09  7.95  3.03  3.51  3.42  3.95  2.56  3.66  0.00  0.00  0.00       0.00  0.00

33  0.21  0.00 14.00  5.26  6.00  6.00  0.00  2.27  0.91        0.87  0.95
34  0.21  0.00 13.00  5.26  6.00  6.00  0.00  0.12  0.00      -17.33 -0.88
35  2.50  0.21 14.00  1.68  6.00  7.00  0.00  0.23  0.00        0.47 -9.50

        11  2.92  2.50 14.00 14.00 13.93  5.26  1.68  4.07  6.00  6.50  6.43  0.00  1.79  0.28       0.53  0.03

36  0.21  0.00 13.00  5.26  4.00  4.00  0.00  2.44  0.93        0.90  0.95
37  1.39  0.00 14.00  2.53  4.00  4.00  0.00  0.12  0.00      -18.70 -3.45
```

```
        12  1.60  1.39 13.00 14.00 13.87  5.26  2.53  3.89  4.00  4.00  4.00  0.00  1.75  0.00    -0.03  0.83

38  0.28  0.00 13.00  4.85  4.00  4.00  0.00  0.55  0.75        0.78  0.73
39  0.42  0.00 14.00  4.26  4.00  4.00  0.00  0.15  0.00       -2.70 -0.34
40  0.69  0.00 13.00  3.53  4.00  4.00  0.00  0.20  0.00        0.25 -1.05

        13  1.39  0.69 13.00 13.00 13.30  4.85  3.53  4.21  4.00  4.00  4.00  0.00  0.29  0.00    -5.04 -1.85

41  0.28  0.00 14.00  4.85  4.00  5.00  0.00  0.41  0.31        0.51  0.10
42  0.28  0.00 13.00  4.85  5.00  6.00  0.00  0.37  0.00       -0.12 -1.02
43  3.06  0.28 15.00  1.39  7.00  7.00  0.00  0.74  0.00        0.51 -3.08

        14  3.61  3.06 14.00 15.00 14.77  4.85  1.39  3.69  4.50  7.00  6.69  0.00  0.82  0.00     0.65 -1.34

              5  9.51  3.61 13.93 14.77 14.15  4.07  3.69  3.92  6.43  6.69  5.77  0.00  1.66  0.35     0.36  0.34

44  0.28  0.00 21.00  4.85  5.00  5.00  0.00  3.01  0.81        0.75  0.87
45  0.56  0.00 15.00  3.85  5.00  5.00  0.00  0.39  0.00       -6.71 -0.26

        15  0.83  0.56 21.00 15.00 17.00  4.85  3.85  4.35  5.00  5.00  5.00  0.00  1.93  0.70     0.57  0.83

46  0.28  0.00  9.00  4.85  5.00  5.00  0.00  0.49  0.20        0.20  0.20
47  0.42  0.00 15.00  4.26  5.00  5.00  0.00  0.39  0.00       -0.26 -0.13
48  0.14  0.00 21.00  5.85  5.00  5.00  0.00  0.44  0.00        0.11 -0.98

        16  0.83  0.14  9.00 21.00 14.00  4.85  5.85  4.99  5.00  5.00  5.00  0.00  0.32  0.00    -5.06 -0.67

49  0.28  0.00  4.00  4.85  5.00  5.00  0.00  0.87  0.52        0.49  0.55
50  0.42  0.00 10.00  4.26  5.00  5.00  0.00  0.39  0.00       -1.23 -0.41
51  1.25  0.42 16.00  2.68  5.00  6.00  0.00  0.55  0.00        0.29 -3.19

        17  1.94  1.25  4.00 16.00 13.00  4.85  2.68  3.93  5.00  5.50  5.32  0.00  0.53  0.00     0.40 -1.58

              6  3.61  1.94 17.00 13.00 14.15  4.35  3.93  4.27  5.00  5.32  5.17  0.00  1.09  0.00    -0.52 -0.26

52  0.42  0.00 22.00  4.26  6.00  6.00  0.00  2.30  0.72        0.76  0.68
53  0.42  0.00 10.00  4.26  6.00  6.00  0.00  0.73  0.00       -2.15 -0.44

        18  0.83  0.42 22.00 10.00 16.00  4.26  4.26  4.26  6.00  6.00  6.00  0.00  1.37  0.42     0.61  0.23

54  1.25  0.00 23.00  2.68  6.50  7.00  0.00  1.05  0.25        0.30  0.19
55  4.58  1.25 29.00  0.80  7.00  7.50  0.00  0.85  0.00       -0.24 -4.01

        19  5.83  4.58 23.00 29.00 27.71  2.68  0.80  1.74  6.75  7.25  7.14  0.00  1.06  0.00    -0.30 -2.38

              7  6.67  5.83 15.00 27.71 26.25  4.26  1.74  2.06  6.00  7.14  7.00  0.00  1.37  0.00     0.21 -0.81

                    2 19.79  6.67 14.15 26.25 18.22  3.92  2.06  3.36  5.77  7.00  6.07  0.00  1.60  0.00     0.00  0.00

56  0.21  0.00 17.00  5.26  2.00  2.00  0.00  4.26  0.89        0.80  0.97
57  0.21  0.00 16.00  5.26  2.00  2.00  0.00  0.12  0.00      -33.44 -1.27
58  1.67  0.21 18.00  2.26  2.00  1.00  0.00  0.28  0.00        0.56 -7.17

        20  2.08  1.67 17.00 18.00 17.70  5.26  2.26  4.26  2.00  1.50  1.60  0.00  3.58  0.66     0.70  0.61

59  0.42  0.00 16.00  4.26  5.00  2.00  0.00  2.29  0.81        0.88  0.75
```

```
60  0.56  0.42 18.00  3.85  2.00  2.00  0.00  0.57  0.00      -3.00 -0.54

        21  0.97  0.56 16.00 18.00 17.14  4.26  3.85  4.06  3.50  2.00  2.64  0.00  1.39  0.00     -1.58  0.56

61  0.56  0.00 16.00  3.85  2.00  2.00  0.00  0.88  0.53       0.35  0.72
62  0.97  0.00 17.00  3.04  2.00  2.00  0.00  0.25  0.00      -2.54 -1.67
63  0.42  0.00 19.00  4.26  2.00  4.00  0.00  0.67  0.00       0.63 -0.83
64  0.83  0.21  6.00  3.26  4.00  6.00  0.00  1.21  0.00       0.45 -0.69

        22  2.78  0.83 16.00  6.00 13.80  3.85  3.26  3.60  2.00  5.00  3.05  0.00  0.61  0.00     -1.27 -2.64

65  0.83  0.00  7.00  3.26  6.00  7.00  0.00  2.05  0.30       0.41  0.18
66  3.33  0.42 32.00  1.26  7.00  7.50  0.00  1.67  0.00      -0.22 -1.33

        23  4.17  3.33  7.00 32.00 27.00  3.26  1.26  2.26  6.50  7.25  7.10  0.00  2.22  0.00      0.73 -0.54

               8 10.00  4.17 17.70 27.00 20.44  4.26  2.26  3.23  1.60  7.10  4.40  0.00  2.49  0.33      0.45  0.22

67  2.22  0.00 12.00  1.85  2.00  2.00  0.00  3.90  0.68       0.57  0.78
68  0.28  0.00 11.00  4.85  2.00  2.00  0.00  0.85  0.00      -3.58  0.83
69  0.42  0.21 12.00  4.26  2.00  2.00  0.00  0.15  0.00      -4.72 -5.62

        24  2.92  0.42 12.00 12.00 11.90  1.85  4.26  3.65  2.00  2.00  2.00  0.00  3.42  0.57      0.35  0.79

70  1.25  0.00 12.00  2.68  3.00  2.00  0.00  0.98  0.62       0.85  0.39
71  0.42  0.00 10.00  4.26  2.00  2.50  0.00  0.60  0.00      -0.63  0.41
72  0.42  0.00 12.00  4.26  2.50  3.00  0.00  0.36  0.00      -0.69  0.02
73  1.25  0.42  9.00  2.68  3.00  3.00  0.00  0.35  0.00      -0.02 -2.68
74  2.08  0.00 12.00  1.94  2.00  5.00  0.00  1.29  0.00       0.73 -0.36

        25  5.42  2.08 12.00 12.00 11.15  2.68  1.94  3.16  2.50  3.50  3.00  0.00  0.73  0.00     -3.70 -1.59

75  0.14  0.00 26.00  5.85  5.00  5.00  0.00  1.76  0.60       0.27  0.94
76  0.14  0.00 25.00  5.85  5.00  5.00  0.00  0.10  0.00     -16.81 -0.00
77  0.14  0.00 26.00  5.85  5.00  5.00  0.00  0.10  0.00      -0.00 -0.00
78  0.14  0.00 25.00  5.85  5.00  5.00  0.00  0.10  0.00      -0.00 -0.00
79  0.14  0.00 26.00  5.85  5.00  5.00  0.00  0.10  0.00      -0.00 -0.00
80  0.14  0.00 25.00  5.85  5.00  5.00  0.00  0.10  0.00      -0.00 -0.00
81  0.14  0.00 26.00  5.85  5.00  5.00  0.00  0.10  0.00      -0.00 -0.00
82  0.14  0.00 25.00  5.85  5.00  5.00  0.00  0.10  0.00      -0.00 -0.00
83  0.14  0.00 26.00  5.85  5.00  5.00  0.00  0.10  0.00      -0.00 -0.33
84  0.14  0.00 25.00  5.85  5.00  5.30  0.00  0.13  0.00       0.25 -0.25
85  0.14  0.00 26.00  5.85  5.30  5.60  0.00  0.16  0.00       0.20 -0.00
86  0.14  0.00 25.00  5.85  5.60  5.90  0.00  0.16  0.00      -0.00 -1.02
87  2.50  0.42 27.00  1.68  6.00  7.00  0.00  0.33  0.00       0.51 -8.79

        26  4.17  2.50 26.00 27.00 26.40  5.85  1.68  5.53  5.00  6.50  5.94  0.00  1.89  0.00      0.61 -0.49

               9 12.50  4.17 11.90 26.40 16.41  3.65  5.53  4.07  2.00  5.94  3.75  0.00  1.95  0.00     -0.28  0.15

88  0.21  0.00 12.00  5.26  2.50  2.00  0.00  3.24  0.92       0.90  0.95
89  0.21  0.00 11.00  5.26  2.00  2.00  0.00  0.18  0.00     -17.23  0.30
90  0.42  0.10 12.00  4.26  2.00  2.00  0.00  0.12  0.00      -0.44 -5.25

        27  0.83  0.42 12.00 12.00 11.75  5.26  4.26  4.93  2.25  2.00  2.06  0.00  2.82  0.57      0.33  0.81

91  0.83  0.00 10.00  3.26  2.00  2.50  0.00  0.77  0.62       0.84  0.41
92  0.28  0.00 11.00  4.85  2.50  3.00  0.00  0.46  0.00      -0.69  0.56
```

```
 93  0.56  0.28 12.00  3.85  3.00  3.00  0.00  0.20  0.00      -1.26 -3.36

          28  1.67  0.56 10.00 12.00 10.83  3.26  3.85  3.99  2.25  3.00  2.58  0.00  0.52  0.00      -4.40 -0.24

 94  0.83  0.00 10.00  3.26  2.00  3.50  0.00  0.89  0.50       0.77  0.24
 95  0.83  0.00 11.00  3.26  3.50  5.00  0.00  0.67  0.00      -0.31  0.31
 96  0.63  0.00 11.00  3.68  5.00  2.00  0.00  0.46  0.00      -0.46 -1.65

          29  2.29  0.63 10.00 11.00 10.64  3.26  3.68  3.40  2.75  3.50  3.50  0.00  0.65  0.00       0.19 -0.96

 97  0.10  0.00 25.00  6.26  2.00  2.00  0.00  1.23  0.78       0.62  0.93
 98  0.10  0.00 26.00  6.26  2.00  2.00  0.00  0.09  0.00     -13.28 -5.04
 99  0.28  0.14 25.00  4.85  3.00  3.00  0.00  0.52  0.00       0.83 -0.54
100  0.28  0.14 25.00  4.85  2.00  2.00  0.00  0.80  0.00       0.35  0.27
101  2.22  2.08 25.00  1.85  2.00  2.00  0.00  0.58  0.00      -0.37 -6.04

          30  2.99  2.22 25.00 25.00 25.03  6.26  1.85  4.81  2.00  2.00  2.09  0.00  1.27  0.00       0.49 -1.78

                    10  7.78  2.99 11.75 25.03 16.33  4.93  4.81  4.23  2.06  2.09  2.61  0.00  1.66  0.00      -0.17 -0.38
                                            PM
                                3 30.28  7.78 20.44 16.33 17.72  3.23  4.23  3.83  4.40  2.61  3.67  0.00  1.78  0.00       0.10 -0.14

102  0.28  0.14  5.00  4.85  3.00  3.00  1.00  4.11  0.81       0.86  0.77
103  1.94  1.81  2.00  2.04  3.00  3.00  1.00  0.95  0.00      -3.35 -1.27

          31  2.22  1.94  5.00  2.00  2.37  4.85  2.04  3.44  3.00  3.00  3.00  1.00  3.53  0.60       0.64  0.55

104  0.28  0.14  5.00  4.85  3.00  3.00  1.00  2.15  0.52       0.56  0.48
105  0.28  0.00  2.00  4.85  3.50  3.00  1.00  1.11  0.00      -0.94  0.21
106  1.11  0.97  2.00  2.85  3.00  3.00  0.00  0.88  0.00      -0.26 -1.61

          32  1.67  1.11  5.00  2.00  2.50  4.85  2.85  4.18  3.00  3.00  3.04  0.33  1.57  0.00      -1.25 -0.09

107  0.42  0.00  2.00  4.26  3.50  3.00  1.00  2.29  0.56       0.62  0.51
108  1.67  0.83  5.00  2.26  3.00  2.50  0.00  1.13  0.00      -1.03 -0.86
109  2.64  2.01 15.00  1.60  2.00  1.00  0.00  2.09  0.00       0.46 -0.99

          33  4.72  2.64  2.00 15.00 10.32  4.26  1.60  2.71  3.25  1.50  2.10  0.09  1.72  0.00       0.09 -0.76

                    11  8.61  4.72  2.37 10.32  6.76  3.44  2.71  3.18  3.00  2.10  2.51  0.37  2.28  0.20       0.27  0.12

110  0.28  0.00  2.00  4.85  3.50  3.00  1.00  4.17  0.66       0.50  0.81
111  1.67  1.46 15.00  2.26  3.00  3.00  1.00  0.78  0.00      -4.32 -2.28

          34  1.94  1.67  2.00 15.00 13.14  4.85  2.26  3.56  3.25  3.00  3.04  1.00  3.02  0.47       0.43  0.51

112  0.42  0.00  2.00  4.26  3.50  3.00  1.00  2.57  0.79       0.70  0.88
113  0.42  0.00  3.00  4.26  3.50  3.00  1.00  0.31  0.00      -7.37 -0.79
114  1.94  1.53  9.00  2.04  3.50  3.00  1.00  0.55  0.00       0.44 -3.09

          35  2.78  1.94  2.00  9.00  7.05  4.26  2.04  3.52  3.25  3.25  3.25  1.00  1.48  0.00      -1.04 -0.06

115  0.28  0.00 15.00  4.85  3.00  3.00  1.00  2.25  0.79       0.76  0.83
116  1.11  0.83  9.00  2.85  3.00  3.00  1.00  0.39  0.00      -4.76 -5.33
117  1.25  0.42  3.00  2.68  2.00  1.00  0.00  2.48  0.00       0.84 -0.25
118  1.25  0.83 16.00  2.68  3.50  3.00  1.00  3.09  0.00       0.20 -0.39
```

```
        36  3.89  1.25 15.00 16.00  9.75  4.85  2.68  3.26  3.00  3.25  2.60  0.68  1.56  0.00       0.05 -1.25

                    12  8.61  3.89 13.14  9.75  9.65  3.56  3.26  3.41  3.04  2.60  2.91  0.85  2.01  0.00       -0.13 -0.60
                                                          PM
                             4 17.22  8.61  6.76  9.65  8.20  3.18  3.41  3.30  2.51  2.91  2.71  0.51  2.02  0.00        0.12 -0.53
                                 PM
  1 93.96 17.22  7.95  8.20 13.31  3.42  3.30  3.52  3.66  2.71  4.00  0.11  0.00  0.00

119  0.13  0.00 32.00  6.00  6.50  6.00  0.00  4.31  0.62       0.28  0.97
120  0.13  0.00 31.00  6.00  6.00  6.00  0.00  0.15  0.00     -28.16 -4.34
121  1.75  0.00 19.00  2.19  6.50  5.00  0.00  0.79  0.00       0.81 -0.07
122  1.00  0.50 18.00  3.00  5.00  5.00  0.00  0.84  0.00       0.06 -2.44

        37  3.00  1.00 32.00 18.00 19.71  6.00  3.00  4.30  6.25  5.00  5.53  0.00  3.52  0.54       0.56  0.53

123  0.13  0.00 32.00  6.00  6.50  6.00  0.00  2.90  0.83       0.71  0.95
124  0.13  0.00 31.00  6.00  6.00  6.00  0.00  0.15  0.00     -18.62 -3.24
125  0.50  0.25 19.00  4.00  6.00  6.00  0.00  0.63  0.00       0.76 -2.77

        38  0.75  0.50 32.00 19.00 23.17  6.00  4.00  5.33  6.25  6.00  6.04  0.00  1.64  0.00      -1.14  0.22

126  0.13  0.00 32.00  6.00  6.50  6.00  0.00  2.36  0.84       0.74  0.94
127  0.13  0.00 31.00  6.00  6.00  6.00  0.00  0.15  0.00     -15.00 -4.34
128  1.50  0.00 19.00  2.42  6.50  6.00  0.00  0.79  0.00       0.81  0.18
129  0.38  0.13 18.00  4.42  6.00  6.00  0.00  0.64  0.00      -0.22 -1.30

        39  2.13  0.38 32.00 18.00 20.29  6.00  4.42  4.71  6.25  6.00  6.19  0.00  1.28  0.00      -0.28  0.27

130  0.13  0.00 18.00  6.00  6.00  6.00  0.00  1.48  0.60       0.56  0.64
131  0.33  0.00  8.00  4.58  6.00  6.00  0.00  0.53  0.00      -1.80 -0.23
132  0.33  0.00 19.00  4.58  6.00  6.00  0.00  0.65  0.00       0.19  0.74
133  0.33  0.00 20.00  4.58  6.00  6.00  0.00  0.17  0.00      -2.87 -3.44
134  0.33  0.17  7.00  4.58  6.00  6.00  0.00  0.75  0.00       0.77 -1.04

        40  1.46  0.33 18.00  7.00 13.89  6.00  4.58  4.87  6.00  6.00  6.00  0.00  0.94  0.00      -0.37  0.06

135  0.17  0.00  8.00  5.58  6.00  6.00  0.00  1.53  0.72       0.51  0.93
136  0.17  0.00  9.00  5.58  6.00  6.00  0.00  0.11  0.00     -13.08 -0.00
137  0.33  0.17 10.00  4.58  6.00  6.00  0.00  0.11  0.00      -0.00-16.36

        41  0.67  0.33  8.00 10.00  9.25  5.58  4.58  5.25  6.00  6.00  6.00  0.00  0.88  0.00      -0.07 -0.14

                    13  8.00  0.67 19.71  9.25 18.26  4.30  5.25  4.59  5.53  6.00  5.88  0.00  3.23  0.57        0.38  0.76

138  0.25  0.00  5.00  5.00  6.50  6.00  0.00  1.89  0.84       0.94  0.74
139  0.75  0.00 11.00  3.42  6.50  6.00  0.00  0.49  0.00      -2.86 -0.54

        42  1.00  0.75  5.00 11.00  9.50  5.00  3.42  4.21  6.25  6.25  6.25  0.00  1.00  0.11       0.13  0.10

140  1.00  0.00 21.00  3.00  6.00  6.50  0.00  0.76  0.27       0.35  0.19
141  1.50  0.00 24.00  2.42  6.50  7.00  0.00  0.62  0.00      -0.23 -0.76
142  1.50  0.50 34.00  2.42  7.00  7.00  0.00  1.08  0.00       0.43 -1.52

        43  4.00  1.50 21.00 34.00 27.00  3.00  2.42  2.61  6.25  7.00  6.72  0.00  0.90  0.00      -0.11 -0.63
```

14 5.00 4.00 9.50 27.00 23.50 4.21 2.61 2.93 6.25 6.72 6.63 0.00 0.79 0.00 -3.09 -0.32

PM

5 13.00 5.00 18.26 23.50 20.27 4.69 2.93 4.01 5.88 6.63 6.17 0.00 3.10 0.54 0.35 0.74

143 0.14 0.00 24.00 5.85 7.00 7.00 0.00 2.72 0.73 0.60 0.86
144 0.42 0.00 31.00 4.26 7.00 7.00 0.00 0.39 0.00 -6.00 0.24
145 0.28 0.00 34.00 4.85 7.00 7.00 0.00 0.30 0.00 -0.32 0.17
146 0.42 0.00 31.00 4.26 7.00 7.00 0.00 0.25 0.00 -0.20 -0.99
147 0.42 0.00 24.00 4.26 7.00 7.00 0.00 0.49 0.00 0.50 -0.30

44 1.67 0.42 24.00 24.00 29.17 5.85 4.26 4.70 7.00 7.00 7.00 0.00 1.48 0.54 0.39 0.70

148 0.28 0.00 34.00 4.85 7.00 7.00 0.00 0.63 0.15 0.23 0.08
149 0.28 0.00 24.00 4.85 7.00 7.00 0.00 0.58 0.00 -0.09 0.25
150 0.28 0.00 31.00 4.85 7.00 7.00 0.00 0.44 0.00 -0.33 0.32
151 2.50 0.42 34.00 1.68 7.00 7.50 0.00 0.30 0.00 -0.47 -9.37

45 3.33 2.50 34.00 34.00 32.92 4.85 1.68 4.06 7.00 7.25 7.19 0.00 0.45 0.00 -2.29 -2.76

15 5.00 3.33 29.17 32.92 31.67 4.70 4.06 4.27 7.00 7.19 7.12 0.00 1.04 0.18 0.24 0.12

152 0.14 0.00 24.00 5.85 7.00 7.00 0.00 3.11 0.89 0.90 0.87
153 0.42 0.00 31.00 4.26 7.00 7.00 0.00 0.39 0.00 -6.99 0.24
154 0.28 0.00 34.00 4.85 7.00 7.00 0.00 0.30 0.00 -0.32 0.17
155 0.42 0.00 31.00 4.26 7.00 7.00 0.00 0.25 0.00 -0.20 -0.99
156 0.42 0.00 24.00 4.26 7.00 7.00 0.00 0.49 0.00 0.50 -0.30

46 1.67 0.42 24.00 24.00 29.17 5.85 4.26 4.70 7.00 7.00 7.00 0.00 1.69 0.77 0.73 0.80

157 0.28 0.00 34.00 4.85 7.00 7.00 0.00 0.63 0.15 0.23 0.08
158 0.28 0.00 24.00 4.85 7.00 7.00 0.00 0.58 0.00 -0.09 0.25
159 0.69 0.14 31.00 3.53 7.00 7.00 0.00 0.44 0.00 -0.33 -3.47

47 1.25 0.69 34.00 31.00 30.11 4.85 3.53 4.41 7.00 7.00 7.00 0.00 0.34 0.00 -3.96 -2.09

16 2.92 1.25 29.17 30.11 29.57 4.70 4.41 4.57 7.00 7.00 7.00 0.00 0.92 0.00 -0.13 0.38

160 0.14 0.00 34.00 5.85 7.00 7.00 0.00 1.96 0.84 0.78 0.90
161 0.28 0.00 31.00 4.85 7.00 7.00 0.00 0.20 0.00 -9.05 -0.81
162 0.42 0.00 34.00 4.26 7.50 6.50 0.00 0.35 0.00 0.45 -0.14

48 0.83 0.42 34.00 34.00 33.00 5.85 4.26 4.99 7.00 7.00 7.00 0.00 1.05 0.67 0.68 0.67

163 0.42 0.00 31.00 4.26 7.00 7.00 0.00 0.40 0.20 0.12 0.27
164 0.28 0.00 34.00 4.85 7.00 7.00 0.00 0.30 0.00 -0.37 0.17
165 0.28 0.00 31.00 4.85 7.00 7.00 0.00 0.25 0.00 -0.20 -0.00
166 0.56 0.00 34.00 3.85 7.00 7.00 0.00 0.25 0.00 -0.00 -0.85
167 0.56 0.00 31.00 3.85 7.50 6.50 0.00 0.45 0.00 0.46 -0.78
168 2.17 0.38 24.00 1.88 7.50 7.00 0.00 0.81 0.00 0.44 -2.20

49 4.25 2.17 31.00 24.00 28.02 4.26 1.88 3.92 7.00 7.25 7.13 0.00 0.35 0.00 -2.00 -3.32

17 5.08 4.25 33.00 28.02 28.84 4.99 3.92 4.10 7.00 7.13 7.11 0.00 0.57 0.00 -0.62 -0.88

169 2.50 0.00 25.00 1.68 7.50 7.00 0.00 2.59 0.56 0.69 0.44
170 3.00 0.00 16.00 1.42 7.50 7.00 0.00 1.45 0.00 -0.79 -0.12

	50	5.50	3.00	25.00	16.00	20.09	1.68	1.42	1.55	7.25	7.25	7.25	0.00	1.52	0.57	0.77	0.38	
171	0.50	C.00	25.00	4.00	7.50	7.00	0.00	1.63	0.33	0.11	0.55							
172	1.00	0.00	16.00	3.00	7.50	7.00	0.00	0.72	0.00	-1.25	0.20							
173	2.00	0.25	16.00	2.00	7.50	6.00	0.00	0.58	0.00	-0.25	-3.02							
	51	3.50	2.00	25.00	16.00	17.29	4.00	2.00	3.00	7.25	6.75	6.96	0.00	0.94	0.00	-0.60	-0.52	
174	0.50	C.00	15.00	4.00	6.00	6.00	0.00	2.33	0.83	0.75	0.90							
175	0.50	C.00	16.00	4.00	6.00	6.00	0.00	0.23	0.00	-9.15	-0.21							
176	1.50	1.00	14.00	2.42	6.00	6.00	0.00	0.28	0.00	0.17	-7.29							
	52	2.50	1.50	15.00	14.00	14.60	4.00	2.42	3.47	6.00	6.00	6.00	0.00	1.44	0.00	0.34	-0.42	
		18	11.50	2.50	20.09	14.60	18.04	1.55	3.47	2.41	7.25	6.00	6.89	0.00	1.07	0.00	0.47	-0.88
		6	24.50	11.50	31.67	18.04	24.44	4.27	2.41	3.40	7.12	6.89	7.00	0.00	0.80	0.00	-2.86	-1.71
177	0.33	C.00	16.00	4.58	2.00	2.00	0.00	2.30	0.90	0.88	0.93							
178	0.67	0.00	15.00	3.58	2.00	2.00	0.00	0.17	0.00	-12.63	-6.49							
	53	1.00	0.67	16.00	15.00	15.33	4.58	3.58	4.08	2.00	2.00	2.00	0.00	2.04	0.46	0.29	0.63	
179	0.50	C.00	14.00	4.00	5.00	2.00	0.00	1.27	0.70	0.87	0.52							
180	0.83	0.33	16.00	3.26	2.00	2.00	0.00	0.60	0.00	-1.10	-0.76							
	54	1.33	0.83	14.00	16.00	15.25	4.00	3.26	3.63	3.50	2.00	2.56	0.00	0.76	0.00	-1.69	0.12	
181	0.33	0.00	14.00	4.58	2.00	3.00	0.00	1.06	0.43	0.43	0.43							
182	0.83	0.00	15.00	3.26	4.00	3.00	0.00	0.60	0.00	-0.76	0.32							
183	0.50	C.25	15.00	4.00	3.00	3.00	0.00	0.41	0.00	-0.47	-2.69							
	55	1.67	0.50	14.00	15.00	14.80	4.58	4.00	3.95	2.50	3.00	3.15	0.00	0.67	0.00	-0.13	-0.27	
		19	4.00	1.67	15.33	14.80	15.08	4.08	3.95	3.88	2.00	3.15	2.67	0.00	2.01	0.56	0.47	0.64
184	0.67	0.00	16.00	3.58	5.00	2.00	0.00	1.51	0.65	0.73	0.56							
185	0.67	0.00	14.00	3.58	2.00	2.00	0.00	0.66	0.00	-1.28	-0.98							
	56	1.33	0.67	16.00	14.00	15.00	3.58	3.58	3.58	3.50	2.00	2.75	0.00	0.85	0.18	0.21	0.15	
186	0.67	0.00	16.0C	3.58	5.00	2.00	0.00	1.31	0.46	0.50	0.42							
187	1.00	0.50	12.00	3.00	2.00	2.00	0.00	0.76	0.00	-0.73	-0.60							
	57	1.67	1.00	16.00	12.00	13.60	3.58	3.00	3.29	3.50	2.00	2.60	0.00	0.72	0.00	-0.17	-0.35	
188	C.21	0.00	7.00	5.26	2.00	2.00	0.00	1.22	0.64	0.38	0.90							
189	0.21	C.00	6.00	5.26	2.00	2.00	0.00	0.12	0.00	-8.84	-1.27							
190	5.83	2.08	8.00	0.46	2.00	1.00	0.00	0.28	0.00	0.56	-11.30							
	58	6.25	5.83	7.00	8.00	7.90	5.26	0.46	3.66	2.00	1.50	1.53	0.00	0.98	0.00	0.26	-0.88	
		20	9.25	6.25	15.00	7.90	9.95	3.58	3.66	3.58	2.75	1.53	1.90	0.00	0.71	0.00	-1.81	-1.02
191	0.21	0.00	7.00	5.26	2.00	2.00	0.00	3.45	0.94	0.92	0.96							
192	0.21	C.00	6.00	5.26	2.00	2.00	0.00	0.12	0.00	-26.90	-0.39							

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193  0.56  0.14  8.00  3.85  2.00  2.00  0.00  0.17  0.00        0.28 -3.54

          59  0.97  0.56  7.00  8.00  7.36  5.26  3.85  4.79  2.00  2.00  2.00  0.00  1.84  0.63       0.47  0.78

194  0.56  0.00  6.00  3.85  2.00  2.00  0.00  0.78  0.73        0.78  0.68
195  0.56  0.00  7.00  3.85  2.00  2.00  0.00  0.25  0.00       -2.14 -0.00
196  0.42  0.14  8.00  4.26  2.00  2.00  0.00  0.25  0.00       -0.00 -1.74

          60  1.53  0.42  6.00  8.00  6.91  3.85  4.26  3.99  2.00  2.00  2.00  0.00  0.40  0.00      -3.58 -0.28

197  0.42  0.00  7.00  4.26  2.00  2.00  0.00  0.68  0.65        0.64  0.66
198  0.28  0.00  6.00  4.85  2.00  2.30  0.00  0.23  0.00       -1.95 -0.13
199  0.28  0.00  8.00  4.85  2.30  2.60  0.00  0.26  0.00        0.12 -0.55
200  0.28  0.00  3.00  4.85  2.60  2.90  0.00  0.41  0.00        0.36 -0.15
201  1.67  0.21  9.00  2.26  3.00  3.00  0.00  0.47  0.00        0.13 -2.88

          61  2.92  1.67  7.00  9.00  7.76  4.26  2.26  4.21  2.00  3.00  2.70  0.00  0.51  0.00       0.22 -2.49

202  0.83  0.00 10.00  3.26  4.00  4.00  0.00  1.81  0.60        0.74  0.47
203  0.42  0.00 17.00  4.26  5.00  4.00  0.00  0.97  0.00       -0.88  0.21
204  1.25  0.00 23.00  2.68  5.00  5.00  0.00  0.77  0.00       -0.26 -0.13
205  2.78  0.28 26.00  1.53  5.50  6.00  0.00  0.87  0.00        0.12 -2.75

          62  5.28  2.78 10.00 26.00 22.05  3.26  1.53  2.93  4.00  5.75  5.20  0.00  1.79  0.00       0.71 -0.25

                  21 10.69  5.28  7.36 22.05 14.66  4.79  2.93  3.60  2.00  5.20  3.77  0.00  1.44  0.00       0.50 -0.53

                        7 23.94 10.69 15.08 14.66 12.91  3.88  3.60  3.64  2.67  3.77  2.86  0.00  2.18  0.00       0.63 -0.11

   2 61.44 23.94 20.27 12.91 19.06  4.01  3.64  3.62  6.17  2.86  5.21  0.00  3.10  0.00

206  0.28  0.00 39.00  4.85  6.50  6.00  0.00  3.25  0.81        0.73  0.89
207  0.69  0.00 36.00  3.53  6.50  6.00  0.00  0.35  0.00       -8.18 -0.43
208  1.53  0.14 39.00  2.39  6.50  6.00  0.00  0.50  0.00        0.30 -3.27

          63  2.50  1.53 39.00 39.00 38.17  4.85  2.39  3.59  6.25  6.25  6.25  0.00  2.24  0.36       0.20  0.52

209  0.28  0.00 36.00  4.85  6.50  6.00  0.00  2.16  0.80        0.77  0.84
210  0.28  0.00 39.00  4.85  6.50  6.00  0.00  0.35  0.00       -5.09  0.41
211  0.83  0.00 39.00  3.26  6.50  6.00  0.00  0.21  0.00       -0.70 -1.40

          64  1.39  0.83 36.00 39.00 38.40  4.85  3.26  4.32  6.25  6.25  6.25  0.00  1.08  0.00      -1.07  0.68

212  0.56  0.00 36.00  3.85  6.00  6.00  0.00  0.50  0.45        0.58  0.31
213  0.56  0.00 39.00  3.85  6.00  6.00  0.00  0.35  0.00       -0.45 -0.00
214  1.39  0.25 36.00  2.53  6.00  6.00  0.00  0.35  0.00       -0.00 -4.94

          65  2.50  1.39 36.00 36.00 36.67  3.85  2.53  3.41  6.00  6.00  6.00  0.00  0.35  0.00      -2.13 -2.22

                  22  6.39  2.50 38.17 36.67 37.63  3.59  3.41  3.68  6.25  6.00  6.15  0.00  2.20  0.54       0.34  0.73

215  0.56  0.00 36.00  3.85  6.50  6.00  0.00  2.06  0.81        0.83  0.78
216  1.11  0.21 39.00  2.85  6.50  6.00  0.00  0.45  0.00       -3.52 -3.35

          66  1.67  1.11 36.00 39.00 38.00  3.85  2.85  3.35  6.25  6.25  6.25  0.00  1.11  0.37       0.69  0.06
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RM

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217  0.56  C.00 36.00  3.85  6.00  6.00  0.00  1.98  0.80        0.77  0.82
218  1.53  0.21 39.00  2.39  6.00  6.00  0.00  0.35  0.00       -4.71 -4.99

       67  2.08  1.53 36.00 39.J0 38.20  3.85  2.39  3.12  6.00  6.00  6.00  0.00  1.05  0.00      -0.06 -0.06

219  0.42  0.00 36.00  4.26  6.00  6.00  0.00  2.07  0.85        0.83  0.86
220  1.25  0.00 39.00  2.68  6.00  6.00  0.00  0.30  0.00       -6.01 -0.89
221  2.50  C.00 39.00  1.68  6.00  7.00  0.00  0.56  0.00        0.47 -3.40

       68  4.17  2.50 36.00 39.00 38.70  4.26  1.68  2.87  6.00  6.50  6.30  0.00  1.11  0.00       0.06 -0.89

              23  7.92  4.17 38.00 38.70 38.42  3.35  2.87  3.04  6.25  6.30  6.21  0.00  0.59  0.00      -2.73 -2.47

                     8 14.31  7.92 37.63 38.42 38.07  3.68  3.04  3.32  6.15  6.21  6.18  0.J0  2.43  0.10       0.10  0.11

222  1.00  0.C0  9.00  3.00  7.00  7.00  0.00  2.46  0.81        0.77  0.85
223  1.00  0.00  9.00  3.00  7.00  7.00  0.00  0.36  0.00       -5.82 -1.50

       69  2.00  1.00  9.00  9.J0  9.00  3.00  3.00  3.00  7.00  7.00  7.00  0.00  2.10  0.45       0.47  0.44

224  0.50  C.00  9.00  4.00  7.00  2.00  0.00  0.90  0.52        0.60  0.44
225  0.67  0.17  9.00  3.58  2.00  4.00  0.00  0.51  0.00       -0.79 -2.37

       70  1.17  0.67  9.00  9.00  9.00  4.00  3.58  3.79  4.50  3.00  3.64  0.00  1.18  0.00      -0.78  0.14

226  0.67  C.00 10.0C  3.58  5.50  2.00  0.00  1.70  0.64        0.70  0.58
227  0.67  0.17  8.00  3.58  2.00  2.00  0.00  0.72  0.00       -1.38 -1.17

       71  1.33  0.67 10.00  8.J0  9.00  3.58  3.58  3.58  3.75  2.00  2.88  0.00  1.02  0.00      -0.16 -0.05

              24  4.50  1.33  9.00  9.00  9.00  3.00  3.58  3.38  7.00  2.88  4.91  0.00  2.05  0.53       0.71  0.35

228  0.13  0.00 25.00  6.00  2.00  2.00  0.00  1.56  0.45        0.54  0.37
229  1.88  0.00 19.00  2.09  4.00  2.00  0.00  0.99  0.00       -0.58  0.04
230  1.00  C.75 18.00  3.00  2.00  2.00  0.00  0.94  0.00       -0.05 -0.49

       72  3.00  1.00 25.00 18.J0 18.92  6.00  3.00  3.70  2.00  2.00  2.63  0.00  1.07  0.15       0.05  0.25

231  0.13  C.00 25.00  6.00  2.00  2.00  0.00  1.41  0.31        0.33  0.30
232  0.88  C.00 19.00  3.19  4.00  2.00  0.00  0.99  0.00       -0.42  0.41
233  0.67  0.00 18.00  3.58  2.00  2.00  0.00  0.58  0.00       -0.70  0.00
234  0.67  C.00 25.00  3.58  2.00  2.00  0.00  0.58  0.00       -0.00  0.08
235  0.67  0.17 19.00  3.58  2.00  2.00  0.00  0.53  0.00       -0.09 -1.09

       73  3.00  0.67 25.00 19.J0 20.36  6.00  3.58  3.99  2.00  2.00  2.29  0.00  0.81  0.00      -0.33  0.27

236  0.50  0.00 18.00  4.00  3.00  2.00  0.00  1.11  0.48        0.52  0.43
237  0.50  0.25 25.00  4.00  2.00  2.00  0.00  0.63  0.00       -0.76 -4.68

       74  1.00  0.50 18.00 25.J0 21.50  4.00  4.00  4.00  2.50  2.00  2.25  0.00  0.59  0.00      -0.37 -4.22

              25  7.00  1.00 18.92 21.50 19.90  3.70  4.00  3.87  2.63  2.25  2.43  0.00  1.34  0.00      -0.53 -0.62

                     9 11.50  7.00  9.00 19.90 15.64  3.38  3.87  3.68  4.91  2.43  3.40  0.J0  2.17  0.00      -1.24  0.23
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238	2.00	0.00	5.00	2.00	6.50	6.00	0.00	3.57	0.78						0.82	0.74
239	1.00	0.00	3.00	3.00	6.50	6.00	0.00	0.93	0.00						-2.85	0.44
240	1.50	0.00	2.00	2.42	6.50	6.00	0.00	0.52	0.00						-0.79	-0.54
75	4.50	1.50	5.00	2.00	3.56	2.00	2.42	2.47	6.25	6.25	6.25	0.00	3.09	0.83	0.81	0.85
241	0.50	0.00	5.00	4.00	6.50	6.00	0.00	0.80	0.33						0.35	0.32
242	0.67	0.00	2.00	3.58	6.50	5.00	0.00	0.54	0.00						-0.47	-0.21
76	1.17	0.67	5.00	2.00	3.29	4.00	3.58	3.79	6.25	5.75	5.96	0.00	0.47	0.00	-5.62	-1.00
243	0.67	0.00	5.00	3.58	5.00	4.00	0.00	0.66	0.17						0.17	0.16
244	0.67	0.00	7.00	3.58	4.00	3.00	0.00	0.55	0.00						-0.19	0.28
245	1.00	0.25	8.00	3.00	3.00	3.00	0.00	0.40	0.00						-0.39	-2.14
77	2.33	1.00	5.00	8.00	6.86	3.58	3.00	3.39	4.50	3.00	3.57	0.00	0.93	0.00	0.50	-0.39
246	0.50	0.00	5.00	4.00	2.00	2.00	0.00	1.25	0.67						0.68	0.65
247	1.50	0.00	8.00	2.42	2.00	1.00	0.00	0.43	0.00						-1.87	-2.06
248	2.00	0.25	22.00	2.00	1.00	1.00	0.00	1.33	0.00						0.67	-0.83
78	4.00	2.00	5.00	22.00	14.63	4.00	2.00	2.81	2.00	1.00	1.31	0.00	1.30	0.00	0.28	-0.44
249	0.67	0.00	11.00	3.58	3.00	3.00	0.00	2.43	0.59						0.45	0.74
250	0.33	0.00	5.00	4.58	3.00	4.00	0.00	0.64	0.00						-2.80	0.02
251	1.00	0.25	11.00	3.00	4.00	5.00	0.00	0.63	0.00						-0.02	-3.34
79	2.00	1.00	11.00	11.00	10.00	3.58	3.00	3.72	3.00	4.50	3.83	0.00	1.87	0.00	0.31	-0.00
26	14.00	2.00	3.56	10.00	8.17	2.47	3.72	3.01	6.25	3.83	4.02	0.00	2.17	0.28	0.38	0.18
252	0.50	0.00	1.00	4.00	6.50	6.00	0.00	2.72	0.80						0.77	0.82
253	1.00	0.00	5.00	3.00	6.50	6.00	0.00	0.48	0.00						-4.64	-0.86
254	3.00	0.00	15.00	1.42	6.00	6.00	0.00	0.90	0.00						0.46	-0.92
80	4.50	3.00	1.00	15.00	11.22	4.00	1.42	2.81	6.25	6.00	6.08	0.00	1.88	0.20	0.00	0.41
255	0.50	0.00	5.00	4.00	6.50	6.00	0.00	1.73	0.60						0.48	0.72
256	1.00	0.00	1.00	3.00	6.50	6.00	0.00	0.48	0.00						-2.59	-1.38
81	1.50	1.00	5.00	1.00	2.33	4.00	3.00	3.50	6.25	6.25	6.25	0.00	1.12	0.00	-0.68	0.39
257	0.67	0.00	15.00	3.58	6.50	6.00	0.00	1.15	0.34						0.58	0.10
258	0.67	0.00	1.00	3.58	6.50	6.00	0.00	1.03	0.00						-0.12	0.47
259	0.67	0.00	5.00	3.58	6.50	6.00	0.00	0.54	0.00						-0.89	-0.08
82	2.00	0.67	15.00	5.00	7.00	3.58	3.58	3.58	6.25	6.25	6.25	0.00	0.69	0.00	-0.63	0.10
260	1.00	0.00	11.00	3.00	6.00	6.00	0.00	0.59	0.06						0.07	0.05
261	0.50	0.00	15.00	4.00	6.00	6.00	0.00	0.56	0.00						-0.06	-0.07
262	1.00	0.00	19.00	3.00	6.50	6.50	0.00	0.59	0.00						0.06	-0.46
263	1.50	0.25	26.00	2.42	7.00	6.50	0.00	0.86	0.00						0.31	-1.54
83	4.00	1.50	11.00	26.00	19.13	3.00	2.42	3.10	6.00	6.75	6.41	0.00	0.62	0.00	-0.11	-1.60
264	1.00	0.00	28.00	3.00	6.50	6.50	0.00	2.19	0.65						0.61	0.69
265	2.00	0.00	30.00	2.00	7.00	7.00	0.00	0.68	0.00						-2.25	-0.66
266	4.00	0.00	36.00	1.00	7.00	8.00	0.00	1.12	0.00						0.00	0.00

```
84  7.00  4.00 28.00 36.J0 33.14  3.00  1.00  2.00  6.50  7.50  7.21  0.00  1.61  0.00      0.00  0.00

          27 19.00  7.00 11.22 33.14 19.82  2.81  2.00  2.71  6.08  7.21  6.60  0.00  1.78  0.00      0.00  0.00

                    10 33.00 19.00  8.17 19.82 14.87  3.01  2.71  2.84  4.02  6.60  5.51  0.J0  1.56  0.00      0.00  0.00

 3 58.81 33.00 38.C7 14.87 20.67  3.32  2.84  3.12  6.18  5.51  5.26  0.00  2.43  0.00

CORE USAGE        OBJECT CODE=   10568 BYTES,ARRAY AREA=   72180 BYTES,TOTAL AREA AVAILABLE=  444416  BYTES

DIAGNOSTICS        NUMBER OF ERRORS=      0, NUMBER OF WARNINGS=      0, NUMBER OF EXTENSIONS=      0

COMPILE TIME=     0.74 SEC,EXECUTION TIME=     4.41 SEC,     15.17.27    TUESDAY      8 AUG 78    WATFIV - JAN 1976 V1L5

      C$STOP
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PM

Input data: Webern

N	DUR	RST	PITCH	A1	A2	TMBR
1	2.40	0.00	35.00	2.00	2.00	0.00
2	1.20	0.00	43.00	2.00	2.00	0.00
3	3.60	2.40	32.00	2.00	2.00	0.00
4	1.20	0.00	40.00	3.00	3.00	0.00
5	1.20	0.00	51.00	3.00	2.00	0.00
6	2.40	0.00	43.00	2.00	2.00	0.00
7	1.20	0.00	54.00	4.00	4.00	0.00
8	2.40	1.20	46.00	4.00	4.00	0.00
9	1.20	0.00	43.00	4.00	4.00	0.00
10	2.40	0.00	51.00	4.00	4.00	0.00
11	2.40	0.00	40.00	3.00	3.00	0.00
12	3.60	2.40	48.00	3.00	3.00	0.00
13	1.20	0.00	11.00	3.00	3.00	0.00
14	2.40	0.00	19.00	3.00	3.00	0.00
15	1.20	0.00	32.00	4.00	4.00	0.00
16	1.20	0.00	28.00	4.00	4.00	0.00
17	2.40	1.20	17.00	4.00	4.00	0.00
18	1.20	0.00	13.00	3.00	3.00	0.00
19	1.20	0.00	24.00	3.00	3.00	0.00
20	2.40	0.00	32.00	2.00	2.00	0.00
21	1.20	0.00	45.00	4.00	4.00	0.00
22	2.40	1.20	41.00	4.00	4.00	0.00
23	1.20	0.00	42.00	4.00	4.00	0.00
24	2.40	0.00	50.00	4.00	4.00	0.00
25	1.20	0.00	39.00	3.00	3.00	0.00
26	3.60	2.40	47.00	3.00	3.00	0.00
27	1.20	0.00	10.00	4.00	4.00	0.00
28	2.40	1.20	18.00	4.00	4.00	0.00
29	1.20	0.00	43.00	5.00	5.00	0.00
30	2.40	0.00	39.00	5.00	5.00	0.00
31	2.40	0.00	52.00	5.00	5.00	0.00
32	1.20	0.00	36.00	4.00	4.00	0.00
33	2.40	1.20	49.00	4.00	4.00	0.00
34	4.80	3.60	45.00	3.00	3.00	0.00
35	2.40	1.20	32.00	2.00	2.00	0.00
36	2.40	1.20	28.00	2.00	2.00	0.00
37	1.20	0.00	27.00	4.00	4.00	0.00
38	1.20	0.00	31.00	4.00	4.00	0.00
39	1.20	0.00	42.00	4.00	3.00	0.00
40	1.20	0.00	38.00	3.00	3.00	0.00
41	1.20	0.00	36.00	3.00	3.00	0.00
42	2.40	1.20	13.00	2.00	2.00	0.00
43	2.40	1.20	17.00	2.00	2.00	0.00
44	1.20	0.00	30.00	4.00	4.00	0.00
45	1.20	0.00	35.00	4.00	4.00	0.00
46	1.20	0.00	24.00	4.00	4.00	0.00
47	1.20	0.00	40.00	3.00	3.00	0.00
48	2.40	1.20	39.00	3.00	3.00	0.00
49	2.40	1.20	50.00	4.00	4.00	0.00
50	1.20	0.00	45.00	4.00	4.00	0.00
51	2.40	0.00	32.00	4.00	4.00	0.00
52	1.20	0.00	45.00	3.00	3.00	0.00
53	2.40	1.20	43.00	3.00	3.00	0.00
54	2.40	1.20	30.00	2.00	2.00	0.00
55	1.20	0.00	26.00	2.00	2.00	0.00
56	1.20	0.00	37.00	5.00	5.00	0.00
57	1.20	0.00	41.00	5.00	5.00	0.00
58	1.20	0.00	36.00	5.00	5.00	0.00

59	1.20	0.00	35.00	5.00	5.00	0.00
60	1.20	0.00	43.00	5.00	5.00	0.00
61	4.80	3.60	32.00	5.00	5.00	0.00
62	1.20	0.00	37.00	5.00	5.00	0.00
63	1.20	0.00	36.00	5.00	5.00	0.00
64	1.20	0.00	31.00	5.00	5.00	0.00
65	1.20	0.00	42.00	5.00	5.00	0.00
66	2.40	1.20	34.00	5.00	5.00	0.00
67	1.20	0.00	31.00	5.00	5.00	0.00
68	1.20	0.00	47.00	5.00	5.00	0.00
69	1.20	0.00	34.00	4.00	4.00	0.00
70	2.40	1.20	42.00	4.00	4.00	0.00
71	1.20	0.00	32.00	3.00	3.00	0.00
72	3.60	2.40	45.00	3.00	3.00	0.00
73	2.40	0.00	11.00	2.00	2.00	0.00
74	2.40	0.00	31.00	2.00	2.00	0.00
75	1.20	0.00	32.00	4.00	4.00	0.00
76	2.40	1.20	40.00	4.00	4.00	0.00
77	1.20	0.00	53.00	4.00	4.00	0.00
78	2.40	0.00	37.00	4.00	4.00	0.00
79	1.20	0.00	48.00	4.00	4.00	0.00
80	1.20	0.00	32.00	3.00	3.00	0.00
81	1.20	0.00	45.00	3.00	3.00	0.00
82	2.40	1.20	41.00	3.00	3.00	0.00
83	2.40	1.20	30.00	2.00	2.00	0.00
84	2.40	1.20	26.00	2.00	2.00	0.00
85	2.40	1.20	51.00	3.00	3.00	0.00
86	4.80	3.60	47.00	3.00	3.00	0.00
87	2.40	1.20	22.00	2.00	2.00	0.00
88	3.60	2.40	18.00	2.00	2.00	0.00
89	1.20	0.00	19.00	3.00	3.00	0.00
90	4.80	3.60	15.00	3.00	3.00	0.00
91	2.40	1.20	35.00	2.00	2.00	0.00
92	2.40	1.20	31.00	2.00	2.00	0.00
93	1.20	0.00	44.00	2.00	2.00	0.00
94	1.20	0.00	33.00	2.00	2.00	0.00
95	2.40	1.20	16.00	2.00	2.00	0.00
96	1.20	0.00	12.00	2.00	2.00	0.00

WEIGHTINGS: PROXIMITY= 1.00 PITCH= 0.50 INTENSITY= 6.00 TEMPORAL DENSITY= 0.00 TIMBRE= 0.00

Output data ‹ Webern

```
 1  1.50   0.00 35.00  2.42  2.00  2.00  0.00  0.00  0.00        0.00  0.00
 2  0.75   0.00 43.00  3.42  2.00  2.00  0.00  3.07  0.00        0.00  0.00
 3  2.25   1.50 32.00  1.83  2.00  2.00  0.00  2.47  0.00       -0.24 -2.76

       1  4.50  2.25 35.00 32.00 34.83  2.42  1.83  2.55  2.00  2.00  2.00  0.00  0.00  0.00      0.00  0.00

 4  0.75   0.00 40.00  3.42  3.00  3.00  0.00  9.27  0.71        0.73  0.69
 5  0.75   0.00 51.00  3.42  3.00  2.00  0.00  2.87  0.00       -2.23  0.14
 6  1.50   0.00 43.00  2.42  2.00  2.00  0.00  2.47  0.00       -0.16 -1.70

       2  3.00  1.50 40.00 43.00 44.25  3.42  2.42  3.08  3.00  2.00  2.38  0.00  5.56  0.00      0.00  0.00

 7  0.75   0.00 54.00  3.42  4.00  4.00  0.00  6.67  0.66        0.63  0.69
 8  1.50   0.75 46.00  2.42  4.00  4.00  0.00  2.07  0.00       -2.23 -2.19
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YORK UNIVERSITY

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        3  2.25   1.50 54.00 46.00 48.67  3.42  2.42  2.92  4.00  4.00  4.00  0.00  4.93  0.00      -0.13  0.33

 9  0.75   0.00 43.00  3.42  4.00  4.00  0.00  6.60  0.69        0.69  0.69
10  1.50   0.00 51.00  2.42  4.00  4.00  0.00  2.07  0.00       -2.19 -1.45

        4  2.25   1.50 43.00 51.00 48.33  3.42  2.42  2.92  4.00  4.00  4.00  0.00  3.32  0.00      -0.48 -0.07

11  1.50   0.00 40.00  2.42  3.00  3.00  0.00  5.07  0.49        0.59  0.39
12  2.25   1.50 48.00  1.83  3.00  3.00  0.00  3.07  0.00       -0.65 -3.02

        5  3.75   2.25 40.00 48.00 44.80  2.42  1.83  2.12  3.00  3.00  3.00  0.00  3.57  0.00       0.07 -1.26


              1 15.75   3.75 34.83 44.80 42.90  2.55  2.12  2.65  2.00  3.00  2.88  0.00  0.00  0.00       0.00  0.00

13  0.75   0.00 11.00  3.42  3.00  3.00  0.00 12.33  0.79        0.75  0.83
14  1.50   0.00 19.00  2.42  3.00  3.00  0.00  2.07  0.00       -4.97 -1.58

        6  2.25   1.50 11.00 19.00 16.33  3.42  2.42  2.92  3.00  3.00  3.00  0.00  8.06  0.53       0.56  0.51

15  0.75   0.00 32.00  3.42  4.00  4.00  0.00  5.33  0.66        0.61  0.71
16  0.75   0.00 28.00  3.42  4.00  4.00  0.00  1.53  0.00       -2.48 -0.61
17  1.50   0.75 17.00  2.42  4.00  4.00  0.00  2.47  0.00        0.38 -1.73

        7  3.00   1.50 32.00 17.00 23.50  3.42  2.42  3.08  4.00  4.00  4.00  0.00  3.94  0.00      -1.04 -0.19

18  0.75   0.00 13.00  3.42  3.00  3.00  0.00  6.73  0.63        0.63  0.63
19  0.75   0.00 24.00  3.42  3.00  3.00  0.00  2.47  0.00       -1.73 -0.49
20  1.50   0.00 32.00  2.42  2.00  2.00  0.00  3.67  0.00        0.33 -0.89

        8  3.00   1.50 13.00 32.00 25.25  3.42  2.42  3.08  3.00  2.00  2.50  0.00  4.68  0.00       0.16 -0.24


              2  8.25   3.00 15.33 25.25 22.18  2.92  3.08  3.04  3.00  2.50  3.18  0.00  5.65  0.00       0.00  0.00

21  0.75   0.00 45.00  3.42  4.00  4.00  0.00  6.93  0.62        0.47  0.78
22  1.50   0.75 41.00  2.42  4.00  4.00  0.00  1.53  0.00       -3.52 -3.13

        9  2.25   1.50 45.00 41.00 42.33  3.42  2.42  2.92  4.00  4.00  4.00  0.00  5.81  0.30       0.19  0.40

23  0.75   0.00 42.00  3.42  4.00  4.00  0.00  6.33  0.72        0.76  0.67
24  1.50   0.00 50.00  2.42  4.00  4.00  0.00  2.07  0.00       -2.06 -1.45

       10  2.25   1.50 42.00 50.00 47.33  3.42  2.42  2.92  4.00  4.00  4.00  0.00  3.50  0.00      -0.66  0.00

25  0.75   0.00 39.00  3.42  3.00  3.00  0.00  5.07  0.59        0.59  0.59
26  2.25   1.50 47.00  1.83  3.00  3.00  0.00  2.07  0.00       -1.45 -5.74

       11  3.00   2.25 39.00 47.00 45.00  3.42  1.83  2.62  3.00  3.00  3.00  0.00  3.49  0.00      -0.00 -1.79


              3  7.50   3.00 42.33 45.00 44.90  2.92  2.62  2.80  4.00  3.00  3.60  0.00  4.75  0.00      -0.19 -0.19

27  0.75   0.00 10.00  3.42  4.00  4.00  0.00 13.93  0.85        0.85  0.85
28  1.50   0.75 18.00  2.42  4.00  4.00  0.00  2.07  0.00       -5.74 -4.39

       12  2.25   1.50 10.00 18.00 15.33  3.42  2.42  2.92  4.00  4.00  4.00  0.00  9.74  0.39       0.64  0.14

29  0.75   0.00 43.00  3.42  5.00  5.00  0.00 11.13  0.84        0.81  0.86
30  1.50   0.00 39.00  2.42  5.00  5.00  0.00  1.53  0.00       -6.26 -1.43
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31	1.50	0.00	52.00	2.42	5.00	5.00	0.00	3.73	0.00	0.59	-0.54					
13	3.75	1.50	43.00	52.00	45.00	3.42	2.42	2.75	5.00	5.00	5.00	0.00	8.34	0.00	-0.17	0.50
32	0.75	0.00	36.00	3.42	4.00	4.00	0.00	5.73	0.44	0.35	0.52					
33	1.50	0.75	49.00	2.42	4.00	4.00	0.00	2.73	0.00	-1.10	-1.46					
34	3.00	2.25	45.00	1.42	3.00	3.00	0.00	6.73	0.00	0.59	-0.65					
14	5.25	3.00	36.00	45.00	44.86	3.42	1.42	2.42	4.00	3.00	3.43	0.00	4.13	0.00	-1.02	-0.86
4	11.25	5.25	15.33	44.86	39.00	2.92	2.42	2.63	4.00	3.43	4.07	0.00	5.64	0.00	0.16	-0.03
1	42.75	11.25	42.90	39.00	38.23	2.65	2.63	2.75	2.88	4.07	3.38	0.00	0.00	0.00	0.00	0.00
35	1.50	0.75	32.00	2.42	2.00	2.00	0.00	11.13	0.47	0.40	0.54					
36	1.50	0.75	28.00	2.42	2.00	2.00	0.00	5.13	0.00	-1.17	-0.55					
15	3.00	1.50	32.00	28.00	30.00	2.42	2.42	2.42	2.00	2.00	2.00	0.00	7.70	0.37	0.46	0.27
37	0.75	0.00	27.00	3.42	4.00	4.00	0.00	7.93	0.58	0.35	0.81					
38	0.75	0.00	31.00	3.42	4.00	4.00	0.00	1.53	0.00	-4.17	-0.87					
16	1.50	0.75	27.00	31.00	29.00	3.42	3.42	3.42	4.00	4.00	4.00	0.00	5.63	0.00	-0.37	0.51
39	0.75	0.00	42.00	3.42	4.00	3.00	0.00	2.87	0.40	0.47	0.33					
40	0.75	0.00	38.00	3.42	3.00	3.00	0.00	1.93	0.00	-0.48	0.34					
41	0.75	0.00	36.00	3.42	3.00	3.00	0.00	1.27	0.00	-0.53	-3.47					
17	2.25	0.75	42.00	36.00	38.67	3.42	3.42	3.42	3.50	3.00	3.17	0.00	2.74	0.00	-1.05	-0.95
42	1.50	0.75	13.00	2.42	2.00	2.00	0.00	5.67	0.44	0.78	0.09					
43	1.50	0.75	17.00	2.42	2.00	2.00	0.00	5.13	0.00	-0.10	-0.86					
18	3.00	1.50	13.00	17.00	15.00	2.42	2.42	2.42	2.00	2.00	2.00	0.00	5.34	0.00	0.49	-0.37
5	9.75	3.00	30.00	15.00	27.23	2.42	2.42	2.80	2.00	2.00	2.58	0.00	5.83	0.10	0.03	0.16
44	0.75	0.00	30.00	3.42	4.00	4.00	0.00	9.53	0.64	0.46	0.83					
45	0.75	0.00	35.00	3.42	4.00	4.00	0.00	1.67	0.00	-4.72	-0.48					
46	0.75	0.00	24.00	3.42	4.00	4.00	0.00	2.47	0.00	0.32	-0.92					
19	2.25	0.75	30.00	24.00	29.67	3.42	3.42	3.42	4.00	4.00	4.00	0.00	7.34	0.38	0.27	0.48
47	0.75	0.00	40.00	3.42	3.00	3.00	0.00	4.73	0.62	0.48	0.76					
48	1.50	0.75	39.00	2.42	3.00	3.00	0.00	1.13	0.00	-3.18	-6.47					
20	2.25	1.50	40.00	39.00	39.33	3.42	2.42	2.92	3.00	3.00	3.00	0.00	3.81	0.00	-0.93	-0.36
6	4.50	2.25	29.67	39.33	34.50	3.42	2.92	3.17	4.00	3.00	3.50	0.00	4.90	0.00	-0.19	0.36
49	1.50	0.75	50.00	2.42	4.00	4.00	0.00	8.47	0.53	0.87	0.19					
50	0.75	0.00	45.00	3.42	4.00	4.00	0.00	6.87	0.00	-0.23	0.60					
51	1.50	0.00	32.00	2.42	4.00	4.00	0.00	2.73	0.00	-1.51	-0.95					
21	3.75	1.50	50.00	32.00	41.80	2.42	2.42	2.75	4.00	4.00	4.00	0.00	5.20	0.29	0.27	0.31

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52  0.75  0.00 45.00  3.42  3.00  3.00  0.00  5.33  0.63        0.49  0.76
53  1.50  0.75 43.00  2.42  3.00  3.00  0.00  1.27  0.00       -3.21 -4.63

       22  2.25  1.50 45.00 43.00 43.67  3.42  2.42  2.92  3.00  3.00  3.00  0.00  3.59  0.00      -0.45 -0.49

54  1.50  0.75 30.00  2.42  2.00  2.00  0.00  7.13  0.55        0.82  0.28
55  0.75  0.00 26.00  3.42  2.00  2.00  0.00  5.13  0.00       -0.39 -0.42

       23  2.25  0.75 30.00 26.00 28.67  2.42  3.42  2.92  2.00  2.00  2.00  0.00  5.37  0.00       0.33 -0.25

              7  8.25  2.25 41.80 28.67 38.73  2.75  2.92  2.84  4.00  2.00  3.18  0.00  3.14  0.00      -0.56 -0.60

                     2 22.50  8.25 27.23 38.73 32.90  2.80  2.84  2.89  2.58  3.18  2.98  0.00  3.58  0.00       0.00  0.00

56  0.75  0.00 37.00  3.42  5.00  5.00  0.00  7.27  0.54        0.29  0.79
57  0.75  0.00 41.00  3.42  5.00  5.00  0.00  1.53  0.00       -3.74 -0.09

       24  1.50  0.75 37.00 41.00 39.00  3.42  3.42  3.42  5.00  5.00  5.00  0.00  6.72  0.52       0.20  0.83

58  0.75  0.00 36.00  3.42  5.00  5.00  0.00  1.67  0.20        0.08  0.32
59  0.75  0.00 35.00  3.42  5.00  5.00  0.00  1.13  0.00       -0.47 -0.82
60  0.75  0.00 43.00  3.42  5.00  5.00  0.00  2.07  0.00        0.45 -0.19
61  3.00  2.25 32.00  1.42  5.00  5.00  0.00  2.47  0.00        0.16 -3.73

       25  5.25  3.00 36.00 32.00 34.57  3.42  1.42  2.92  5.00  5.00  5.00  0.00  1.13  0.00      -4.96 -4.17

              8  6.75  5.25 39.00 34.57 35.56  3.42  2.92  3.03  5.00  5.00  5.00  0.00  5.03  0.40       0.38  0.42

62  0.75  0.00 37.00  3.42  5.00  5.00  0.00 11.67  0.85        0.79  0.90
63  0.75  0.00 36.00  3.42  5.00  5.00  0.00  1.13  0.00       -9.29 -0.47
64  0.75  0.00 31.00  3.42  5.00  5.00  0.00  1.67  0.00        0.32 -0.48

       26  2.25  0.75 37.00 31.00 34.67  3.42  3.42  3.42  5.00  5.00  5.00  0.00  5.84  0.79       0.81  0.77

65  0.75  0.00 42.00  3.42  5.00  5.00  0.00  2.47  0.24        0.32  0.16
66  1.50  0.75 34.00  2.42  5.00  5.00  0.00  2.07  0.00       -0.19 -2.58

       27  2.25  1.50 42.00 34.00 36.67  3.42  2.42  2.92  5.00  5.00  5.00  0.00  1.37  0.00      -3.27 -1.82

              9  4.50  2.25 34.67 36.67 35.67  3.42  2.92  3.17  5.00  5.00  5.00  0.00  2.93  0.00      -0.72 -0.10

67  0.75  0.00 31.00  3.42  5.00  5.00  0.00  7.40  0.65        0.72  0.58
68  0.75  0.00 47.00  3.42  5.00  5.00  0.00  3.13  0.00       -1.36 -0.38

       28  1.50  0.75 31.00 47.00 39.00  3.42  3.42  3.42  5.00  5.00  5.00  0.00  3.86  0.44       0.65  0.22

69  0.75  0.00 34.00  3.42  4.00  4.00  0.00  4.33  0.40        0.28  0.52
70  1.50  0.75 42.00  2.42  4.00  4.00  0.00  2.07  0.00       -1.10 -2.65

       29  2.25  1.50 34.00 42.00 39.33  3.42  2.42  2.92  4.00  4.00  4.00  0.00  2.99  0.00      -0.29 -0.58

71  0.75  0.00 32.00  3.42  3.00  3.00  0.00  7.53  0.68        0.73  0.64
72  2.25  1.50 45.00  1.83  3.00  3.00  0.00  2.73  0.00       -1.76 -3.37

       30  3.00  2.25 32.00 45.00 41.75  3.42  1.83  2.62  3.00  3.00  3.00  0.00  4.73  0.00       0.37 -0.72
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                 10  6.75  3.00 39.00 41.75 40.33  3.42  2.62  2.90  5.00  3.00  3.78  0.00  3.22  0.00      0.09 -0.53

73   1.50  0.00 11.00  2.42  2.00  2.00  0.00 11.93  0.69        0.77  0.61
74   1.50  0.00 31.00  2.42  2.00  2.00  0.00  4.67  0.00       -1.56 -0.14

          31  3.00  1.50 11.00 31.00 21.00  2.42  2.42  2.42  2.00  2.00  2.00  0.00  8.15  0.38      0.42  0.34

75   0.75  0.00 32.00  3.42  4.00  4.00  0.00  5.33  0.37        0.12  0.61
76   1.50  0.75 40.00  2.42  4.00  4.00  0.00  2.07  0.00       -1.58 -2.84

          32  2.25  1.50 32.00 40.00 37.33  3.42  2.42  2.92  4.00  4.00  4.00  0.00  5.36  0.00     -0.52  0.18

77   0.75  0.00 53.00  3.42  4.00  4.00  0.00  7.93  0.67        0.74  0.61
78   1.50  0.00 37.00  2.42  4.00  4.00  0.00  3.13  0.00       -1.53 -0.11
79   0.75  0.00 48.00  3.42  4.00  4.00  0.00  3.47  0.00        0.10 -0.37

          33  3.00  0.75 53.00 48.00 43.75  3.42  3.42  3.08  4.00  4.00  4.00  0.00  4.39  0.00     -0.22  0.22

80   0.75  0.00 32.00  3.42  3.00  3.00  0.00  4.73  0.35        0.27  0.42
81   0.75  0.00 45.00  3.42  3.00  3.00  0.00  2.73  0.00       -0.73  0.44
82   1.50  0.75 41.00  2.42  3.00  3.00  0.00  1.53  0.00       -0.78 -3.48

          34  3.00  1.50 32.00 41.00 39.75  3.42  2.42  3.08  3.00  3.00  3.00  0.00  3.43  0.00     -0.28 -0.46

83   1.50  0.75 30.00  2.42  2.00  2.00  0.00  6.87  0.51        0.78  0.25
84   1.50  0.75 26.00  2.42  2.00  2.00  0.00  5.13  0.00       -0.34 -0.86

          35  3.00  1.50 30.00 26.00 28.00  2.42  2.42  2.42  2.00  2.00  2.00  0.00  5.02  0.00      0.32 -0.38

85   1.50  0.75 51.00  2.42  3.00  3.00  0.00  9.53  0.42        0.46  0.38
86   3.00  2.25 47.00  1.42  3.00  3.00  0.00  5.93  0.00       -0.61 -1.15

          36  4.50  3.00 51.00 47.00 48.33  2.42  1.42  1.92  3.00  3.00  3.00  0.00  6.92  0.00      0.28 -0.31

                 11 18.75  4.50 21.00 48.33 37.28  2.42  1.92  2.57  2.00  3.00  2.96  0.00  4.93  0.00      0.35 -0.26

                        3 36.75 18.75 35.56 37.28 37.33  3.03  2.57  2.79  5.00  2.96  3.73  0.00  3.41  0.00     -0.05 -0.54

87   1.50  0.75 22.00  2.42  2.00  2.00  0.00 12.73  0.57        0.53  0.60
88   2.25  1.50 18.00  1.83  2.00  2.00  0.00  5.13  0.00       -1.48 -0.62

          37  3.75  2.25 22.00 18.00 19.60  2.42  1.83  2.12  2.00  2.00  2.00  0.00  9.08  0.33      0.24  0.43

89   0.75  0.00 19.00  3.42  3.00  3.00  0.00  8.33  0.60        0.38  0.82
90   3.00  2.25 15.00  1.42  3.00  3.00  0.00  1.53  0.00       -4.43 -6.87

          38  3.75  3.00 19.00 15.00 15.80  3.42  1.42  2.42  3.00  3.00  3.00  0.00  5.22  0.00     -0.74 -0.53

                 12  7.50  3.75 19.60 15.80 17.70  2.12  2.42  2.27  2.00  3.00  2.50  0.00  6.21  0.19      0.21  0.18

91   1.50  0.75 35.00  2.42  2.00  2.00  0.00 12.07  0.72        0.87  0.57
92   1.50  0.75 31.00  2.42  2.00  2.00  0.00  5.13  0.00       -1.35 -0.23

          39  3.00  1.50 35.00 31.00 33.00  2.42  2.42  2.42  2.00  2.00  2.00  0.00  7.98  0.44      0.35  0.53

93   0.75  0.00 44.00  3.42  2.00  2.00  0.00  6.33  0.40        0.19  0.61
94   0.75  0.00 33.00  3.42  2.00  2.00  0.00  2.47  0.00       -1.57 -0.32
```

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 95  1.50  C.75 16.00  2.42  2.00  2.00  0.00  3.27  0.00        0.24 -0.57
 96  0.75  0.00 12.00  3.42  2.00  2.00  0.00  5.13  0.00        0.00  0.00

        40  3.75  0.75 44.00 12.00 24.20  3.42  3.42  3.17  2.00  2.00  2.00  0.00  3.75  0.00       0.00  0.00

               13  6.75  3.75 33.00 24.20 28.11  2.42  3.17  2.83  2.00  2.00  2.00  0.00  5.08  0.00       0.00  0.00

                     4 14.25  6.75 17.70 28.11 22.63  2.27  2.83  2.54  2.50  2.00  2.26  0.00  5.26  0.00       0.00  0.00

   1116.25 14.25 38.23 22.63 35.00  2.75  2.54  2.76  3.38  2.26  3.28  0.00  0.00  0.00

CORE USAGE       OBJECT CODE=   10568 BYTES,ARRAY AREA=   72180 BYTES,TOTAL AREA AVAILABLE=  444416  BYTES

DIAGNOSTICS        NUMBER OF ERRORS=       0, NUMBER OF WARNINGS=       0, NUMBER OF EXTENSIONS=       0

COMPILE TIME=     0.80 SEC,EXECUTION TIME=     2.01 SEC,     13.41.18    TUESDAY        8 AUG 78    WATFIV - JAN 1976 V1L5

       C$STOP
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N	DUR	RST	PITCH	A1	A2	TMBR
1	0.90	0.00	23.00	5.50	4.50	0.00
2	0.15	0.00	22.00	4.50	4.50	0.00
3	0.15	0.00	24.00	4.50	4.50	0.00
4	0.90	0.00	21.00	5.50	4.50	0.00
5	0.15	0.00	20.00	4.50	4.50	0.00
6	0.15	0.00	22.00	4.50	4.50	0.00
7	0.30	0.00	19.00	5.00	5.00	0.00
8	0.30	0.00	18.00	5.00	5.00	0.00
9	0.30	0.00	17.00	5.00	5.00	0.00
10	0.30	0.15	14.00	5.00	5.00	0.00
11	0.90	0.00	23.00	5.00	5.00	0.00
12	0.15	0.00	25.00	5.00	5.00	0.00
13	0.15	0.00	24.00	4.50	4.50	0.00
14	3.60	1.20	23.00	4.00	4.00	0.00
15	0.90	0.00	23.00	2.50	1.50	0.00
16	0.15	0.00	22.00	1.50	1.50	0.00
17	0.15	0.00	24.00	1.50	1.50	0.00
18	0.90	0.00	21.00	2.50	1.50	0.00
19	0.15	0.00	20.00	1.50	1.50	0.00
20	0.15	0.00	22.00	1.50	1.50	0.00
21	0.30	0.00	19.00	2.00	2.00	0.00
22	0.30	0.00	18.00	2.00	2.00	0.00
23	0.30	0.00	17.00	2.00	2.00	0.00
24	0.30	0.15	14.00	2.00	2.00	0.00
25	0.90	0.00	11.00	2.50	2.00	0.00
26	0.15	0.00	7.00	2.00	2.50	0.00
27	0.15	0.00	8.00	2.50	3.00	0.00
28	0.80	0.10	12.00	3.50	3.00	0.00
29	0.20	0.00	7.00	3.00	3.00	0.00
30	0.20	0.00	8.00	3.20	3.20	0.00
31	0.20	0.00	13.00	3.40	3.40	0.00
32	0.20	0.00	7.00	3.40	3.40	0.00
33	0.20	0.00	8.00	3.50	3.50	0.00
34	0.15	0.00	14.00	3.60	3.60	0.00
35	0.C5	0.00	18.00	3.60	3.60	0.00
36	0.20	0.00	17.00	3.80	3.80	0.00
37	0.20	0.00	14.00	3.40	3.40	0.00
38	0.90	0.00	11.00	3.00	3.00	0.00
39	0.15	0.00	7.00	3.00	3.00	0.00
40	0.15	0.00	8.00	3.30	3.30	0.00
41	1.40	0.20	12.00	3.60	3.60	0.00
42	0.20	0.00	9.00	3.00	3.00	0.00
43	0.20	0.00	12.00	3.25	3.25	0.00
44	0.20	0.00	14.00	3.50	3.50	0.00
45	0.20	0.00	17.00	3.75	3.75	0.00
46	1.10	0.90	21.00	4.00	4.00	0.00
47	0.30	0.00	21.00	3.50	3.50	0.00
48	4.80	0.00	24.00	4.00	4.00	0.00
49	1.20	0.00	26.00	4.50	4.50	0.00
50	2.40	0.00	28.00	4.00	4.00	0.00
51	2.40	1.20	23.00	3.00	3.00	0.00
52	0.90	0.00	11.00	3.50	2.50	0.00
53	0.15	0.00	10.00	2.50	2.50	0.00
54	0.15	0.00	12.00	2.50	2.50	0.00
55	0.90	0.00	9.00	3.50	2.50	0.00
56	0.15	0.00	8.00	2.50	2.50	0.00
57	0.15	0.00	10.00	2.50	2.50	0.00
58	0.30	0.00	7.00	3.00	3.00	0.00

Input data: Debussy

59	0.30	0.00	6.00	3.00	3.00	0.00
60	0.30	0.00	5.00	3.00	3.00	0.00
61	0.30	0.15	2.00	3.00	3.00	0.00
62	0.90	0.00	11.00	3.50	2.50	0.00
63	0.15	0.00	10.00	2.50	2.50	0.00
64	0.15	0.00	12.00	2.50	2.50	0.00
65	0.90	0.00	9.00	3.50	2.50	0.00
66	0.15	0.00	8.00	2.50	2.50	0.00
67	0.15	0.00	10.00	2.50	2.50	0.00
68	0.30	0.00	7.00	3.00	3.00	0.00
69	0.30	0.00	9.00	3.25	3.25	0.00
70	0.30	0.00	11.00	3.50	3.50	0.00
71	0.30	0.00	14.00	3.75	3.75	0.00
72	0.25	0.00	16.00	4.00	4.00	0.00
73	0.05	0.00	19.00	4.00	4.00	0.00
74	0.30	0.00	18.00	4.00	4.00	0.00
75	0.30	0.00	16.00	4.00	4.00	0.00
76	0.30	0.00	14.00	4.00	4.00	0.00
77	1.50	0.30	11.00	4.00	4.00	0.00
78	0.30	0.00	9.00	3.75	3.75	0.00
79	0.30	0.00	2.00	3.50	3.50	0.00
80	0.30	0.00	4.00	3.25	3.25	0.00
81	0.15	0.00	7.00	3.10	3.10	0.00
82	0.15	0.00	9.00	3.20	3.20	0.00
83	0.15	0.00	11.00	3.30	3.30	0.00
84	0.15	0.00	14.00	3.40	3.40	0.00
85	0.10	0.00	16.00	3.50	3.50	0.00
86	0.05	0.00	19.00	3.60	3.60	0.00
87	0.15	0.00	18.00	3.70	3.70	0.00
88	0.15	0.00	16.00	3.80	3.80	0.00
89	0.15	0.00	14.00	3.90	3.90	0.00
90	1.80	0.30	11.00	4.00	4.00	0.00
91	0.20	0.00	14.00	4.25	4.25	0.00
92	0.20	0.00	16.00	4.50	4.50	0.00
93	0.20	0.00	19.00	4.75	4.75	0.00
94	0.75	0.00	22.00	5.00	5.00	0.00
95	0.15	0.00	21.00	5.00	5.00	0.00
96	0.15	0.00	20.00	5.00	5.00	0.00
97	0.15	0.00	19.00	5.00	5.00	0.00
98	0.75	0.00	16.00	5.00	5.00	0.00
99	0.15	0.00	15.00	5.00	5.00	0.00
100	0.15	0.00	14.00	5.00	5.00	0.00
101	0.15	0.00	13.00	5.00	5.00	0.00
102	0.75	0.00	10.00	5.00	5.00	0.00
103	0.15	0.00	9.00	4.50	4.50	0.00
104	0.15	0.00	8.00	4.00	4.00	0.00
105	0.15	0.00	7.00	3.50	3.50	0.00
106	0.35	0.00	4.00	3.00	3.00	0.00
107	0.05	0.00	7.00	3.00	3.00	0.00
108	0.40	0.00	6.00	3.00	3.00	0.00
109	0.40	0.00	5.00	3.00	3.00	0.00
110	1.20	0.60	4.00	3.00	3.00	0.00
111	0.60	0.00	6.00	3.00	3.00	0.00
112	0.60	0.00	5.00	3.50	3.50	0.00
113	0.35	0.00	4.00	4.00	4.00	0.00
114	0.05	0.00	7.00	4.00	4.00	0.00
115	0.40	0.00	6.00	4.00	4.00	0.00
116	0.40	0.00	5.00	3.50	3.50	0.00
117	0.35	0.00	4.00	3.00	3.00	0.00
118	0.05	0.00	7.00	4.00	4.00	0.00

119	0.40	0.00	6.00	4.00	4.00	0.00
120	0.40	0.00	5.00	3.50	3.50	0.00
121	0.35	0.00	4.00	3.00	3.00	0.00
122	0.05	0.00	6.00	4.00	4.00	0.00
123	0.40	0.00	5.00	4.00	4.00	0.00
124	0.40	0.00	4.00	3.50	3.50	0.00
125	0.35	0.00	3.00	3.00	3.00	0.00
126	0.05	0.00	6.00	3.00	3.00	0.00
127	0.40	0.00	5.00	3.00	3.00	0.00
128	0.40	0.00	2.00	3.00	3.00	0.00
129	0.60	0.00	1.00	3.00	3.00	0.00
130	0.60	0.00	2.00	3.33	3.33	0.00
131	0.60	0.00	7.00	3.66	3.66	0.00
132	1.20	0.60	10.00	4.00	4.00	0.00
133	0.35	0.00	3.00	4.00	4.00	0.00
134	0.05	0.00	7.00	4.00	4.00	0.00
135	0.40	0.00	6.00	4.00	4.00	0.00
136	0.40	0.00	3.00	3.75	3.75	0.00
137	1.20	0.00	2.00	3.50	3.50	0.00
138	1.20	0.40	14.00	3.25	3.25	0.00
139	0.35	0.00	3.00	3.00	3.00	0.00
140	0.05	0.00	6.00	3.00	3.00	0.00
141	0.40	0.00	5.00	3.00	3.00	0.00
142	0.40	0.00	2.00	3.00	3.00	0.00
143	0.60	0.00	1.00	3.00	3.00	0.00
144	0.60	0.00	2.00	3.33	3.33	0.00
145	0.60	0.00	7.00	3.66	3.66	0.00
146	0.60	0.30	10.00	4.00	4.00	0.00
147	0.35	0.00	3.00	3.00	3.00	0.00
148	0.05	0.00	7.00	3.00	3.00	0.00
149	0.40	0.00	6.00	3.00	3.00	0.00
150	0.40	0.00	3.00	3.00	3.00	0.00
151	1.20	0.00	2.00	3.00	3.00	0.00
152	1.80	0.00	16.00	3.40	4.00	0.00
153	0.20	0.00	14.00	4.00	4.00	0.00
154	0.20	0.00	12.00	4.00	4.00	0.00
155	0.20	0.00	11.00	4.00	4.00	0.00
156	1.40	0.20	9.00	4.00	4.00	0.00
157	0.20	0.00	4.00	4.00	4.00	0.00
158	0.20	0.00	7.00	4.00	4.00	0.00
159	0.20	0.00	9.00	4.00	4.00	0.00
160	0.20	0.00	11.00	4.00	4.00	0.00
161	0.20	0.00	14.00	4.00	4.00	0.00
162	0.60	0.00	16.00	4.50	4.50	0.00
163	0.20	0.00	14.00	4.00	4.00	0.00
164	0.20	0.00	16.00	4.00	4.00	0.00
165	0.20	0.00	18.00	4.00	4.00	0.00
166	0.30	0.00	16.00	4.00	4.00	0.00
167	0.30	0.00	14.00	4.00	4.00	0.00
168	0.30	0.00	12.00	4.00	4.00	0.00
169	1.70	0.20	11.00	4.00	4.00	0.00
170	0.20	0.00	12.00	4.00	4.00	0.00
171	0.20	0.00	14.00	4.00	4.00	0.00
172	0.20	0.00	15.00	4.00	4.00	0.00
173	0.20	0.00	14.00	4.00	4.00	0.00
174	0.20	0.00	12.00	4.00	4.00	0.00
175	0.20	0.00	11.00	4.00	4.00	0.00
176	0.20	0.00	12.00	4.00	4.00	0.00
177	0.20	0.00	15.00	4.00	4.00	0.00
178	0.20	0.00	17.00	4.00	4.00	0.00

179	0.20	0.00	15.00	4.00	4.00	0.00
180	0.20	0.00	12.00	4.00	4.00	0.00
181	0.15	0.00	11.00	4.00	4.00	0.00
182	0.15	0.00	10.00	4.00	4.00	0.00
183	0.15	0.00	9.00	4.00	4.00	0.00
184	0.15	0.00	7.00	4.00	4.00	0.00
185	0.15	0.00	3.00	4.00	4.00	0.00
186	0.15	0.00	7.00	4.00	4.00	0.00
187	0.15	0.00	9.00	4.00	4.00	0.00
188	0.15	0.00	10.00	4.00	4.00	0.00
189	1.20	0.40	11.00	4.00	4.00	0.00
190	0.15	0.00	16.00	4.50	4.50	0.00
191	0.15	0.00	14.00	4.50	4.50	0.00
192	0.15	0.00	16.00	4.50	4.50	0.00
193	0.15	0.00	14.00	4.50	4.50	0.00
194	0.15	0.00	16.00	4.50	4.50	0.00
195	0.15	0.00	14.00	4.50	4.50	0.00
196	0.15	0.00	16.00	4.50	4.50	0.00
197	0.15	0.00	14.00	4.50	4.50	0.00
198	1.20	0.30	11.00	4.50	4.50	0.00
199	0.15	0.00	19.00	5.00	5.00	0.00
200	0.15	0.00	18.00	5.00	5.00	0.00
201	0.15	0.00	19.00	5.00	5.00	0.00
202	0.15	0.00	18.00	5.00	5.00	0.00
203	0.15	0.00	19.00	5.00	5.00	0.00
204	0.15	0.00	18.00	5.00	5.00	0.00
205	0.15	0.00	19.00	5.00	5.00	0.00
206	0.15	0.00	18.00	5.00	5.00	0.00
207	1.05	0.30	11.00	5.00	5.00	0.00
208	0.05	0.00	18.00	4.50	4.50	0.00
209	0.05	0.00	19.00	5.00	5.00	0.00
210	0.05	0.00	21.00	5.50	5.50	0.00
211	4.80	1.20	23.00	6.00	4.00	0.00
212	2.10	0.00	23.00	5.50	4.50	0.00
213	0.15	0.00	22.00	4.50	4.50	0.00
214	0.15	0.00	24.00	5.00	5.00	0.00
215	0.90	0.00	21.00	6.00	5.00	0.00
216	0.15	0.00	20.00	5.00	5.00	0.00
217	0.15	0.00	22.00	5.50	5.50	0.00
218	0.30	0.00	19.00	6.00	6.00	0.00
219	0.30	0.00	18.00	6.00	6.00	0.00
220	0.30	0.00	17.00	6.00	6.00	0.00
221	0.45	0.15	14.00	6.00	6.00	0.00
222	1.50	0.00	23.00	6.00	6.00	0.00
223	0.25	0.00	26.00	6.00	6.00	0.00
224	0.05	0.00	29.00	6.00	6.00	0.00
225	0.30	0.00	27.00	6.00	6.00	0.00
226	0.30	0.00	26.00	6.00	6.00	0.00
227	2.10	0.00	23.00	6.00	5.00	0.00
228	0.15	0.00	22.00	4.50	4.50	0.00
229	0.15	0.00	24.00	4.50	4.50	0.00
230	0.90	0.00	21.00	5.00	4.00	0.00
231	0.15	0.00	20.00	4.00	4.00	0.00
232	0.15	0.00	22.00	4.00	4.00	0.00
233	0.30	0.00	19.00	4.00	4.00	0.00
234	0.30	0.00	18.00	3.75	3.75	0.00
235	0.30	0.00	17.00	3.50	3.50	0.00
236	0.60	0.30	14.00	3.25	3.25	0.00
237	0.20	0.00	11.00	3.00	3.00	0.00
238	0.20	0.00	10.00	3.00	3.00	0.00

239	0.20	0.00	12.00	3.00	3.00	0.00
240	0.20	0.00	9.00	3.50	3.50	0.00
241	0.20	0.00	8.00	3.50	3.50	0.00
242	0.20	0.00	10.00	3.50	3.50	0.00
243	0.30	0.00	7.00	4.00	4.00	0.00
244	0.30	0.00	6.00	3.75	3.75	0.00
245	0.30	0.00	5.00	3.50	3.50	0.00
246	0.60	0.30	2.00	3.25	3.25	0.00
247	0.20	0.00	11.00	3.00	3.00	0.00
248	0.20	0.00	10.00	3.00	3.00	0.00
249	0.20	0.00	12.00	3.00	3.00	0.00
250	0.20	0.00	9.00	3.50	3.50	0.00
251	0.20	0.00	8.00	3.50	3.50	0.00
252	0.20	0.00	10.00	3.50	3.50	0.00
253	0.30	0.00	7.00	4.00	4.00	0.00
254	0.30	0.00	6.00	3.75	3.75	0.00
255	0.30	0.00	5.00	3.50	3.50	0.00
256	1.50	0.60	2.00	3.25	3.00	0.00
257	0.35	0.00	2.00	3.00	3.00	0.00
258	0.05	0.00	7.00	3.00	3.00	0.00
259	0.40	0.00	6.00	3.00	3.00	0.00
260	0.40	0.00	5.00	3.00	3.00	0.00
261	2.80	0.20	2.00	3.00	3.00	0.00
262	0.40	0.00	10.00	3.40	3.40	0.00
263	0.40	0.00	8.00	3.20	3.20	0.00
264	2.40	0.60	2.00	3.00	3.00	0.00
265	2.40	0.00	12.00	3.00	4.00	0.00
266	1.70	0.00	12.00	4.00	3.50	0.00
267	0.50	0.00	10.00	3.30	3.30	0.00
268	0.50	0.00	8.00	3.20	3.20	0.00
269	0.50	0.00	6.00	3.10	3.10	0.00
270	0.50	0.20	4.00	3.00	3.00	0.00
271	0.20	0.00	4.00	3.50	3.50	0.00
272	5.00	0.00	2.00	3.00	0.50	0.00

WEIGHTINGS: PROXIMITY= 1.00 PITCH= 1.00 INTENSITY= 1.00 TEMPORAL D̶ENSITY= 0.00 TIMBRE= 0.00

Output data: Debussy ("optimum" weightings)

1	0.94	0.00	23.00	3.09	5.50	4.50	0.00	0.00	0.00	0.00	0.00
2	0.16	0.00	22.00	5.68	4.50	4.50	0.00	3.96	0.00	0.00	0.00
3	0.16	0.00	24.00	5.68	4.50	4.50	0.00	1.85	0.00	-1.13	-0.63
4	0.94	0.00	21.00	3.09	5.50	4.50	0.00	3.02	0.00	0.39	-0.31

1	2.19	0.94	23.00	21.00	22.14	3.09	3.09	4.39	5.00	5.00	4.93	0.00	0.00	0.00	0.00	0.00

5	0.16	0.00	20.00	5.68	4.50	4.50	0.00	3.96	0.38	0.24	0.53
6	0.16	0.00	22.00	5.68	4.50	4.50	0.00	1.85	0.00	-1.13	-0.54

2	0.31	0.16	20.00	22.00	21.00	5.68	5.68	5.68	4.50	4.50	4.50	0.00	2.50	0.00	0.00	0.00

7	0.31	0.00	19.00	4.68	5.00	5.00	0.00	2.85	0.38	0.35	0.40
8	0.31	0.00	18.00	4.68	5.00	5.00	0.00	1.71	0.00	-0.67	-0.00
9	0.31	0.00	17.00	4.68	5.00	5.00	0.00	1.71	0.00	-0.00	-0.78
10	0.31	0.16	14.00	4.68	5.00	5.00	0.00	3.04	0.00	0.44	-2.03

3	1.25	0.31	19.00	14.00	17.00	4.68	4.68	4.68	5.00	5.00	5.00	0.00	2.93	0.00	0.14	-1.36

```
11  0.94  0.00 23.00  3.09  5.00  5.00  0.00  9.23  0.59       0.67  0.52
12  0.16  0.00 25.00  5.68  5.00  5.00  0.00  4.46  0.00      -1.07  0.66
13  0.16  0.00 24.00  5.68  4.50  4.50  0.00  1.52  0.00      -1.93 -0.00
14  3.75  1.25 23.00  1.09  4.00  4.00  0.00  1.52  0.00      -0.00-10.95

        4  5.00  3.75 23.00 23.00 23.09  3.09  1.09  3.89  5.00  4.00  4.23  0.00  6.90  0.00       0.58 -0.47

               1  8.75  5.00 22.14 23.09 21.91  4.39  3.89  4.19  4.93  4.23  4.53  0.00  0.00  0.00       0.00  0.00

15  0.94  0.00 23.00  3.09  2.50  1.50  0.00 18.17  0.85       0.92  0.78
16  0.16  0.00 22.00  5.68  1.50  1.50  0.00  3.96  0.00      -3.59  0.53
17  0.16  0.00 24.00  5.68  1.50  1.50  0.00  1.85  0.00      -1.13 -0.63
18  0.94  0.00 21.00  3.09  2.50  1.50  0.00  3.02  0.00       0.39 -0.31

        5  2.19  0.94 23.00 21.00 22.14  3.09  3.09  4.39  2.00  2.00  1.93  0.00 10.17  0.54       0.32  0.75

19  0.16  0.00 20.00  5.68  1.50  1.50  0.00  3.96  0.38       0.24  0.53
20  0.16  0.00 22.00  5.68  1.50  1.50  0.00  1.85  0.00      -1.13 -0.54

        6  0.31  0.16 20.00 22.00 21.00  5.68  5.68  5.68  1.50  1.50  1.50  0.00  2.50  0.00      -3.06 -0.53

21  0.31  0.00 19.00  4.68  2.00  2.00  0.00  2.85  0.38       0.35  0.40
22  0.31  0.00 18.00  4.68  2.00  2.00  0.00  1.71  0.00      -0.67 -0.00
23  0.31  0.00 17.00  4.68  2.00  2.00  0.00  1.71  0.00      -0.00 -0.78
24  0.31  0.16 14.00  4.68  2.00  2.00  0.00  3.04  0.00       0.44 -0.47
25  0.94  0.00 11.00  3.09  2.50  2.00  0.00  4.48  0.00       0.32 -0.29

        7  2.19  0.94 19.00 11.00 14.43  4.68  3.09  4.36  2.00  2.25  2.11  0.00  3.82  0.00       0.34 -0.16

               2  4.69  2.19 22.14 14.43 18.47  4.39  4.36  4.46  1.93  2.11  1.98  0.00  7.08  0.00       0.00  0.00

26  0.16  0.00  7.00  5.68  2.00  2.50  0.00  5.79  0.50       0.23  0.77
27  0.16  0.00  8.00  5.68  2.50  3.00  0.00  1.35  0.00      -3.28 -1.60
28  0.83  0.10 12.00  3.26  3.50  3.00  0.00  3.52  0.00       0.62 -1.14

        8  1.15  0.83  7.00 12.00 10.77  5.68  3.26  4.87  2.25  3.25  3.05  0.00  4.43  0.08       0.14  0.03

29  0.21  0.00  7.00  5.26  3.00  3.00  0.00  7.54  0.67       0.53  0.80
30  0.21  0.00  8.00  5.26  3.20  3.20  0.00  1.49  0.00      -4.05 -1.78
31  0.21  0.00 13.00  5.26  3.40  3.40  0.00  4.16  0.00       0.64 -0.13

        9  0.62  0.21  7.00 13.00  9.33  5.26  5.26  5.26  3.00  3.40  3.20  0.00  4.30  0.00      -0.03  0.29

32  0.21  0.00  7.00  5.26  3.40  3.40  0.00  4.69  0.40       0.11  0.70
33  0.21  0.00  8.00  5.26  3.50  3.50  0.00  1.43  0.00      -2.29 -2.33

       10  0.42  0.21  7.00  8.00  7.50  5.26  5.26  5.26  3.40  3.50  3.45  0.00  3.04  0.00      -0.41 -0.38

               3  2.19  0.42 10.77  7.50  9.74  4.87  5.26  5.06  3.05  3.45  3.17  0.00  5.52  0.00      -0.28  0.47

34  0.16  0.00 14.00  5.68  3.60  3.60  0.00  4.76  0.52       0.70  0.33
35  0.05  0.00 18.00  7.26  3.60  3.60  0.00  3.19  0.00      -0.49  0.69
36  0.21  0.00 17.00  5.26  3.80  3.80  0.00  0.97  0.00      -2.27 -2.04
37  0.21  0.00 14.00  5.26  3.40  3.40  0.00  2.96  0.00       0.67  0.00
38  0.94  0.00 11.00  3.09  3.00  3.00  0.00  2.96  0.00      -0.00 -0.96

       11  1.56  0.94 14.00 11.00 12.73  5.68  3.09  5.31  3.60  3.00  3.24  0.00  4.19  0.22       0.27  0.17
```

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39  0.16  0.00  7.00  5.68  3.00  3.00  0.00  5.79  0.62        0.49  0.76
40  0.16  0.00  8.00  5.68  3.30  3.30  0.00  1.39  0.00       -3.17 -1.44
41  1.46  0.21 12.00  2.46  3.60  3.60  0.00  3.39  0.00        0.59 -1.58

       12  1.77  1.46  7.00 12.00 11.21  5.68  2.46  4.60  3.00  3.60  3.52  0.00  3.50  0.00      -0.20 -0.88

                    4  3.33  1.77 12.73 11.21 11.92  5.31  4.60  4.94  3.24  3.52  3.39  0.00  2.90  0.00      -0.90 -1.54

42  0.21  0.00  9.00  5.26  3.00  3.00  0.00  8.76  0.64        0.61  0.67
43  0.21  0.00 12.00  5.26  3.25  3.25  0.00  2.86  0.00       -2.06  0.23
44  0.21  C.00 14.00  5.26  3.50  3.50  0.00  2.19  0.00       -0.30 -0.30
45  0.21  0.00 17.00  5.26  3.75  3.75  0.00  2.86  0.00        0.23 -0.23
46  1.15  0.94 21.00  2.80  4.00  4.00  0.00  3.53  0.00        0.19 -1.35

       13  1.98  1.15  9.00 21.00 17.63  5.26  2.80  4.77  3.00  4.00  3.74  0.00  6.59  0.26       0.47  0.05

47  0.31  0.00 21.00  4.68  3.50  3.50  0.00  8.28  0.58        0.57  0.59
48  5.00  0.00 24.00  0.68  4.00  4.00  0.00  3.37  0.00       -1.45 -4.43

       14  5.31  5.00 21.00 24.00 23.82  4.68  0.68  2.68  3.50  4.00  3.97  0.00  6.28  0.00      -0.05 -0.57

49  1.25  0.00 26.00  2.68  4.50  4.50  0.00 18.33  0.75        0.82  0.68
50  2.50  0.00 28.00  1.68  4.00  4.00  0.00  5.83  0.00       -2.14 -1.11
51  2.50  1.25 23.00  1.68  3.00  3.00  0.00 12.33  0.00        0.53 -0.76

       15  6.25  2.50 26.00 23.00 25.60  2.68  1.68  2.01  4.50  3.00  3.70  0.00  9.85  0.00       0.36 -0.65

                    5 13.54  6.25 17.63 25.60 23.74  4.77  2.01  2.68  3.74  3.70  3.81  0.00  7.38  0.00       0.61 -0.84

                           1 32.50 13.54 21.91 23.74 20.33  4.19  2.68  3.73  4.53  3.81  3.65  0.00  0.00  0.00       0.00  0.00

52  0.94  0.00 11.00  3.09  3.50  2.50  0.00 21.67  0.62        0.43  0.82
53  0.16  0.00 10.00  5.68  2.50  2.50  0.00  3.96  0.00       -4.47  0.53
54  C.16  0.00 12.00  5.68  2.50  2.50  0.00  1.85  0.00       -1.13 -0.63
55  0.94  0.00  9.00  3.09  3.50  2.50  0.00  3.02  0.00        0.39 -0.31

       16  2.19  0.94 11.00  9.00 10.14  3.09  3.09  4.39  3.00  3.00  2.93  0.00 16.24  0.62       0.39  0.85

56  0.16  0.00  8.00  5.68  2.50  2.50  0.00  3.96  0.38        0.24  0.53
57  0.16  0.00 10.00  5.68  2.50  2.50  0.00  1.85  0.00       -1.13 -0.54

       17  0.31  0.16  8.00 10.00  9.00  5.68  5.68  5.68  2.50  2.50  2.50  0.00  2.50  0.00      -5.49 -0.17

58  C.31  0.00  7.00  4.68  3.00  3.00  0.00  2.85  0.38        0.35  0.40
59  C.31  C.00  6.00  4.68  3.00  3.00  0.00  1.71  0.00       -0.67 -0.00
60  0.31  C.00  5.00  4.68  3.00  3.00  0.00  1.71  0.00       -0.00 -0.78
61  0.31  0.16  2.00  4.68  3.00  3.00  0.00  3.04  0.00        0.44 -1.87

       18  1.25  0.31  7.00  2.00  5.00  4.68  4.68  4.68  3.00  3.00  3.00  0.00  2.93  0.00       0.14 -1.08

                    6  3.75  1.25 10.14  5.00  8.33  4.39  4.68  4.59  2.93  3.00  2.92  0.00 13.55  0.60       0.46  0.74

62  0.94  C.00 11.00  3.09  3.50  2.50  0.00  8.73  0.60        0.65  0.55
63  0.16  0.00 10.00  5.68  2.50  2.50  0.00  3.96  0.00       -1.21  0.53
64  0.16  0.00 12.00  5.68  2.50  2.50  0.00  1.85  0.00       -1.13 -0.63
```

```
65  0.94  0.00  9.00  3.09  3.50  2.50  0.00  3.02  0.00        0.39 -0.31

          19  2.19  0.94 11.00  9.00 10.14  3.09  3.09  4.39  3.00  3.00  2.93  0.00  6.10  0.56       0.52  0.59

66  0.16  0.00  8.00  5.68  2.50  2.50  0.00  3.96  0.38        0.24  0.53
67  0.16  0.00 10.00  5.68  2.50  2.50  0.00  1.85  0.00       -1.13 -0.54

          20  0.31  0.16  8.00 10.00  9.00  5.68  5.68  5.68  2.50  2.50  2.50  0.00  2.50  0.00      -1.44  0.33

68  0.31  0.00  7.00  4.68  3.00  3.00  0.00  2.85  0.23        0.35  0.11
69  0.31  0.00  9.00  4.68  3.25  3.25  0.00  2.54  0.00       -0.12 -0.00
70  0.31  0.00 11.00  4.68  3.50  3.50  0.00  2.54  0.00       -0.00 -0.26

          21  0.94  0.31  7.00 11.00  9.00  4.68  4.68  4.68  3.00  3.50  3.25  0.00  1.68  0.00      -0.49 -1.25

                       7  3.44  0.94 10.14  9.00  9.73  4.39  4.68  4.58  2.93  3.25  2.98  0.00  3.54  0.00      -2.83  0.03

71  0.31  0.00 14.00  4.68  3.75  3.75  0.00  3.21  0.21        0.21  0.21
72  0.26  0.00 16.00  4.94  4.00  4.00  0.00  2.54  0.00       -0.26 -0.13

          22  0.57  0.26 14.00 16.00 14.91  4.68  4.94  4.81  3.75  4.00  3.86  0.00  3.78  0.50       0.56  0.44

73  0.05  0.00 19.00  7.26  4.00  4.00  0.00  2.87  0.41        0.11  0.71
74  0.31  0.00 18.00  4.68  4.00  4.00  0.00  0.84  0.00       -2.41 -1.83
75  0.31  0.00 16.00  4.68  4.00  4.00  0.00  2.37  0.00        0.65 -0.00
76  0.31  0.00 14.00  4.68  4.00  4.00  0.00  2.37  0.00       -0.00 -0.28
77  1.56  0.31 11.00  2.36  4.00  4.00  0.00  3.04  0.00        0.22 -1.93

          23  2.55  1.56 19.00 11.00 13.00  7.26  2.36  4.73  4.00  4.00  4.00  0.00  2.12  0.00      -0.79 -2.45

                       8  3.12  2.55 14.91 13.00 13.35  4.81  4.73  4.75  3.86  4.00  3.97  0.00  3.43  0.00      -0.03 -0.80

                                  2 10.31  3.12  8.33 13.35 10.32  4.59  4.75  4.63  2.92  3.97  3.26  0.00 10.25  0.00       0.00  0.00

78  0.31  0.00  9.00  4.68  3.75  3.75  0.00  8.92  0.50        0.66  0.34
79  0.31  0.00  2.00  4.68  3.50  3.50  0.00  5.87  0.00       -0.52  0.57
80  0.31  0.00  4.00  4.68  3.25  3.25  0.00  2.54  0.00       -1.31 -0.24

          24  0.94  0.31  9.00  4.00  5.00  4.68  4.68  4.68  3.75  3.25  3.50  0.00  7.29  0.65       0.71  0.59

81  0.16  0.00  7.00  5.68  3.10  3.10  0.00  3.14  0.29        0.19  0.39
82  0.16  0.00  9.00  5.68  3.20  3.20  0.00  1.92  0.00       -0.64 -0.00
83  0.16  0.00 11.00  5.68  3.30  3.30  0.00  1.92  0.00        0.00 -0.35

          25  0.47  0.16  7.00 11.00  9.00  5.68  5.68  5.68  3.10  3.30  3.20  0.00  3.00  0.00      -1.43 -0.10

                       9  1.41  0.47  5.00  9.00  6.33  4.68  5.68  5.31  3.50  3.20  3.40  0.00  6.18  0.41       0.44  0.38

84  0.16  0.00 14.00  5.68  3.40  3.40  0.00  2.59  0.26        0.26  0.26
85  0.10  0.00 16.00  6.26  3.50  3.50  0.00  1.92  0.00       -0.35 -0.26

          26  0.26  0.10 14.00 16.00 14.80  5.68  6.26  5.97  3.40  3.50  3.44  0.00  3.31  0.20       0.09  0.32

86  0.05  0.00 19.00  7.26  3.60  3.60  0.00  2.41  0.41        0.20  0.62
87  0.16  0.00 18.00  5.68  3.70  3.70  0.00  0.91  0.00       -1.66 -1.12
88  0.16  0.00 16.00  5.68  3.80  3.80  0.00  1.92  0.00        0.53  0.00
```

89	0.16	0.00	14.00	5.68	3.90	3.90	0.00	1.92	0.00						-0.00	-0.35
90	1.88	0.31	11.00	2.09	4.00	4.00	0.00	2.59	0.00						0.26	-3.17
27	2.40	1.88	19.00	11.00	12.15	7.26	2.09	5.28	3.60	4.00	3.95	0.00	2.26	0.00	-0.46	-2.59
10	2.66	2.40	14.80	12.15	12.41	5.97	5.28	5.35	3.44	3.95	3.90	0.00	3.85	0.00	-0.61	-0.48
91	0.21	0.00	14.00	5.26	4.25	4.25	0.00	10.79	0.78						0.76	0.80
92	0.21	0.00	16.00	5.26	4.50	4.50	0.00	2.19	0.00						-3.92	-0.30
93	0.21	0.00	19.00	5.26	4.75	4.75	0.00	2.86	0.00						0.23	-0.00
94	0.78	0.00	22.00	3.36	5.00	5.00	0.00	2.86	0.00						-0.00	-0.14
28	1.41	0.78	14.00	22.00	19.48	5.26	3.36	4.79	4.25	5.00	4.78	0.00	8.11	0.71	0.72	0.71
95	0.16	0.00	21.00	5.68	5.00	5.00	0.00	3.27	0.38						0.13	0.64
96	0.16	0.00	20.00	5.68	5.00	5.00	0.00	1.19	0.00						-1.75	-0.00
97	0.16	0.00	19.00	5.68	5.00	5.00	0.00	1.19	0.00						-0.00	-1.12
98	0.78	0.00	16.00	3.36	5.00	5.00	0.00	2.52	0.00						0.53	-0.30
29	1.25	0.78	21.00	16.00	17.50	5.68	3.36	5.10	5.00	5.00	5.00	0.00	2.37	0.00	-2.42	-0.53
99	0.16	0.00	15.00	5.68	5.00	5.00	0.00	3.27	0.43						0.23	0.64
100	0.16	0.00	14.00	5.68	5.00	5.00	0.00	1.19	0.00						-1.75	-0.00
101	0.16	0.00	13.00	5.68	5.00	5.00	0.00	1.19	0.00						-0.00	-1.12
102	0.78	0.00	10.00	3.36	5.00	5.00	0.00	2.52	0.00						0.53	-0.43
30	1.25	0.78	15.00	10.00	11.50	5.68	3.36	5.10	5.00	5.00	5.00	0.00	3.64	0.00	0.35	-0.11
11	3.91	1.25	19.48	11.50	16.29	4.79	5.10	4.99	4.78	5.00	4.92	0.00	5.69	0.00	0.32	-0.11
3	7.97	3.91	6.33	16.29	13.24	5.01	4.99	5.11	3.40	4.92	4.31	0.00	4.41	0.00	-1.32	-0.37
1	50.78	7.97	20.33	13.24	17.19	3.73	5.11	4.13	3.65	4.31	3.68	0.00	0.00	0.00		
103	0.16	0.00	9.00	5.68	4.50	4.50	0.00	3.60	0.44						0.30	0.58
104	0.16	0.00	8.00	5.68	4.00	4.00	0.00	1.52	0.00						-1.37	-0.00
105	0.16	0.00	7.00	5.68	3.50	3.50	0.00	1.52	0.00						-0.00	-0.88
106	0.36	0.00	4.00	4.46	3.00	3.00	0.00	2.85	0.00						0.47	-0.13
31	0.83	0.36	9.00	4.00	6.25	5.68	4.46	5.37	4.50	3.00	3.56	0.00	4.03	0.26	0.10	0.42
107	0.05	0.00	7.00	7.26	3.00	3.00	0.00	3.22	0.43						0.11	0.74
108	0.42	0.00	6.00	4.26	3.00	3.00	0.00	0.84	0.00						-2.83	-1.45
109	0.42	0.00	5.00	4.26	3.00	3.00	0.00	2.06	0.00						0.59	-0.00
110	1.25	0.63	4.00	2.68	3.00	3.00	0.00	2.06	0.00						-0.00	-3.18
32	2.14	1.25	7.00	4.00	4.66	7.26	2.68	4.62	3.00	3.00	3.00	0.00	2.33	0.00	-0.73	-0.98
12	2.97	2.14	6.25	4.66	5.11	5.37	4.62	4.83	3.56	3.00	3.16	0.00	6.33	0.36	0.10	0.62
111	0.63	0.00	6.00	3.68	3.00	3.00	0.00	8.58	0.70						0.76	0.64
112	0.63	0.00	5.00	3.68	3.50	3.50	0.00	3.08	0.00						-1.78	-0.00
113	0.36	0.00	4.00	4.46	4.00	4.00	0.00	3.08	0.00						-0.00	-0.04
33	1.61	0.36	6.00	4.00	5.16	3.68	4.46	3.94	3.00	4.00	3.42	0.00	4.60	0.57	0.49	0.64

114	0.05	0.00	7.00	7.26	4.00	4.00	0.00	3.22	0.39	0.04	0.74					
115	0.42	0.00	6.00	4.26	4.00	4.00	0.00	0.84	0.00	-2.83	-1.84					
116	0.42	0.00	5.00	4.26	3.50	3.50	0.00	2.39	0.00	0.65	-0.00					
117	0.36	0.00	4.00	4.46	3.00	3.00	0.00	2.39	0.00	-0.00	-0.63					
34	1.25	0.36	7.00	4.00	5.13	7.26	4.46	5.06	4.00	3.00	3.54	0.00	1.66	0.00	-1.77	-0.17
118	0.05	0.00	7.00	7.26	4.00	4.00	0.00	3.88	0.58	0.38	0.78					
119	0.42	0.00	6.00	4.26	4.00	4.00	0.00	0.84	0.00	-3.62	-1.84					
120	0.42	0.00	5.00	4.26	3.50	3.50	0.00	2.39	0.00	0.65	-0.00					
121	0.36	0.00	4.00	4.46	3.00	3.00	0.00	2.39	0.00	-0.00	-0.35					
35	1.25	0.36	7.00	4.00	5.13	7.26	4.46	5.06	4.00	3.00	3.54	0.00	1.94	0.00	0.14	0.00
122	0.05	0.00	6.00	7.26	4.00	4.00	0.00	3.22	0.50	0.26	0.74					
123	0.42	0.00	5.00	4.26	4.00	4.00	0.00	0.84	0.00	-2.83	-1.84					
124	0.42	0.00	4.00	4.26	3.50	3.50	0.00	2.39	0.00	0.65	-0.00					
125	0.36	0.00	3.00	4.46	3.00	3.00	0.00	2.39	0.00	-0.00	-0.35					
36	1.25	0.36	6.00	3.00	4.13	7.26	4.46	5.06	4.00	3.00	3.54	0.00	1.94	0.00	-0.00	-0.09
126	0.05	0.00	6.00	7.26	3.00	3.00	0.00	3.22	0.50	0.26	0.74					
127	0.42	0.00	5.00	4.26	3.00	3.00	0.00	0.84	0.00	-2.83	-3.03					
37	0.47	0.42	6.00	5.00	5.11	7.26	4.26	5.76	3.00	3.00	3.00	0.00	2.12	0.00	0.08	-0.37
128	0.42	0.00	2.00	4.26	3.00	3.00	0.00	3.39	0.57	0.75	0.39					
129	0.63	0.00	1.00	3.68	3.00	3.00	0.00	2.06	0.00	-0.65	-0.44					
130	0.63	0.00	2.00	3.68	3.33	3.33	0.00	2.97	0.00	0.31	-0.90					
38	1.67	0.63	2.00	2.00	1.63	4.26	3.68	3.87	3.00	3.33	3.12	0.00	2.90	0.00	0.27	-0.91
131	0.63	0.00	7.00	3.68	3.66	3.66	0.00	5.64	0.35	0.47	0.24					
132	1.25	0.63	10.00	2.68	4.00	4.00	0.00	4.31	0.00	-0.31	-1.84					
39	1.87	1.25	7.00	10.00	9.00	3.68	2.68	3.18	3.66	4.00	3.89	0.00	5.53	0.00	0.48	-0.37
13	9.37	1.87	5.16	9.00	5.15	3.94	3.18	4.31	3.42	3.89	3.49	0.00	2.42	0.00	-1.61	-0.79
133	0.36	0.00	3.00	4.46	4.00	4.00	0.00	12.25	0.67	0.65	0.68					
134	0.05	0.00	7.00	7.26	4.00	4.00	0.00	3.88	0.00	-2.16	0.78					
135	0.42	0.00	6.00	4.26	4.00	4.00	0.00	0.84	0.00	-3.62	-3.23					
40	0.83	0.42	3.00	6.00	4.75	4.46	4.26	5.33	4.00	4.00	4.00	0.00	7.58	0.45	0.27	0.63
136	0.42	0.00	3.00	4.26	3.75	3.75	0.00	3.56	0.57	0.76	0.38					
137	1.25	0.00	2.00	2.68	3.50	3.50	0.00	2.22	0.00	-0.60	-4.55					
138	1.25	0.42	14.00	2.68	3.25	3.25	0.00	12.33	0.00	0.82	-0.13					
41	2.92	1.25	3.00	14.00	7.29	4.26	2.68	3.21	3.75	3.25	3.43	0.00	2.81	0.00	-1.69	-1.90
14	3.75	2.92	4.75	7.29	6.72	5.33	3.21	3.68	4.00	3.43	3.56	0.00	4.34	0.00	0.44	-0.13
4	16.09	3.75	5.11	6.72	5.51	4.83	3.68	4.26	3.16	3.56	3.44	0.00	6.03	0.38	27	0.49
139	0.36	0.00	3.00	4.46	3.00	3.00	0.00	13.97	0.44	0.12	0.77					

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140  0.05  0.00  6.00  7.26  3.00  3.00  0.00  3.22  0.00       -3.35  0.74
141  0.42  0.00  5.00  4.26  3.00  3.00  0.00  0.84  0.00       -2.83 -3.03

        42  0.83  0.42  3.00  5.00  4.19  4.46  4.26  5.33  3.00  3.00  3.00  0.00  8.16  0.67       0.66  0.68

142  0.42  0.00  2.00  4.26  3.00  3.00  0.00  3.39  0.57        0.75  0.39
143  0.63  0.00  1.00  3.68  3.00  3.00  0.00  2.06  0.00       -0.65 -0.44
144  0.63  0.00  2.00  3.68  3.33  3.33  0.00  2.97  0.00        0.31 -0.90

        43  1.67  0.63  2.00  2.00  1.63  4.26  3.68  3.87  3.00  3.33  3.12  0.00  2.59  0.00      -2.15 -1.06

145  0.63  0.00  7.00  3.68  3.66  3.66  0.00  5.64  0.35        0.47  0.24
146  0.63  0.31 10.00  3.68  4.00  4.00  0.00  4.31  0.00       -0.31 -1.12

        44  1.25  0.63  7.00 10.00  8.50  3.68  3.68  3.68  3.66  4.00  3.83  0.00  5.35  0.00       0.52 -0.14

               15  3.75  1.25  4.19  8.50  4.49  5.33  3.68  4.13  3.00  3.83  3.33  0.00  4.90  0.19       0.12  0.26

147  0.36  0.00  3.00  4.46  3.00  3.00  0.00  9.12  0.55        0.53  0.57
148  0.05  C.00  7.00  7.26  3.00  3.00  0.00  3.88  0.00       -1.35  0.78
149  0.42  0.00  6.00  4.26  3.00  3.00  0.00  0.84  0.00       -3.62 -3.03

        45  0.83  0.42  3.00  6.00  4.75  4.46  4.26  5.33  3.00  3.00  3.00  0.00  6.09  0.35       0.12  0.58

150  C.42  C.00  3.00  4.26  3.00  3.00  0.00  3.39  0.57        0.75  0.39
151  1.25  0.00  2.00  2.68  3.00  3.00  0.00  2.06  0.00       -0.65 -5.75

        46  1.67  1.25  3.00  2.00  2.25  4.26  2.68  3.47  3.00  3.00  3.00  0.00  2.53  0.00      -1.41 -3.25

               16  2.50  1.67  4.75  2.25  3.08  5.33  3.47  4.09  3.00  3.00  3.00  0.00  3.62  0.00      -0.35 -1.45

                      5  6.25  2.50  4.49  3.08  3.92  4.13  4.09  4.11  3.33  3.00  3.20  0.00  3.06  0.00      -0.97 -1.77

  2 22.34  6.25  5.51  3.92  5.07  4.26  4.11  4.22  3.44  3.20  3.37  0.00  6.03  0.00

152  1.88  0.00 16.00  2.09  3.40  4.00  0.00 13.87  0.65        0.85  0.45
153  0.21  0.00 14.00  5.26  4.00  4.00  0.00  7.68  0.00       -0.80  0.74
154  C.21  0.00 12.00  5.26  4.00  4.00  0.00  2.03  0.00       -2.79  0.33
155  C.21  0.00 11.00  5.26  4.00  4.00  0.00  1.36  0.00       -0.49 -0.49
156  1.46  0.21  9.00  2.46  4.00  4.00  0.00  2.03  0.00        0.33 -4.04

        47  3.96  1.46 16.00  9.00 12.84  2.09  2.46  4.07  3.70  4.00  3.86  0.00 10.75  0.56       0.76  0.36

157  0.21  C.00  4.00  5.26  4.00  4.00  0.00 10.22  0.77        0.80  0.74
158  0.21  0.00  7.00  5.26  4.00  4.00  0.00  2.69  0.00       -2.79  0.25
159  0.21  0.00  9.00  5.26  4.00  4.00  0.00  2.03  0.00       -0.33 -0.00
160  0.21  0.00 11.00  5.26  4.00  4.00  0.00  2.03  0.00       -0.00 -0.33

        48  0.83  0.21  4.00 11.00  7.75  5.26  5.26  5.26  4.00  4.00  4.00  0.00  6.86  0.00      -0.57  0.41

161  0.21  0.00 14.00  5.26  4.00  4.00  0.00  2.69  0.19        0.25  0.12
162  0.63  0.00 16.00  3.68  4.50  4.50  0.00  2.36  0.00       -0.14 -0.59

        49  0.83  0.63 14.00 16.00 15.50  5.26  3.68  4.47  4.00  4.50  4.37  0.00  4.06  0.00      -0.69  0.28

163  0.21  0.00 14.00  5.26  4.00  4.00  0.00  3.75  0.41        0.37  0.46
```

164	0.21	0.00	16.00	5.26	4.00	4.00	0.00	2.03	0.00	-0.85	-0.00
165	0.21	0.00	18.00	5.26	4.00	4.00	0.00	2.03	0.00	-0.00	-0.00
166	0.31	0.00	16.00	4.68	4.00	4.00	0.00	2.03	0.00	-0.00	-0.17
167	0.31	0.00	14.00	4.68	4.00	4.00	0.00	2.37	0.00	0.15	-0.00
168	0.31	0.00	12.00	4.68	4.00	4.00	0.00	2.37	0.00	-0.00	0.28
169	1.77	0.21	11.00	2.18	4.00	4.00	0.00	1.71	0.00	-0.39	-4.03

50	3.33	1.77	14.00	11.00	12.78	5.26	2.18	4.57	4.00	4.00	4.00	0.00	2.91	0.00	-0.40	-0.59
17	8.96	3.33	12.84	12.78	12.59	4.07	4.57	4.40	3.86	4.00	3.97	0.00	8.87	0.58	0.59	0.58

170	0.21	0.00	12.00	5.26	4.00	4.00	0.00	8.60	0.78	0.80	0.76
171	0.21	0.00	14.00	5.26	4.00	4.00	0.00	2.03	0.00	-3.24	0.33
172	0.21	0.00	15.00	5.26	4.00	4.00	0.00	1.36	0.00	-0.49	-0.00
173	0.21	0.00	14.00	5.26	4.00	4.00	0.00	1.36	0.00	-0.00	-0.49

51	0.83	0.21	12.00	14.00	13.75	5.26	5.26	5.26	4.00	4.00	4.00	0.00	4.62	0.50	0.37	0.63

174	0.21	0.00	12.00	5.26	4.00	4.00	0.00	2.03	0.33	0.33	0.33
175	0.21	0.00	11.00	5.26	4.00	4.00	0.00	1.36	0.00	-0.49	-0.00
176	0.21	0.00	12.00	5.26	4.00	4.00	0.00	1.36	0.00	-0.00	-0.98

52	0.62	0.21	12.00	12.00	11.67	5.26	5.26	5.26	4.00	4.00	4.00	0.00	1.71	0.00	-1.71	-0.57

177	0.21	0.00	15.00	5.26	4.00	4.00	0.00	2.69	0.37	0.49	0.25
178	0.21	0.00	17.00	5.26	4.00	4.00	0.00	2.03	0.00	-0.33	-0.00
179	0.21	0.00	15.00	5.26	4.00	4.00	0.00	2.03	0.00	-0.00	-0.33

53	0.62	0.21	15.00	15.00	15.67	5.26	5.26	5.26	4.00	4.00	4.00	0.00	2.68	0.00	0.36	-0.23

180	0.21	0.00	12.00	5.26	4.00	4.00	0.00	2.69	0.37	0.25	0.49
181	0.16	0.00	11.00	5.68	4.00	4.00	0.00	1.36	0.00	-0.98	0.13
182	0.16	0.00	10.00	5.68	4.00	4.00	0.00	1.19	0.00	-0.15	-0.00
183	0.16	0.00	9.00	5.68	4.00	4.00	0.00	1.19	0.00	-0.00	-0.56
184	0.16	0.00	7.00	5.68	4.00	4.00	0.00	1.85	0.00	0.36	-0.72
185	0.16	0.00	3.00	5.68	4.00	4.00	0.00	3.19	0.00	0.42	-0.00
186	0.16	0.00	7.00	5.68	4.00	4.00	0.00	3.19	0.00	-0.00	0.42
187	0.16	0.00	9.00	5.68	4.00	4.00	0.00	1.85	0.00	-0.72	0.36
188	0.16	0.00	10.00	5.68	4.00	4.00	0.00	1.19	0.00	-0.56	-0.00
189	1.25	0.42	11.00	2.68	4.00	4.00	0.00	1.19	0.00	-0.00	-7.89

54	2.71	1.25	12.00	11.00	9.81	5.26	2.68	5.34	4.00	4.00	4.00	0.00	3.30	0.00	0.19	-0.97

190	0.16	0.00	16.00	5.68	4.50	4.50	0.00	10.56	0.86	0.89	0.82
191	0.16	0.00	14.00	5.68	4.50	4.50	0.00	1.85	0.00	-4.69	-0.00
192	0.16	0.00	16.00	5.68	4.50	4.50	0.00	1.85	0.00	-0.00	-0.00
193	0.16	0.00	14.00	5.68	4.50	4.50	0.00	1.85	0.00	-0.00	-0.00
194	0.16	0.00	16.00	5.68	4.50	4.50	0.00	1.85	0.00	-0.00	-0.00
195	0.16	0.00	14.00	5.68	4.50	4.50	0.00	1.85	0.00	-0.00	-0.00
196	0.16	0.00	16.00	5.63	4.50	4.50	0.00	1.85	0.00	-0.00	-0.00
197	0.16	0.00	14.00	5.68	4.50	4.50	0.00	1.85	0.00	-0.00	-0.36
198	1.25	0.31	11.00	2.68	4.50	4.50	0.00	2.52	0.00	0.26	-3.91

55	2.50	1.25	16.00	11.00	13.00	5.68	2.68	5.34	4.50	4.50	4.50	0.00	6.51	0.00	0.49	-0.08

199	0.16	0.00	19.00	5.68	5.00	5.00	0.00	12.37	0.85	0.80	0.90
200	0.16	0.00	18.00	5.68	5.00	5.00	0.00	1.19	0.00	-9.42	-0.00
201	0.16	0.00	19.00	5.68	5.00	5.00	0.00	1.19	0.00	-0.00	-0.00
202	0.16	0.00	18.00	5.68	5.00	5.00	0.00	1.19	0.00	-0.00	-0.00

```
203  0.16  0.00 19.00  5.68  5.00  5.00  0.00  1.19  0.00       -0.00 -0.00
204  0.16  0.00 18.00  5.68  5.00  5.00  0.00  1.19  0.00       -0.00 -0.00
205  0.16  0.00 19.00  5.68  5.00  5.00  0.00  1.19  0.00       -0.00 -0.00
206  0.16  0.00 18.00  5.68  5.00  5.00  0.00  1.19  0.00       -0.00 -3.37
207  1.09  0.31 11.00  2.87  5.00  5.00  0.00  5.19  0.00        0.77 -1.12

       56  2.34  1.09 19.00 11.00 15.00  5.68  2.87  5.37  5.00  5.00  5.00  0.00  7.02  0.00      0.07 -0.16

208  0.05  0.00 18.00  7.26  4.50  4.50  0.00 11.02  0.71        0.53  0.89
209  0.05  0.00 19.00  7.26  5.00  5.00  0.00  1.17  0.00       -8.39 -0.57
210  0.05  0.00 21.00  7.26  5.50  5.50  0.00  1.84  0.00        0.36 -0.00
211  5.00  1.25 23.00  0.68  6.00  4.00  0.00  1.84  0.00       -0.00-11.32

       57  5.16  5.00 18.00 23.00 22.89  7.26  0.68  5.62  4.50  5.00  5.00  0.00  8.14  0.00      0.14 -0.41

             18 14.79  5.16 13.75 22.89 16.28  5.26  5.62  5.43  4.00  5.00  4.59  0.00  3.75  0.00      -1.37 -1.01

                  6 23.75 14.79 12.59 16.28 14.89  4.40  5.43  5.04  3.97  4.59  4.36  0.00  8.48  0.45      0.64  0.27

212  2.19  0.00 23.00  1.87  5.50  4.50  0.00 22.67  0.78        0.92  0.64
213  0.16  0.00 22.00  5.68  4.50  4.50  0.00  8.12  0.00       -1.79  0.73
214  0.16  0.00 24.00  5.68  5.00  5.00  0.00  2.19  0.00       -2.71 -0.38
215  0.94  0.00 21.00  3.09  6.00  5.00  0.00  3.02  0.00        0.28 -0.31

       58  3.44  0.94 23.00 21.00 22.45  1.87  3.09  4.08  5.00  5.50  5.11  0.00 11.52  0.54      0.29  0.78

216  0.16  0.00 20.00  5.68  5.00  5.00  0.00  3.96  0.34        0.24  0.45
217  0.16  0.00 22.00  5.68  5.50  5.50  0.00  2.19  0.00       -0.81 -0.30

       59  0.31  0.16 20.00 22.00 21.00  5.68  5.68  5.68  5.00  5.50  5.25  0.00  2.51  0.00     -3.59 -0.24

218  0.31  0.00 19.00  4.68  6.00  6.00  0.00  2.85  0.32        0.23  0.40
219  0.31  0.00 18.00  4.68  6.00  6.00  0.00  1.71  0.00       -0.67 -0.00
220  0.31  0.00 17.00  4.68  6.00  6.00  0.00  1.71  0.00       -0.00 -0.78
221  0.47  0.16 14.00  4.09  6.00  6.00  0.00  3.04  0.00        0.44 -2.32

       60  1.41  0.47 19.00 14.00 16.67  4.68  4.09  4.53  6.00  6.00  6.00  0.00  3.12  0.00      0.20 -1.39

             19  5.16  1.41 22.45 16.67 20.79  4.08  4.53  4.30  5.11  6.00  5.36  0.00  7.52  0.47      0.50  0.45

222  1.56  0.00 23.00  2.36  6.00  6.00  0.00 10.08  0.49        0.70  0.29
223  0.26  0.00 26.00  4.94  6.00  6.00  0.00  7.21  0.00       -0.40  0.60
224  0.05  0.00 29.00  7.26  6.00  6.00  0.00  2.87  0.00       -1.51  0.47
225  0.31  0.00 27.00  4.68  6.00  6.00  0.00  1.51  0.00       -0.90 -0.13
226  0.31  0.00 26.00  4.68  6.00  6.00  0.00  1.71  0.00        0.12 -0.88
227  2.19  0.00 23.00  1.87  6.00  5.00  0.00  3.21  0.00        0.47 -1.64

       61  4.69  2.19 23.00 23.00 23.70  2.36  1.87  4.30  6.00  5.50  5.77  0.00  7.46  0.43      0.58  0.28

228  0.16  0.00 22.00  5.68  4.50  4.50  0.00  8.46  0.70        0.62  0.78
229  0.16  0.00 24.00  5.68  4.50  4.50  0.00  1.85  0.00       -3.56 -0.45
230  0.94  0.00 21.00  3.09  5.00  4.00  0.00  2.69  0.00        0.31 -0.47

       62  1.25  0.94 22.00 21.00 21.50  5.68  3.09  4.82  4.50  4.50  4.50  0.00  5.38  0.00     -0.39  0.57

231  0.16  0.00 20.00  5.68  4.00  4.00  0.00  3.96  0.43        0.32  0.53
232  0.16  0.00 22.00  5.68  4.00  4.00  0.00  1.85  0.00       -1.13 -0.36
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          63  0.31   0.16 20.00 22.00 21.00   5.68   5.68   5.68   4.00   4.00   4.00   0.00   2.31   0.00      -1.33 -0.27

233  0.31   0.00 19.00  4.68  4.00   4.00  0.00  2.52  0.26       0.26  0.26
234  0.31   0.00 18.00  4.68  3.75   3.75  0.00  1.87  0.00      -0.34 -0.00
235  0.31   0.00 17.00  4.68  3.50   3.50  0.00  1.87  0.00      -0.00 -0.71
236  0.63   0.31 14.00  3.68  3.25   3.25  0.00  3.21  0.00       0.42 -0.94

          64  1.56   0.63 19.00 14.00 16.40   4.68   3.68   4.43   4.00   3.25   3.55   0.00   2.94   0.00       0.21 -0.73

                  20  7.81   1.56 23.70 16.40 21.78   4.30   4.43   4.46   5.77   3.55   5.05   0.00   4.17   0.00      -0.80 -0.93

                         7 12.97   7.81 20.79 21.78 21.39   4.30   4.46   4.40   5.36   5.05   5.17   0.00   6.20   0.00      -0.37 -0.62

237  0.21   0.00 11.00  5.26  3.00   3.00  0.00  6.21  0.63       0.48  0.78
238  0.21   0.00 10.00  5.26  3.00   3.00  0.00  1.36  0.00      -3.56 -0.49
239  0.21   C.00 12.00  5.26  3.00   3.00  0.00  2.03  0.00       0.33 -0.49

          65  0.62   0.21 11.00 12.00 11.00   5.26   5.26   5.26   3.00   3.00   3.00   0.00   5.09   0.48       0.42  0.54

240  0.21   0.00  9.00  5.26  3.50   3.50  0.00  3.03  0.44       0.33  0.55
241  0.21   0.00  8.00  5.26  3.50   3.50  0.00  1.36  0.00      -1.22 -0.49
242  0.21   0.00 10.00  5.26  3.50   3.50  0.00  2.03  0.00       0.33 -0.49

          66  0.62   0.21  9.00 10.00  9.00   5.26   5.26   5.26   3.50   3.50   3.50   0.00   2.35   0.00      -1.17 -0.31

243  0.31   0.00  7.00  4.68  4.00   4.00  0.00  3.03  0.36       0.33  0.38
244  0.31   0.00  6.00  4.68  3.75   3.75  0.00  1.87  0.00      -0.61 -0.00
245  0.31   0.00  5.00  4.68  3.50   3.50  0.00  1.87  0.00      -0.00 -0.71
246  0.63   0.31  2.00  3.68  3.25   3.25  0.00  3.21  0.00       0.42 -2.18

          67  1.56   0.63  7.00  2.00  4.40   4.68   3.68   4.43   4.00   3.25   3.55   0.00   3.06   0.00       0.23 -1.44

                  21  2.81   1.56 11.00  4.40  6.89   5.26   4.43   4.80   3.00   3.55   3.42   0.00   8.05   0.44       0.48  0.40

247  0.21   C.00 11.00  5.26  3.00   3.00  0.00 10.21  0.78       0.69  0.87
248  0.21   0.00 10.00  5.26  3.00   3.00  0.00  1.36  0.00      -6.50 -0.49
249  0.21   C.00 12.00  5.26  3.00   3.00  0.00  2.03  0.00       0.33 -0.49

          68  0.62   0.21 11.00 12.00 11.00   5.26   5.26   5.26   3.00   3.00   3.00   0.00   7.49   0.64       0.59  0.69

250  C.21   0.00  9.00  5.26  3.50   3.50  0.00  3.03  0.44       0.33  0.55
251  0.21   C.00  8.00  5.26  3.50   3.50  0.00  1.36  0.00      -1.22 -0.49
252  0.21   0.00 10.00  5.26  3.50   3.50  0.00  2.03  0.00       0.33 -0.49

          69  0.62   0.21  9.00 10.00  9.00   5.26   5.26   5.26   3.50   3.50   3.50   0.00   2.35   0.00      -2.19 -0.45

253  0.31   0.00  7.00  4.68  4.00   4.00  0.00  3.03  0.36       0.33  0.38
254  0.31   C.00  6.00  4.68  3.75   3.75  0.00  1.87  0.00      -0.61 -0.00
255  0.31   C.00  5.00  4.68  3.50   3.50  0.00  1.87  0.00      -0.00 -0.73
256  1.56   C.63  2.00  2.36  3.25   3.00  0.00  3.25  0.00       0.42 -1.56

          70  2.50   1.56  7.00  2.00  3.50   4.68   2.36   4.10   4.00   3.13   3.36   0.00   3.39   0.00       0.31 -0.34

257  0.36   0.00  2.00  4.46  3.00   3.00  0.00  8.33  0.53       0.61  0.45
258  C.05   0.00  7.00  7.26  3.00   3.00  0.00  4.55  0.00      -0.83  0.82
259  C.42   0.00  6.00  4.26  3.00   3.00  0.00  0.84  0.00      -4.41 -1.45
260  0.42   0.00  5.00  4.26  3.00   3.00  0.00  2.06  0.00       0.59 -0.65
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```
261  2.92  0.21  2.00  1.46  3.00  3.00  0.00  3.39  0.00        0.39 -4.02

          71  4.17  2.92  2.00  2.00  2.76  4.46  1.46  4.34  3.00  3.00  3.00  0.00  4.53  0.00        0.25 -0.96

262  0.42  0.00 10.00  4.26  3.40  3.40  0.00 17.02  0.82        0.80  0.83
263  0.42  0.00  8.00  4.26  3.20  3.20  0.00  2.86  0.00       -4.96 -0.93
264  2.50  0.63  2.00  1.68  3.00  3.00  0.00  5.52  0.00        0.48 -2.30

          72  3.33  2.50 10.00  2.00  3.75  4.26  1.68  3.40  3.40  3.00  3.07  0.00  8.86  0.00        0.49 -0.29

                  22 11.25  3.33 11.00  3.75  4.02  5.26  3.40  4.11  3.00  3.07  3.13  0.00  4.79  0.00       -0.68 -0.40

265  2.50  0.00 12.00  1.68  3.00  4.00  0.00 18.25  0.62        0.70  0.54
266  1.77  0.00 12.00  2.18  4.00  3.50  0.00  8.42  0.00       -1.17  0.11
267  0.52  0.00 10.00  3.94  3.30  3.30  0.00  7.45  0.00       -0.13  0.58
268  0.52  0.00  8.00  3.94  3.20  3.20  0.00  3.14  0.00       -1.38  0.00
269  0.52  0.00  6.00  3.94  3.10  3.10  0.00  3.14  0.00       -0.00 -0.00
270  0.52  0.21  4.00  3.94  3.00  3.00  0.00  3.14  0.00        0.00 -0.20

          73  6.35  0.52 12.00  4.00 10.36  1.68  3.94  3.27  3.50  3.00  3.45  0.00 11.46  0.39        0.23  0.55

271  0.21  0.00  4.00  5.26  3.50  3.50  0.00  3.76  0.21        0.17  0.26
272  5.21  0.00  2.00  0.62  3.00  0.50  0.00  2.78  0.00        0.00  0.00

          74  5.42  5.21  4.00  2.00  2.08  5.26  0.62  2.94  3.50  1.75  1.82  0.00  5.19  0.00        0.00  0.00

                  23 11.77  5.42 10.36  2.08  6.55  3.27  2.94  3.12  3.45  1.82  2.70  0.00  6.71  0.00        0.00  0.00

                           8 25.83 11.77  6.89  6.55  5.49  4.80  3.12  3.73  3.42  2.70  2.97  0.00 10.06  0.00        0.00  0.00

   3 62.55 25.83 14.89  5.49 12.35  5.04  3.73  4.37  4.36  2.97  3.95  0.00  8.48  0.00
```

PMS

WEIGHTINGS: PROXIMITY= 1.00 PITCH= 2.00 INTENSITY= 1.00 TEMPORAL DENSITY= 0.00 TIMBRE= 0.00

Output data: Debussy (variant)

```
  1  0.94  0.00 23.00  3.09  5.50  4.50  0.00  0.00  0.00        0.00  0.00
  2  0.16  0.00 22.00  5.68  4.50  4.50  0.00  3.47  0.00        0.00  0.00
  3  0.16  0.00 24.00  5.68  4.50  4.50  0.00  2.39  0.00       -0.45 -0.58

           1  1.25  0.16 23.00 24.00 23.00  3.09  5.68  4.82  5.00  4.50  4.88  0.00  0.00  0.00        0.00  0.00

  4  0.94  0.00 21.00  3.09  5.50  4.50  0.00  3.77  0.22        0.37  0.08
  5  0.16  0.00 20.00  5.68  4.50  4.50  0.00  3.47  0.00       -0.09  0.31
  6  0.16  0.00 22.00  5.68  4.50  4.50  0.00  2.39  0.00       -0.45 -0.52

           2  1.25  0.16 21.00 22.00 21.00  3.09  5.68  4.82  5.00  4.50  4.88  0.00  2.88  0.00        0.00  0.00

  7  0.31  0.00 19.00  4.68  5.00  5.00  0.00  3.64  0.43        0.34  0.51
  8  0.31  0.00 18.00  4.68  5.00  5.00  0.00  1.78  0.00       -1.04 -0.00
  9  0.31  0.00 17.00  4.68  5.00  5.00  0.00  1.78  0.00       -0.00 -1.12
 10  0.31  0.16 14.00  4.68  5.00  5.00  0.00  3.78  0.00        0.53 -2.02
```

3	1.25	0.31	19.00	14.00	17.00	4.68	4.68	4.68	5.00	5.00	5.00	0.00	3.85	0.00	0.25	-1.32
1	3.75	1.25	23.00	17.00	20.33	4.82	4.68	4.77	4.88	5.00	4.92	0.00	0.00	0.00	0.00	0.00
11	0.94	0.00	23.00	3.09	5.00	5.00	0.00	11.42	0.64	0.67	0.62					
12	0.16	0.00	25.00	5.68	5.00	5.00	0.00	4.34	0.00	-1.63	0.62					
13	0.16	0.00	24.00	5.68	4.50	4.50	0.00	1.64	0.00	-1.65	-0.00					
14	3.75	1.25	23.00	1.09	4.00	4.00	0.00	1.64	0.00	-0.00	-7.30					
4	5.00	3.75	23.00	23.00	23.09	3.09	1.09	3.89	5.00	4.00	4.23	0.00	8.95	0.37	0.57	0.17
15	0.94	0.00	23.00	3.09	2.50	1.50	0.00	13.62	0.81	0.88	0.75					
16	0.16	0.00	22.00	5.68	1.50	1.50	0.00	3.47	0.00	-2.93	0.31					
17	0.16	0.00	24.00	5.68	1.50	1.50	0.00	2.39	0.00	-0.45	-0.58					
5	1.25	0.16	23.00	24.00	23.00	3.09	5.68	4.82	2.00	1.50	1.88	0.00	7.45	0.00	-0.20	0.61
18	0.94	0.00	21.00	3.09	2.50	1.50	0.00	3.77	0.22	0.37	0.08					
19	0.16	0.00	20.00	5.68	1.50	1.50	0.00	3.47	0.00	-0.09	0.31					
20	0.16	0.00	22.00	5.68	1.50	1.50	0.00	2.39	0.00	-0.45	-0.52					
6	1.25	0.16	21.00	22.00	21.00	3.09	5.68	4.82	2.00	1.50	1.88	0.00	2.88	0.00	-1.58	-0.79
21	0.31	0.00	19.00	4.68	2.00	2.00	0.00	3.64	0.43	0.34	0.51					
22	0.31	0.00	18.00	4.68	2.00	2.00	0.00	1.78	0.00	-1.04	-0.00					
23	0.31	0.00	17.00	4.68	2.00	2.00	0.00	1.78	0.00	-0.00	-1.12					
24	0.31	0.16	14.00	4.68	2.00	2.00	0.00	3.78	0.00	0.53	-0.29					
25	0.94	0.00	11.00	3.09	2.50	2.00	0.00	4.86	0.00	0.22	-0.31					
7	2.19	0.94	19.00	11.00	14.43	4.68	3.09	4.36	2.00	2.25	2.11	0.00	5.16	0.00	0.44	-0.01
2	9.69	2.19	23.09	14.43	20.85	3.89	4.36	4.23	4.23	2.11	3.15	0.00	5.18	0.00	0.00	0.00
1	13.44	9.69	20.33	20.85	20.71	4.77	4.23	4.38	4.92	3.15	3.64	0.00	0.00	0.00	0.00	0.00
26	0.16	0.00	7.00	5.68	2.00	2.50	0.00	6.34	0.50	0.23	0.76					
27	0.16	0.00	8.00	5.68	2.50	3.00	0.00	1.52	0.00	-3.19	-2.06					
28	0.83	0.10	12.00	3.26	3.50	3.00	0.00	4.64	0.00	0.67	-0.76					
8	1.15	0.83	7.00	12.00	10.77	5.68	3.26	4.87	2.25	3.25	3.05	0.00	5.23	0.04	0.01	0.08
29	0.21	0.00	7.00	5.26	3.00	3.00	0.00	8.16	0.62	0.43	0.80					
30	0.21	0.00	8.00	5.26	3.20	3.20	0.00	1.62	0.00	-4.03	-2.47					
31	0.21	0.00	13.00	5.26	3.40	3.40	0.00	5.62	0.00	0.71	-0.16					
9	0.62	0.21	7.00	13.00	9.33	5.26	5.26	5.26	3.00	3.40	3.20	0.00	4.84	0.00	-0.08	0.12
32	0.21	0.00	7.00	5.26	3.40	3.40	0.00	6.52	0.45	0.14	0.76					
33	0.21	0.00	8.00	5.26	3.50	3.50	0.00	1.57	0.00	-3.15	-3.18					
10	0.42	0.21	7.00	8.00	7.50	5.26	5.26	5.26	3.40	3.50	3.45	0.00	4.24	0.00	-0.14	-0.40
3	2.19	0.42	10.77	7.50	9.74	4.87	5.26	5.06	3.05	3.45	3.17	0.00	8.18	0.43	0.37	0.50
34	0.16	0.00	14.00	5.68	3.60	3.60	0.00	6.57	0.55	0.76	0.33					
35	0.05	0.00	18.00	7.26	3.60	3.60	0.00	4.39	0.00	-0.50	0.72					

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36  0.21  0.00 17.00  5.26  3.80  3.80  0.00  1.23  0.00      -2.57 -2.02
37  0.21  0.00 14.00  5.26  3.40  3.40  0.00  3.72  0.00       0.67 -0.00
38  0.94  0.00 11.00  3.09  3.00  3.00  0.00  3.72  0.00      -0.00 -0.70

      11  1.56  0.94 14.00 11.00 12.73  5.68  3.09  5.31  3.60  3.00  3.24  0.00  5.95  0.31      0.29  0.33

39  0.16  0.00  7.00  5.68  3.00  3.00  0.00  6.34  0.59       0.41  0.76
40  0.16  0.00  8.00  5.68  3.30  3.30  0.00  1.54  0.00      -3.12 -1.95
41  1.46  0.21 12.00  2.46  3.60  3.60  0.00  4.54  0.00       0.66 -0.78

      12  1.77  1.46  7.00 12.00 11.21  5.68  2.46  4.60  3.00  3.60  3.52  0.00  4.01  0.00     -0.49 -0.82

               4  3.33  1.77 12.73 11.21 11.92  5.31  4.60  4.94  3.24  3.52  3.39  0.00  4.12  0.00     -0.98 -1.34

42  0.21  0.00  9.00  5.26  3.00  3.00  0.00  8.07  0.49       0.44  0.55
43  0.21  0.00 12.00  5.26  3.25  3.25  0.00  3.65  0.00      -1.21  0.27
44  0.21  0.00 14.00  5.26  3.50  3.50  0.00  2.65  0.00      -0.38 -0.38
45  0.21  0.00 17.00  5.26  3.75  3.75  0.00  3.65  0.00       0.27 -0.27
46  1.15  0.94 21.00  2.80  4.00  4.00  0.00  4.65  0.00       0.22 -0.34

      13  1.98  1.15  9.00 21.00 17.63  5.26  2.80  4.77  3.00  4.00  3.74  0.00  7.30  0.30      0.45  0.14

47  0.31  0.00 21.00  4.68  3.50  3.50  0.00  6.21  0.30       0.25  0.35
48  5.00  0.00 24.00  0.68  4.00  4.00  0.00  4.03  0.00      -0.54 -2.66

      14  5.31  5.00 21.00 24.00 23.82  4.68  0.68  2.68  3.50  4.00  3.97  0.00  6.26  0.00     -0.17 -0.33

49  1.25  0.00 26.00  2.68  4.50  4.50  0.00 14.75  0.68       0.73  0.64
50  2.50  0.00 28.00  1.68  4.00  4.00  0.00  5.37  0.00      -1.74 -1.19
51  2.50  1.25 23.00  1.68  3.00  3.00  0.00 11.75  0.00       0.54 -0.89

      15  6.25  2.50 26.00 23.00 25.60  2.68  1.68  2.01  4.50  3.00  3.70  0.00  8.33  0.00      0.25 -1.24

               5 13.54  6.25 17.63 25.60 23.74  4.77  2.01  2.58  3.74  3.70  3.81  0.00  9.66  0.00      0.57 -0.78

                    2 19.06 13.54  9.74 23.74 20.07  5.06  2.68  3.34  3.17  3.81  3.66  0.00  4.42  0.00      0.00  0.00

 1 32.50 19.06 20.71 20.07 20.33  4.38  3.34  3.77  3.64  3.66  3.65  0.00  0.00  0.00

52  0.94  0.00 11.00  3.09  3.50  2.50  0.00 22.25  0.66       0.47  0.84
53  0.16  0.00 10.00  5.68  2.50  2.50  0.00  3.47  0.00      -5.41  0.31
54  0.16  0.00 12.00  5.68  2.50  2.50  0.00  2.39  0.00      -0.45 -0.58

      16  1.25  0.16 11.00 12.00 11.00  3.09  5.68  4.82  3.00  2.50  2.88  0.00 18.63  0.70      0.55  0.85

55  0.94  0.00  9.00  3.09  3.50  2.50  0.00  3.77  0.22       0.37  0.08
56  0.16  0.00  8.00  5.68  2.50  2.50  0.00  3.47  0.00      -0.09  0.31
57  0.16  0.00 10.00  5.68  2.50  2.50  0.00  2.39  0.00      -0.45 -0.52

      17  1.25  0.16  9.00 10.00  9.00  3.09  5.68  4.82  3.00  2.50  2.88  0.00  2.88  0.00     -5.46 -0.34

58  0.31  0.00  7.00  4.68  3.00  3.00  0.00  3.64  0.43       0.34  0.51
59  0.31  0.00  6.00  4.68  3.00  3.00  0.00  1.78  0.00      -1.04 -0.00
60  0.31  0.00  5.00  4.68  3.00  3.00  0.00  1.78  0.00      -0.00 -1.12
61  0.31  0.16  2.00  4.68  3.00  3.00  0.00  3.78  0.00       0.53 -1.92
```

18	1.25	0.31	7.00	2.00	5.00	4.68	4.68	4.68	3.00	3.00	3.00	0.00	3.85	0.00	0.25	-1.22
6	3.75	1.25	11.00	5.00	8.33	4.82	4.68	4.77	2.88	3.00	2.92	0.00	17.24	0.58	0.44	0.71
62	0.94	0.00	11.00	3.09	3.50	2.50	0.00	11.05	0.67	0.66	0.69					
63	0.16	0.00	10.00	5.68	2.50	2.50	0.00	3.47	0.00	-2.18	0.31					
64	0.16	0.00	12.00	5.68	2.50	2.50	0.00	2.39	0.00	-0.45	-0.58					
19	1.25	0.16	11.00	12.00	11.00	3.09	5.68	4.82	3.00	2.50	2.88	0.00	8.55	0.61	0.55	0.66
65	0.94	0.00	9.00	3.09	3.50	2.50	0.00	3.77	0.22	0.37	0.08					
66	0.16	0.00	8.00	5.68	2.50	2.50	0.00	3.47	0.00	-0.09	0.31					
67	0.16	0.00	10.00	5.68	2.50	2.50	0.00	2.39	0.00	-0.45	-0.52					
20	1.25	0.16	9.00	10.00	9.00	3.09	5.68	4.82	3.00	2.50	2.88	0.00	2.88	0.00	-1.97	0.34
68	0.31	0.00	7.00	4.68	3.00	3.00	0.00	3.64	0.27	0.34	0.20					
69	0.31	0.00	9.00	4.68	3.25	3.25	0.00	2.91	0.00	-0.25	-0.00					
70	0.31	0.00	11.00	4.68	3.50	3.50	0.00	2.91	0.00	-0.00	-0.34					
21	0.94	0.31	7.00	11.00	9.00	4.68	4.68	4.68	3.00	3.50	3.25	0.00	1.91	0.00	-0.51	-1.64
7	3.44	0.94	11.00	9.00	9.73	4.82	4.68	4.78	2.88	3.25	2.98	0.00	4.99	0.00	-2.46	0.12
71	0.31	0.00	14.00	4.68	3.75	3.75	0.00	3.91	0.26	0.26	0.26					
72	0.26	0.00	16.00	4.94	4.00	4.00	0.00	2.91	0.00	-0.34	-0.26					
22	0.57	0.26	14.00	16.00	14.91	4.68	4.94	4.81	3.75	4.00	3.86	0.00	5.06	0.51	0.62	0.40
73	0.05	0.00	19.00	7.26	4.00	4.00	0.00	3.65	0.45	0.20	0.69					
74	0.31	0.00	18.00	4.68	4.00	4.00	0.00	1.13	0.00	-2.23	-1.46					
75	0.31	0.00	16.00	4.68	4.00	4.00	0.00	2.78	0.00	0.59	-0.00					
76	0.31	0.00	14.00	4.68	4.00	4.00	0.00	2.78	0.00	-0.00	-0.36					
77	1.56	0.31	11.00	2.36	4.00	4.00	0.00	3.78	0.00	0.26	-1.03					
78	0.31	0.00	9.00	4.68	3.75	3.75	0.00	7.69	0.00	0.51	-0.03					
23	2.86	0.31	19.00	9.00	12.56	7.26	4.68	4.72	4.00	3.75	3.97	0.00	3.03	0.00	-0.67	-1.94
8	3.44	2.86	14.91	12.56	12.95	4.81	4.72	4.74	3.86	3.97	3.95	0.00	4.39	0.00	-0.14	-0.31
79	0.31	0.00	2.00	4.68	3.50	3.50	0.00	7.91	0.33	0.03	0.63					
80	0.31	0.00	4.00	4.68	3.25	3.25	0.00	2.91	0.00	-1.72	-0.33					
24	0.63	0.31	2.00	4.00	3.00	4.68	4.68	4.68	3.50	3.25	3.38	0.00	8.88	0.55	0.66	0.44
81	0.16	0.00	7.00	5.68	3.10	3.10	0.00	3.86	0.31	0.25	0.37					
82	0.16	0.00	9.00	5.68	3.20	3.20	0.00	2.44	0.00	-0.58	-0.00					
83	0.16	0.00	11.00	5.68	3.30	3.30	0.00	2.44	0.00	-0.00	-0.41					
25	0.47	0.16	7.00	11.00	9.00	5.68	5.68	5.68	3.10	3.30	3.20	0.00	4.97	0.00	-0.79	0.06
84	0.16	0.00	14.00	5.68	3.40	3.40	0.00	3.44	0.29	0.29	0.29					
85	0.10	0.00	16.00	6.26	3.50	3.50	0.00	2.44	0.00	-0.41	-0.36					
26	0.26	0.10	14.00	16.00	14.80	5.68	6.26	5.97	3.40	3.50	3.44	0.00	4.68	0.00	-0.06	0.34
86	0.05	0.00	19.00	7.26	3.60	3.60	0.00	3.31	0.45	0.26	0.64					

87	0.16	0.00	18.00	5.68	3.70	3.70	0.00	1.18	0.00	-1.80	-1.07					
88	0.16	0.00	16.00	5.68	3.80	3.80	0.00	2.44	0.00	0.52	-0.00					
89	0.16	0.00	14.00	5.68	3.90	3.90	0.00	2.44	0.00	-0.00	-0.41					
90	1.88	0.31	11.00	2.09	4.00	4.00	0.00	3.44	0.00	0.29	-1.79					
27	2.40	1.88	19.00	11.00	12.15	7.26	2.09	5.28	3.60	4.00	3.95	0.00	3.11	0.00	-0.51	-1.81
9	3.75	2.40	3.00	12.15	10.42	4.68	5.28	5.28	3.38	3.95	3.73	0.00	5.77	0.00	0.24	-0.45
91	0.21	0.00	14.00	5.26	4.25	4.25	0.00	9.59	0.68	0.64	0.72					
92	0.21	0.00	16.00	5.26	4.50	4.50	0.00	2.65	0.00	-2.63	-0.38					
93	0.21	0.00	19.00	5.26	4.75	4.75	0.00	3.65	0.00	0.27	-0.00					
94	0.78	0.00	22.00	3.36	5.00	5.00	0.00	3.65	0.00	-0.00	0.19					
95	0.16	0.00	21.00	5.68	5.00	5.00	0.00	2.95	0.00	-0.23	0.53					
96	0.16	0.00	20.00	5.68	5.00	5.00	0.00	1.39	0.00	-1.12	-0.00					
97	0.16	0.00	19.00	5.68	5.00	5.00	0.00	1.39	0.00	-0.00	-1.44					
28	1.87	0.16	14.00	19.00	19.61	5.26	5.68	5.17	4.25	5.00	4.83	0.00	8.75	0.60	0.64	0.55
98	0.78	0.00	16.00	3.36	5.00	5.00	0.00	3.39	0.36	0.59	0.13					
99	0.16	0.00	15.00	5.68	5.00	5.00	0.00	2.95	0.00	-0.15	0.53					
100	0.16	0.00	14.00	5.68	5.00	5.00	0.00	1.39	0.00	-1.12	-0.00					
101	0.16	0.00	13.00	5.68	5.00	5.00	0.00	1.39	0.00	-0.00	-1.44					
29	1.25	0.16	16.00	13.00	15.25	3.36	5.68	5.10	5.00	5.00	5.00	0.00	3.92	0.00	-1.23	-0.40
10	3.12	1.25	19.61	15.25	17.87	5.17	5.10	5.14	4.83	5.00	4.90	0.00	8.39	0.00	0.31	-0.07
3	17.50	3.12	8.33	17.87	11.66	4.77	5.14	4.94	2.92	4.90	3.66	0.00	12.82	0.54	0.66	0.42
102	0.78	0.00	10.00	3.36	5.00	5.00	0.00	3.39	0.32	0.59	0.06					
103	0.16	0.00	9.00	5.68	4.50	4.50	0.00	3.20	0.00	-0.06	0.49					
104	0.16	0.00	8.00	5.68	4.00	4.00	0.00	1.64	0.00	-0.95	-0.00					
105	0.16	0.00	7.00	5.68	3.50	3.50	0.00	1.64	0.00	-0.00	-1.22					
106	0.36	0.00	4.00	4.46	3.00	3.00	0.00	3.64	0.00	0.55	-0.07					
30	1.61	0.36	10.00	4.00	8.06	3.36	4.46	4.97	5.00	3.00	4.26	0.00	5.47	0.28	0.28	0.27
107	0.05	0.00	7.00	7.26	3.00	3.00	0.00	3.91	0.39	0.07	0.71					
108	0.42	0.00	6.00	4.26	3.00	3.00	0.00	1.13	0.00	-2.46	-0.81					
109	0.42	0.00	5.00	4.26	3.00	3.00	0.00	2.04	0.00	0.45	-0.00					
110	1.25	0.63	4.00	2.68	3.00	3.00	0.00	2.04	0.00	-0.00	-2.64					
31	2.14	1.25	7.00	4.00	4.66	7.26	2.68	4.62	3.00	3.00	3.00	0.00	3.97	0.00	-0.38	-0.03
11	3.75	2.14	8.06	4.66	6.13	4.97	4.62	4.77	4.26	3.00	3.54	0.00	8.95	0.39	0.06	0.72
111	0.63	0.00	6.00	3.68	3.00	3.00	0.00	7.44	0.67	0.73	0.62					
112	0.63	0.00	5.00	3.68	3.50	3.50	0.00	2.81	0.00	-1.64	-0.00					
113	0.36	0.00	4.00	4.46	4.00	4.00	0.00	2.81	0.00	-0.00	-0.39					
32	1.61	0.36	6.00	4.00	5.16	3.68	4.46	3.94	3.00	4.00	3.42	0.00	4.07	0.27	0.02	0.51
114	0.05	0.00	7.00	7.26	4.00	4.00	0.00	3.91	0.50	0.28	0.71					
115	0.42	0.00	6.00	4.26	4.00	4.00	0.00	1.13	0.00	-2.46	-1.03					
116	0.42	0.00	5.00	4.26	3.50	3.50	0.00	2.29	0.00	0.51	-0.00					

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117  0.36  C.00  4.00  4.46  3.00  3.00  0.00  2.29  0.00        -0.00 -0.93

          33  1.25  0.36  7.00  4.00  5.13  7.26  4.46  5.06  4.00  3.00  3.54  0.00  2.00  0.00      -1.03 -0.10

118  0.05  0.00  7.00  7.26  4.00  4.00  0.00  4.41  0.61         0.48  0.74
119  0.42  0.00  6.00  4.26  4.00  4.00  0.00  1.13  0.00        -2.90 -1.03
120  0.42  0.00  5.00  4.26  3.50  3.50  0.00  2.29  0.00         0.51 -0.00
121  0.36  C.00  4.00  4.46  3.00  3.00  0.00  2.29  0.00        -0.00 -0.49

          34  1.25  0.36  7.00  4.30  5.13  7.26  4.46  5.06  4.00  3.00  3.54  0.00  2.21  0.00       0.09 -0.00

122  0.05  0.00  6.00  7.26  4.00  4.00  0.00  3.41  0.50         0.33  0.67
123  0.42  0.00  5.00  4.26  4.00  4.00  0.00  1.13  0.00        -2.02 -1.03
124  0.42  0.00  4.00  4.26  3.50  3.50  0.00  2.29  0.00         0.51 -0.00
125  0.36  0.00  3.00  4.46  3.00  3.00  0.00  2.29  0.00        -0.00 -0.71

          35  1.25  0.36  6.00  3.30  4.13  7.26  4.46  5.06  4.00  3.00  3.54  0.00  2.21  0.00       0.00 -0.17

126  0.05  C.00  6.00  7.26  3.00  3.00  0.00  3.91  0.56         0.41  0.71
127  0.42  0.00  5.00  4.26  3.00  3.00  0.00  1.13  0.00        -2.46 -2.58

          36  0.47  0.42  6.00  5.00  5.11  7.26  4.26  5.76  3.00  3.00  3.00  0.00  2.58  0.00       0.15 -0.47

128  0.42  0.00  2.00  4.26  3.00  3.00  0.00  4.04  0.61         0.72  0.49
129  0.63  0.00  1.00  3.68  3.00  3.00  0.00  2.04  0.00        -0.98 -0.34
130  0.63  0.00  2.00  3.68  3.33  3.33  0.00  2.73  0.00         0.25 -1.47

          37  1.67  0.63  2.00  2.00  1.63  4.26  3.68  3.87  3.00  3.33  3.12  0.00  3.79  0.00       0.32 -0.91

131  0.63  0.00  7.00  3.68  3.66  3.66  0.00  6.73  0.45         0.59  0.30
132  1.25  0.63 10.00  2.68  4.00  4.00  0.00  4.73  0.00        -0.42 -1.68

          38  1.87  1.25  7.00 10.00  9.00  3.68  2.68  3.18  3.66  4.00  3.89  0.00  7.24  0.00       0.48 -0.17


                 12  9.37  1.87  5.16  9.00  5.15  3.94  3.18  4.31  3.42  3.89  3.49  0.00  2.54  0.00      -2.52 -0.99

133  0.36  0.00  3.00  4.46  4.00  4.00  0.00 12.69  0.62         0.63  0.61
134  0.05  0.00  7.00  7.26  4.00  4.00  0.00  4.91  0.00        -1.58  0.77
135  0.42  0.00  6.00  4.26  4.00  4.00  0.00  1.13  0.00        -3.35 -2.69

          39  0.83  0.42  3.00  6.00  4.75  4.46  4.26  5.33  4.00  4.00  4.00  0.00  8.50  0.37       0.15  0.59

136  0.42  C.00  3.00  4.26  3.75  3.75  0.00  4.17  0.60         0.73  0.48
137  1.25  0.00  2.00  2.68  3.50  3.50  0.00  2.17  0.00        -0.92 -6.04
138  1.25  0.42 14.00  2.68  3.25  3.25  0.00 15.25  0.00         0.86 -0.05

          40  2.92  1.25  3.00 14.00  7.29  4.26  2.68  3.21  3.75  3.25  3.43  0.00  3.49  0.00      -1.43 -1.76


                 13  3.75  2.92  4.75  7.29  6.72  5.33  3.21  3.68  4.00  3.43  3.56  0.00  5.05  0.00       0.50 -0.19


                          4 16.87  3.75  6.13  6.72  5.72  4.77  3.68  4.27  3.54  3.56  3.52  0.00  7.48  0.00      -0.71  0.47

139  0.36  0.00  3.00  4.46  3.00  3.00  0.00 15.98  0.40         0.05  0.76
140  0.05  0.00  6.00  7.26  3.00  3.00  0.00  3.91  0.00        -3.09  0.71
141  0.42  0.00  5.00  4.26  3.00  3.00  0.00  1.13  0.00        -2.46 -2.58

          41  0.83  0.42  3.00  5.00  4.19  4.46  4.26  5.33  3.00  3.00  3.00  0.00  9.65  0.65       0.64  0.65
```

```
142  0.42  0.00  2.00  4.26  3.00  3.00  0.00  4.04  0.61        0.72  0.49
143  0.63  0.00  1.00  3.68  3.00  3.00  0.00  2.04  0.00       -0.98 -0.34
144  0.63  0.00  2.00  3.68  3.33  3.33  0.00  2.73  0.00        0.25 -1.47

         42  1.67  0.63  2.00  2.00  1.63  4.26  3.68  3.87  3.00  3.33  3.12  0.00  3.33  0.00      -1.89 -1.09

145  0.63  0.00  7.00  3.68  3.66  3.66  0.00  6.73  0.45        0.59  0.30
146  0.63  0.31 10.00  3.68  4.00  4.00  0.00  4.73  0.00       -0.42 -1.19

         43  1.25  0.63  7.00 10.00  8.50  3.68  3.68  3.68  3.66  4.00  3.83  0.00  6.98  0.00       0.52 -0.04

              14  3.75  1.25  4.19  8.50  4.49  5.33  3.68  4.13  3.00  3.83  3.33  0.00  6.00  0.21       0.16  0.26

147  0.36  0.00  3.00  4.46  3.00  3.00  0.00 10.34  0.53        0.54  0.53
148  0.05  0.00  7.00  7.26  3.00  3.00  0.00  4.91  0.00       -1.11  0.77
149  0.42  0.00  6.00  4.26  3.00  3.00  0.00  1.13  0.00       -3.35 -2.58

         44  0.83  0.42  3.00  6.00  4.75  4.46  4.26  5.33  3.00  3.00  3.00  0.00  7.25  0.29       0.04  0.55

150  0.42  0.00  3.00  4.26  3.00  3.00  0.00  4.04  0.61        0.72  0.49
151  1.25  0.00  2.00  2.68  3.00  3.00  0.00  2.04  0.00       -0.98 -7.52

         45  1.67  1.25  3.00  2.00  2.25  4.26  2.68  3.47  3.00  3.00  3.00  0.00  3.27  0.00      -1.22 -3.34

              15  2.50  1.67  4.75  2.25  3.08  5.33  3.47  4.09  3.00  3.00  3.00  0.00  4.41  0.00      -0.36 -1.74

                    5  6.25  2.50  4.49  3.08  3.92  4.13  4.09  4.11  3.33  3.00  3.20  0.00  3.97  0.00      -0.88 -1.69

  2 40.62  6.25 11.66  3.92  8.00  4.94  4.11  4.54  3.66  3.20  3.53  0.00 12.82  0.00

152  1.88  0.00 16.00  2.09  3.40  4.00  0.00 17.40  0.75        0.88  0.61
153  0.21  0.00 14.00  5.26  4.00  4.00  0.00  6.76  0.00       -1.57  0.63
154  0.21  0.00 12.00  5.26  4.00  4.00  0.00  2.52  0.00       -1.68  0.40
155  0.21  0.00 11.00  5.26  4.00  4.00  0.00  1.52  0.00       -0.66 -0.66
156  1.46  0.21  9.00  2.46  4.00  4.00  0.00  2.52  0.00        0.40 -3.03

         46  3.96  1.46 16.00  9.00 12.84  2.09  2.46  4.07  3.70  4.00  3.86  0.00 14.21  0.62       0.77  0.46

157  0.21  0.00  4.00  5.26  4.00  4.00  0.00 10.17  0.70        0.75  0.65
158  0.21  0.00  7.00  5.26  4.00  4.00  0.00  3.52  0.00       -1.89  0.28
159  0.21  0.00  9.00  5.26  4.00  4.00  0.00  2.52  0.00       -0.40 -0.00
160  0.21  0.00 11.00  5.26  4.00  4.00  0.00  2.52  0.00       -0.00 -0.40

         47  0.83  0.21  4.00 11.00  7.75  5.26  5.26  5.26  4.00  4.00  4.00  0.00  7.66  0.00      -0.85  0.25

161  0.21  0.00 14.00  5.26  4.00  4.00  0.00  3.52  0.25        0.28  0.21
162  0.63  0.00 16.00  3.68  4.50  4.50  0.00  2.77  0.00       -0.27 -0.38

         48  0.83  0.63 14.00 16.00 15.50  5.26  3.68  4.47  4.00  4.50  4.37  0.00  5.73  0.00      -0.34  0.41

163  0.21  0.00 14.00  5.26  4.00  4.00  0.00  3.81  0.31        0.27  0.34
164  0.21  0.00 16.00  5.26  4.00  4.00  0.00  2.52  0.00       -0.51 -0.00
165  0.21  0.00 18.00  5.26  4.00  4.00  0.00  2.52  0.00       -0.00 -0.00
166  0.31  0.00 16.00  4.68  4.00  4.00  0.00  2.52  0.00       -0.00 -0.10
167  0.31  0.00 14.00  4.68  4.00  4.00  0.00  2.78  0.00        0.09 -0.00
```

168	0.31	0.00	12.00	4.68	4.00	4.00	0.00	2.78	0.00	-0.00	0.36					
169	1.77	C.21	11.00	2.18	4.00	4.00	0.00	1.78	0.00	-0.56	-2.90					
49	3.33	1.77	14.00	11.00	12.78	5.26	2.18	4.57	4.00	4.00	4.00	0.00	3.36	0.00	-0.71	-0.18
16	8.96	3.33	12.84	12.78	12.59	4.07	4.57	4.40	3.86	4.00	3.97	0.00	12.10	0.73	0.64	0.82
170	0.21	0.00	12.00	5.26	4.00	4.00	0.00	6.95	0.69	0.74	0.64					
171	0.21	C.00	14.00	5.26	4.00	4.00	0.00	2.52	0.00	-1.76	0.40					
172	0.21	0.00	15.00	5.26	4.00	4.00	0.00	1.52	0.00	-0.66	-0.00					
173	0.21	C.00	14.00	5.26	4.00	4.00	0.00	1.52	0.00	-0.00	-0.66					
50	0.83	0.21	12.00	14.00	13.75	5.26	5.26	5.26	4.00	4.00	4.00	0.00	3.96	0.28	0.15	0.42
174	0.21	0.00	12.00	5.26	4.00	4.00	0.00	2.52	0.40	0.40	0.40					
175	0.21	C.00	11.00	5.26	4.00	4.00	0.00	1.52	0.00	-0.66	-0.00					
176	0.21	0.00	12.00	5.26	4.00	4.00	0.00	1.52	0.00	-0.00	-1.32					
51	0.62	0.21	12.00	12.00	11.67	5.26	5.26	5.26	4.00	4.00	4.00	0.00	2.30	0.00	-0.72	-0.63
177	0.21	0.00	15.00	5.26	4.00	4.00	0.00	3.52	0.43	0.57	0.28					
178	0.21	0.00	17.00	5.26	4.00	4.00	0.00	2.52	0.00	-0.40	-0.00					
179	0.21	0.00	15.00	5.26	4.00	4.00	0.00	2.52	0.00	-0.00	-0.40					
52	0.62	0.21	15.00	15.00	15.67	5.26	5.26	5.26	4.00	4.00	4.00	0.00	3.76	0.00	0.39	-0.25
180	0.21	0.00	12.00	5.26	4.00	4.00	0.00	3.52	0.43	0.28	0.57					
181	0.16	0.00	11.00	5.68	4.00	4.00	0.00	1.52	0.00	-1.32	0.09					
182	0.16	0.00	10.00	5.68	4.00	4.00	0.00	1.39	0.00	-0.09	-0.00					
183	0.16	0.00	9.00	5.68	4.00	4.00	0.00	1.39	0.00	-0.00	-0.72					
184	C.16	0.00	7.00	5.68	4.00	4.00	0.00	2.39	0.00	0.42	-0.84					
185	0.16	0.00	3.00	5.68	4.00	4.00	0.00	4.39	0.00	0.46	-0.00					
186	0.16	0.00	7.00	5.68	4.00	4.00	0.00	4.39	0.00	-0.00	0.46					
187	C.16	0.00	9.00	5.68	4.00	4.00	0.00	2.39	0.00	-0.84	0.42					
188	0.16	0.00	10.00	5.68	4.00	4.00	0.00	1.39	0.00	-0.72	-0.00					
189	1.25	0.42	11.00	2.68	4.00	4.00	0.00	1.39	0.00	-0.00	-6.49					
53	2.71	1.25	12.00	11.00	9.81	5.26	2.68	5.34	4.00	4.00	4.00	0.00	4.69	0.00	0.20	-0.48
190	0.16	0.00	16.00	5.68	4.50	4.50	0.00	10.42	0.82	0.87	0.77					
191	0.16	C.00	14.00	5.68	4.50	4.50	0.00	2.39	0.00	-3.36	-0.00					
192	0.16	0.00	16.00	5.68	4.50	4.50	0.00	2.39	0.00	-0.00	-0.00					
193	0.16	0.00	14.00	5.68	4.50	4.50	0.00	2.39	0.00	-0.00	-0.00					
194	0.16	0.00	16.00	5.68	4.50	4.50	0.00	2.39	0.00	-0.00	-0.00					
195	0.16	0.00	14.00	5.68	4.50	4.50	0.00	2.39	0.00	-0.00	-0.00					
196	0.16	C.00	16.00	5.68	4.50	4.50	0.00	2.39	0.00	-0.00	-0.00					
197	0.16	0.00	14.00	5.68	4.50	4.50	0.00	2.39	0.00	-0.00	-0.42					
198	1.25	0.31	11.00	2.68	4.50	4.50	0.00	3.39	0.00	0.29	-2.92					
54	2.50	1.25	16.00	11.00	13.00	5.68	2.68	5.34	4.50	4.50	4.50	0.00	6.93	0.00	0.32	-0.12
199	0.16	0.00	19.00	5.68	5.00	5.00	0.00	13.28	0.82	0.74	0.90					
200	0.16	0.00	18.00	5.68	5.00	5.00	0.00	1.39	0.00	-8.55	-0.00					
201	0.16	0.00	19.00	5.68	5.00	5.00	0.00	1.39	0.00	-0.00	-0.00					
2C2	0.16	0.00	18.00	5.68	5.00	5.00	0.00	1.39	0.00	-0.00	-0.00					
203	0.16	0.00	19.00	5.68	5.00	5.00	0.00	1.39	0.00	-0.00	-0.00					
204	0.16	0.00	18.00	5.68	5.00	5.00	0.00	1.39	0.00	-0.00	-0.00					
205	0.16	0.00	19.00	5.68	5.00	5.00	0.00	1.39	0.00	-0.00	-0.00					
2C6	C.16	0.00	18.00	5.68	5.00	5.00	0.00	1.39	0.00	-0.00	-4.31					

```
207  1.09  0.31 11.00  2.87  5.00  5.00  0.00  7.39  0.00        0.81 -0.59

          55  2.34  1.09 19.00 11.00 15.00  5.68  2.87  5.37  5.00  5.00  5.00  0.00  7.77  0.00        0.11 -0.27

                    17  9.64  2.34 13.75 15.00 12.74  5.26  5.37  5.33  4.00  5.00  4.37  0.00  2.15  0.00      -4.62 -3.49

                               6 18.59  9.64 12.59 12.74 12.67  4.40  5.33  4.88  3.97  4.37  4.18  0.00 10.67  0.36       0.63  0.10

208  0.05  0.00 18.00  7.26  4.50  4.50  0.00 11.77  0.63        0.37  0.88
209  0.05  0.00 19.00  7.26  5.00  5.00  0.00  1.38  0.00       -7.52 -0.72
210  0.05  0.00 21.00  7.26  5.50  5.50  0.00  2.38  0.00        0.42 -0.00
211  5.00  1.25 23.00  0.68  6.00  4.00  0.00  2.38  0.00       -0.00 -6.14

          56  5.16  5.00 18.00 23.00 22.89  7.26  0.68  5.62  4.50  5.00  5.00  0.00  9.83  0.17        0.21  0.13

212  2.19  0.00 23.00  1.87  5.50  4.50  0.00 17.00  0.74        0.86  0.61
213  0.16  0.00 22.00  5.68  4.50  4.50  0.00  6.59  0.00       -1.58  0.60
214  0.16  0.00 24.00  5.68  5.00  5.00  0.00  2.64  0.00       -1.50 -0.43

          57  2.50  0.16 23.00 24.00 23.00  1.87  5.68  4.41  5.00  5.00  4.97  0.00  8.56  0.00       -0.15  0.65

215  0.94  0.00 21.00  3.09  6.00  5.00  0.00  3.77  0.19        0.30  0.08
216  0.16  0.00 20.00  5.68  5.00  5.00  0.00  3.47  0.00       -0.09  0.24
217  0.16  0.00 22.00  5.68  5.50  5.50  0.00  2.64  0.00       -0.31 -0.38

          58  1.25  0.16 21.00 22.00 21.00  3.09  5.68  4.82  5.50  5.50  5.44  0.00  3.00  0.00       -1.85 -0.38

218  0.31  0.00 19.00  4.68  6.00  6.00  0.00  3.64  0.39        0.27  0.51
219  0.31  0.00 18.00  4.68  6.00  6.00  0.00  1.78  0.00       -1.04 -0.00
220  0.31  0.00 17.00  4.68  6.00  6.00  0.00  1.78  0.00       -0.00 -1.12
221  0.47  0.16 14.00  4.09  6.00  6.00  0.00  3.78  0.00        0.53 -2.19

          59  1.41  0.47 19.00 14.00 16.67  4.68  4.09  4.53  6.00  6.00  6.00  0.00  4.13  0.00        0.27 -1.33

                    18 10.31  1.41 22.89 16.67 21.84  5.62  4.53  5.08  5.00  6.00  5.18  0.00  9.66  0.64        0.78  0.50

222  1.56  0.00 23.00  2.36  6.00  6.00  0.00 12.06  0.56        0.69  0.43
223  0.26  0.00 26.00  4.94  6.00  6.00  0.00  6.91  0.00       -0.75  0.47
224  0.05  0.00 29.00  7.26  6.00  6.00  0.00  3.65  0.00       -0.89  0.42
225  0.31  0.00 27.00  4.68  6.00  6.00  0.00  2.13  0.00       -0.71  0.16
226  0.31  0.00 26.00  4.68  6.00  6.00  0.00  1.78  0.00       -0.20 -1.19
227  2.19  0.00 23.00  1.87  6.00  5.00  0.00  3.91  0.00        0.54 -0.75

          60  4.69  2.19 23.00 23.00 23.70  2.36  1.87  4.30  6.00  5.50  5.77  0.00  9.61  0.57        0.57  0.57

228  0.16  0.00 22.00  5.68  4.50  4.50  0.00  6.84  0.54        0.43  0.65
229  0.16  0.00 24.00  5.68  4.50  4.50  0.00  2.39  0.00       -1.86 -0.47

          61  0.31  0.16 22.00 24.00 23.00  5.68  5.68  5.68  4.50  4.50  4.50  0.00  4.09  0.00       -1.35  0.32

230  0.94  0.00 21.00  3.09  5.00  4.00  0.00  3.52  0.17        0.32  0.01
231  0.16  0.00 20.00  5.68  4.00  4.00  0.00  3.47  0.00       -0.01  0.31
232  0.16  0.00 22.00  5.68  4.00  4.00  0.00  2.39  0.00       -0.45 -0.42

          62  1.25  0.16 21.00 22.00 21.00  3.09  5.68  4.82  4.50  4.00  4.38  0.00  2.79  0.00       -0.47 -0.51

233  0.31  0.00 19.00  4.68  4.00  4.00  0.00  3.39  0.37        0.29  0.44
```

```
234  0.31  0.00 18.00  4.68  3.75  3.75  0.00  1.91  0.00       -0.78 -0.00
235  0.31  0.00 17.00  4.68  3.50  3.50  0.00  1.91  0.00       -0.00 -1.05
236  0.63  0.31 14.00  3.68  3.25  3.25  0.00  3.91  0.00        0.51 -0.58

        63  1.56  0.63 19.00 14.00 16.40  4.68  3.68  4.43  4.00  3.25  3.55  0.00  4.20  0.00      0.34 -0.41

               19  7.81  1.56 23.70 16.40 21.78  4.30  4.43  4.46  5.77  3.55  5.05  0.00  4.87  0.00      -0.99 -1.22

                     7 18.12  7.81 21.84 21.78 21.81  5.08  4.46  4.81  5.18  5.05  5.12  0.00  9.64  0.00      -0.11 -0.46

237  0.21  0.00 11.00  5.26  3.00  3.00  0.00  6.16  0.56        0.37  0.75
238  0.21  0.00 10.00  5.26  3.00  3.00  0.00  1.52  0.00       -3.05 -0.66
239  0.21  0.00 12.00  5.26  3.00  3.00  0.00  2.52  0.00        0.40 -0.50

        64  0.62  0.21 11.00 12.00 11.00  5.26  5.26  5.26  3.00  3.00  3.00  0.00  5.92  0.39      0.29  0.49

240  0.21  0.00  9.00  5.26  3.50  3.50  0.00  3.77  0.46        0.33  0.60
241  0.21  0.00  8.00  5.26  3.50  3.50  0.00  1.52  0.00       -1.48 -0.66
242  0.21  0.00 10.00  5.26  3.50  3.50  0.00  2.52  0.00        0.40 -0.50

        65  0.62  0.21  9.00 10.00  9.00  5.26  5.26  5.26  3.50  3.50  3.50  0.00  3.01  0.00     -0.97 -0.39

243  0.31  0.00  7.00  4.68  4.00  4.00  0.00  3.77  0.41        0.33  0.49
244  0.31  0.00  6.00  4.68  3.75  3.75  0.00  1.91  0.00       -0.98 -0.00
245  0.31  0.00  5.00  4.68  3.50  3.50  0.00  1.91  0.00       -0.00 -1.05
246  0.63  0.31  2.00  3.68  3.25  3.25  0.00  3.91  0.00        0.51 -2.11

        66  1.56  0.63  7.00  2.00  4.40  4.68  3.68  4.43  4.00  3.25  3.55  0.00  4.20  0.00      0.28 -1.27

               20  2.81  1.56 11.00  4.40  6.89  5.26  4.43  4.80  3.00  3.55  3.42  0.00 10.81  0.48      0.55  0.41

247  0.21  0.00 11.00  5.26  3.00  3.00  0.00 12.16  0.78        0.68  0.87
248  0.21  0.00 10.00  5.26  3.00  3.00  0.00  1.52  0.00       -6.99 -0.66
249  0.21  0.00 12.00  5.26  3.00  3.00  0.00  2.52  0.00        0.40 -0.50

        67  0.62  0.21 11.00 12.00 11.00  5.26  5.26  5.26  3.00  3.00  3.00  0.00  9.52  0.62      0.56  0.68

250  0.21  0.00  9.00  5.26  3.50  3.50  0.00  3.77  0.46        0.33  0.60
251  0.21  0.00  8.00  5.26  3.50  3.50  0.00  1.52  0.00       -1.48 -0.66
252  0.21  0.00 10.00  5.26  3.50  3.50  0.00  2.52  0.00        0.40 -0.50

        68  0.62  0.21  9.00 10.00  9.00  5.26  5.26  5.26  3.50  3.50  3.50  0.00  3.01  0.00     -2.16 -0.55

               21  1.25  0.62 11.00  9.00 10.00  5.26  5.26  5.26  3.00  3.50  3.25  0.00  6.36  0.00      -0.70  0.10

253  0.31  0.00  7.00  4.68  4.00  4.00  0.00  3.77  0.41        0.33  0.49
254  0.31  0.00  6.00  4.68  3.75  3.75  0.00  1.91  0.00       -0.98 -0.00
255  0.31  0.00  5.00  4.68  3.50  3.50  0.00  1.91  0.00       -0.00 -1.07
256  1.56  0.63  2.00  2.36  3.25  3.00  0.00  3.94  0.00        0.52 -0.59

        69  2.50  1.56  7.00  2.00  3.50  4.68  2.36  4.10  4.00  3.13  3.36  0.00  4.67  0.29      0.36  0.23

257  0.36  0.00  2.00  4.46  3.00  3.00  0.00  6.25  0.21        0.37  0.05
258  0.05  0.00  7.00  7.26  3.00  3.00  0.00  5.91  0.00       -0.06  0.81
259  0.42  0.00  6.00  4.26  3.00  3.00  0.00  1.13  0.00       -4.23 -0.81
260  0.42  0.00  5.00  4.26  3.00  3.00  0.00  2.04  0.00        0.45 -0.98
```

```
261  2.92  0.21  2.00  1.46  3.00  3.00  0.00  4.04  0.00        0.49 -3.15

        70  4.17  2.92  2.00  2.00  2.76  4.46  1.46  4.34  3.00  3.00  3.00  0.00  3.58  0.00     -0.30 -1.48

262  0.42  0.00 10.00  4.26  3.40  3.40  0.00 16.76  0.79        0.76  0.81
263  0.42  0.00  8.00  4.26  3.20  3.20  0.00  3.14  0.00       -4.34 -1.27
264  2.50  0.63  2.00  1.68  3.00  3.00  0.00  7.14  0.00        0.56 -1.62

        71  3.33  2.50 10.00  2.00  3.75  4.26  1.68  3.40  3.40  3.00  3.07  0.00  8.89  0.00      0.60 -0.53

               22 10.00  3.33  3.50  3.75  3.28  4.10  3.40  3.97  3.36  3.07  3.11  0.00  5.73  0.00     -0.11 -0.49

265  2.50  0.00 12.00  1.68  3.00  4.00  0.00 18.69  0.64        0.62  0.66
266  1.77  0.00 12.00  2.18  4.00  3.50  0.00  6.31  0.00       -1.96 -0.04

        72  4.27  1.77 12.00 12.00 12.00  1.68  2.18  1.93  3.50  3.75  3.60  0.00 13.60  0.38      0.35  0.42

267  0.52  0.00 10.00  3.94  3.30  3.30  0.00  6.59  0.27        0.04  0.49
268  0.52  0.00  8.00  3.94  3.20  3.20  0.00  3.35  0.00       -0.97 -0.00
269  0.52  0.00  6.00  3.94  3.10  3.10  0.00  3.35  0.00       -0.00 -0.00
270  0.52  0.21  4.00  3.94  3.00  3.00  0.00  3.35  0.00       -0.00  0.16
271  0.21  0.00  4.00  5.26  3.50  3.50  0.00  2.82  0.00       -0.19 -0.09
272  5.21  0.00  2.00  0.62  3.00  0.50  0.00  3.08  0.00        0.00  0.00

        73  7.50  5.21 10.00  2.00  3.44  3.94  0.62  3.61  3.30  1.75  2.19  0.00  7.93  0.00      0.00  0.00

               23 11.77  7.50 12.00  3.44  6.55  1.93  3.61  3.00  3.60  2.19  2.70  0.00  8.54  0.00      0.00  0.00

                      8 25.83 11.77  6.89  6.55  5.49  4.80  3.00  3.68  3.42  2.70  2.97  0.00 14.11  0.00      0.00  0.00

  3 62.55 25.83 12.67  5.49 12.35  4.88  3.68  4.37  4.18  2.97  3.95  0.00 10.67  0.00

CORE USAGE      OBJECT CODE=   10568 BYTES,ARRAY AREA=   72180 BYTES,TOTAL AREA AVAILABLE=  444416  BYTES

DIAGNOSTICS       NUMBER OF ERRORS=       0, NUMBER OF WARNINGS=       0, NUMBER OF EXTENSIONS=       0

COMPILE TIME=     0.77 SEC,EXECUTION TIME=     7.13 SEC,     15.16.52     TUESDAY       8 AUG 78    WATFIV - JAN 1976 V1L5

       C$STOP
```

N	DUR	RST	PITCH	A1	A2	TMBR
1	2.40	0.00	13.00	2.00	3.00	0.00
2	3.00	0.00	20.00	3.00	5.00	0.00
3	0.60	0.00	23.00	5.00	5.00	0.00
4	1.80	0.00	21.00	5.00	4.50	0.00
5	0.60	0.00	16.00	4.50	4.50	0.00
6	1.80	0.00	21.00	4.50	4.00	0.00
7	0.60	0.00	15.00	4.00	3.80	0.00
8	0.60	0.00	20.00	3.80	3.60	0.00
9	0.60	0.00	13.00	3.60	3.40	0.00
10	1.80	0.00	18.00	3.40	2.80	0.00
11	0.60	0.00	20.00	2.80	2.60	0.00
12	2.40	C.00	18.00	2.60	2.30	0.00
13	2.40	0.30	16.00	2.30	2.00	0.00
14	0.40	0.00	15.00	2.00	2.00	0.00
15	0.40	0.00	13.00	2.00	2.00	0.00
16	0.40	0.00	11.00	2.00	2.00	0.00
17	2.40	0.00	18.00	2.00	2.00	0.00
18	1.20	0.00	15.00	2.00	2.40	0.00
19	0.40	0.00	11.00	2.40	2.40	0.00
20	0.40	0.00	10.00	2.60	2.60	0.00
21	0.40	0.00	9.00	2.80	2.80	0.00
22	2.40	0.00	16.00	3.00	4.00	0.00
23	1.20	0.00	13.00	4.00	5.00	0.00
24	0.40	0.00	9.00	5.00	5.00	0.00
25	0.40	0.00	8.00	5.00	5.00	0.00
26	0.40	0.00	7.00	5.00	5.00	0.00
27	2.10	0.00	15.00	5.00	4.00	0.00
28	0.30	0.00	18.00	4.00	4.00	0.00
29	2.40	0.00	16.00	4.00	2.00	0.00
30	2.40	0.00	15.00	2.00	4.00	0.00
31	6.00	0.60	14.00	5.00	2.00	0.00
32	2.40	0.00	13.00	2.00	3.00	0.00
33	3.C0	0.00	20.00	3.00	5.00	0.00
34	0.60	0.00	23.00	5.00	5.00	0.00
35	1.80	0.00	21.00	5.00	4.50	0.00
36	0.60	0.00	16.00	4.50	4.50	0.00
37	1.80	0.00	21.00	4.50	4.00	0.00
38	0.60	0.00	15.00	4.00	3.80	0.00
39	0.60	0.00	20.00	3.80	3.60	0.00
40	0.60	0.00	14.00	3.60	3.40	0.00
41	1.80	0.00	20.00	3.40	2.80	0.00
42	0.60	0.00	13.00	2.80	2.60	0.00
43	1.80	0.00	18.00	2.60	2.30	0.00
44	0.60	0.00	12.00	2.30	2.30	0.00
45	1.80	0.00	18.00	2.30	2.00	0.00
46	0.60	0.00	11.00	2.00	2.00	0.00
47	2.40	0.00	16.00	2.00	3.50	0.00
48	3.00	0.00	9.00	3.50	5.00	0.00
49	0.60	0.00	6.00	5.00	5.00	0.00
50	1.80	0.00	8.00	5.00	4.50	0.00
51	0.60	0.00	13.00	4.50	4.50	0.00
52	1.80	0.00	8.00	4.00	3.00	0.00
53	0.60	0.00	14.00	3.00	3.00	0.00
54	1.80	0.00	8.00	3.00	2.50	0.00
55	0.60	0.00	15.00	2.50	2.50	0.00
56	0.60	0.00	9.00	2.50	2.25	0.00
57	0.60	0.00	16.00	2.25	2.00	0.00
58	1.80	0.00	15.00	2.00	2.00	0.00

Input data : Wagner

59	0.60	0.00	9.00	2.00	2.00	0.00
60	1.60	0.00	14.00	2.00	2.00	0.00
61	0.40	0.00	8.00	2.00	2.00	0.00
62	0.40	0.00	16.00	2.00	2.00	0.00
63	1.80	0.00	15.00	2.00	2.00	0.00
64	0.60	0.00	9.00	2.00	2.00	0.00
65	1.60	0.00	14.00	2.00	2.50	0.00
66	0.40	0.00	8.00	2.50	2.50	0.00
67	0.40	0.00	16.00	2.50	2.50	0.00
68	0.60	0.00	15.00	2.50	2.50	0.00
69	0.60	0.00	9.00	2.50	3.00	0.00
70	0.40	0.00	14.00	3.00	3.00	0.00
71	0.40	0.00	8.00	3.00	3.50	0.00
72	0.40	0.00	16.00	3.50	4.00	0.00
73	0.60	0.00	15.00	4.00	3.50	0.00
74	0.60	0.00	9.00	3.50	3.50	0.00
75	0.40	0.00	14.00	3.50	3.00	0.00
76	0.40	0.00	8.00	3.00	2.50	0.00
77	0.40	0.00	16.00	2.50	2.00	0.00
78	4.80	0.00	15.00	2.00	4.00	0.00
79	5.20	0.20	20.00	4.00	6.00	0.00
80	0.40	0.00	18.00	6.00	6.00	0.00
81	0.40	0.00	16.00	6.00	6.00	0.00
82	2.40	0.00	23.00	6.00	6.00	0.00
83	1.20	0.00	20.00	6.00	6.00	0.00
84	0.40	0.00	16.00	6.00	6.00	0.00
85	0.40	0.00	15.00	6.00	6.00	0.00
86	0.40	0.00	14.00	6.00	6.00	0.00
87	0.80	0.00	22.00	6.00	5.00	0.00
88	0.40	0.00	19.00	5.00	5.00	0.00
89	0.40	0.00	15.00	5.00	4.50	0.00
90	0.40	0.00	14.00	4.50	4.00	0.00
91	0.40	0.00	13.00	4.00	3.50	0.00
92	0.80	0.00	21.00	3.50	2.50	0.00
93	0.40	0.00	18.00	2.50	2.00	0.00
94	0.40	0.00	14.00	2.00	2.00	0.00
95	0.40	0.00	13.00	2.00	2.00	0.00
96	0.40	0.00	12.00	2.00	2.00	0.00
97	2.40	0.00	20.00	2.00	2.50	0.00
98	1.20	0.00	16.00	2.50	3.00	0.00
99	0.40	0.00	13.00	3.00	3.00	0.00
100	0.40	0.00	12.00	3.00	3.00	0.00
101	0.40	0.00	11.00	3.00	3.00	0.00
102	0.80	0.00	18.00	3.00	3.50	0.00
103	0.40	0.00	15.00	3.50	4.00	0.00
104	0.40	0.00	11.00	4.00	4.00	0.00
105	0.40	0.00	10.00	4.00	4.00	0.00
106	0.40	0.00	9.00	4.00	4.00	0.00
107	0.80	0.00	16.00	4.00	4.50	0.00
108	0.40	0.00	13.00	4.50	5.00	0.00
109	0.40	0.00	9.00	5.00	5.00	0.00
110	0.40	0.00	8.00	5.00	5.00	0.00
111	0.40	0.00	7.00	5.00	5.00	0.00
112	4.80	0.00	15.00	5.00	5.00	0.00
113	3.00	0.00	8.00	5.00	5.00	0.00
114	0.60	0.00	20.00	5.00	5.00	0.00
115	3.00	0.00	15.00	5.00	3.00	0.00
116	1.20	0.00	8.00	3.00	2.50	0.00
117	0.60	0.00	20.00	2.50	2.00	0.00
118	1.60	0.00	15.00	2.00	2.00	0.00

119	0.40	0.00	8.00	2.00	2.00	0.00
120	0.40	0.00	20.00	2.00	2.00	0.00
121	1.60	0.00	15.00	2.00	2.00	0.00
122	0.40	0.00	8.00	2.00	2.00	0.00
123	0.40	0.00	20.00	2.00	2.00	0.00
124	0.40	0.00	15.00	2.00	2.00	0.00
125	0.40	0.00	8.00	2.00	2.00	0.00
126	0.40	0.00	20.00	2.00	2.00	0.00
127	0.40	0.00	15.00	2.50	2.50	0.00
128	0.40	0.00	8.00	2.50	2.50	0.00
129	0.40	0.00	20.00	2.50	2.50	0.00
130	0.40	0.00	15.00	3.00	3.00	0.00
131	0.40	0.00	8.00	3.00	3.00	0.00
132	0.40	0.00	20.00	3.00	3.00	0.00
133	5.20	0.20	14.00	4.00	2.50	0.00
134	0.40	0.00	21.00	2.50	2.00	0.00
135	0.40	0.00	13.00	2.00	2.00	0.00
136	1.60	0.00	12.00	2.00	2.00	0.00
137	0.40	0.00	8.00	2.00	2.50	0.00
138	0.40	0.00	20.00	2.50	3.00	0.00
139	1.60	0.00	14.00	3.50	3.00	0.00
140	0.40	0.00	21.00	3.00	2.50	0.00
141	0.40	0.00	13.00	2.50	2.00	0.00
142	0.40	0.00	12.00	2.00	2.00	0.00
143	0.40	0.00	8.00	2.00	2.50	0.00
144	0.40	0.00	20.00	2.50	3.00	0.00
145	0.40	0.00	14.00	3.50	3.00	0.00
146	0.40	0.00	21.00	3.00	3.00	0.00
147	0.40	0.00	13.00	3.00	3.00	0.00
148	0.40	0.00	12.00	3.00	3.00	0.00
149	0.40	0.00	8.00	3.00	3.50	0.00
150	0.40	0.00	20.00	3.50	4.00	0.00
151	0.40	0.00	14.00	4.50	4.00	0.00
152	0.40	0.00	21.00	4.00	4.00	0.00
153	0.40	0.00	13.00	4.00	4.00	0.00
154	0.40	0.00	12.00	4.00	4.00	0.00
155	0.40	0.00	8.00	4.00	4.50	0.00
156	0.40	0.00	20.00	4.50	5.00	0.00
157	0.40	0.00	14.00	5.50	5.00	0.00
158	0.40	0.00	21.00	5.00	5.00	0.00
159	0.40	0.00	13.00	5.00	5.00	0.00
160	0.40	0.00	12.00	5.00	4.50	0.00
161	0.40	0.00	8.00	4.50	4.50	0.00
162	0.40	0.00	20.00	4.50	4.50	0.00
163	0.40	0.00	12.00	4.50	4.00	0.00
164	0.40	0.00	8.00	4.00	4.00	0.00
165	0.40	0.00	20.00	4.00	4.00	0.00
166	1.60	0.00	15.00	4.00	3.50	0.00
167	0.40	0.00	8.00	3.50	3.00	0.00
168	0.40	0.00	20.00	3.00	3.00	0.00
169	1.60	0.00	15.00	3.00	2.50	0.00
170	0.40	0.00	8.00	2.50	2.00	0.00
171	0.40	0.00	20.00	2.00	2.00	0.00
172	5.20	0.20	14.00	2.00	3.00	0.00
173	0.40	0.00	13.00	3.00	3.00	0.00
174	0.40	0.00	12.00	3.00	3.00	0.00
175	2.40	0.00	20.00	3.50	3.50	0.00
176	1.20	0.00	16.00	3.50	4.00	0.00
177	2.40	0.00	13.00	4.00	5.00	0.00
178	3.00	0.00	6.00	5.00	5.00	0.00

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179    0.60    0.00    9.00    5.00    5.00    0.00
180    1.80    0.00    8.00    5.00    4.50    0.00
181    0.60    0.00   13.00    4.50    4.50    0.00
182    1.80    0.00    8.00    4.50    4.00    0.00
183    0.60    0.00    9.00    4.00    4.00    0.00
184    1.80    0.00    4.00    4.00    3.00    0.00
185    0.60    0.00    6.00    3.00    3.00    0.00
186    2.40    0.00    8.00    3.00    2.00    0.00
187    2.40    0.00    4.00    2.00    3.00    0.00
188    0.90    0.00    3.00    3.00    4.00    0.00
189    0.30    0.00    1.00    4.00    5.00    0.00
190    4.80    0.00    1.00    5.00    1.00    0.00

WEIGHTINGS: PROXIMITY= 1.00 PITCH= 0.03 INTENSITY= 1.00 TEMPORAL DENSITY= 0.00 TIMBRE= 0.00
```

Output data : Wagner

```
  1  1.50  0.00 13.00  2.42  2.00  3.00  0.00  0.00  0.00        0.00  0.00
  2  1.88  0.00 20.00  2.09  3.00  5.00  0.00  8.33  0.00        0.00  0.00

        1  3.38  1.88 13.00 20.00 16.89  2.42  2.09  2.25  2.50  4.00  3.33  0.00  0.00  0.00     0.00  0.00

  3  0.38  0.00 23.00  4.42  5.00  5.00  0.00  9.82  0.47        0.15  0.79
  4  1.13  0.00 21.00  2.83  5.00  4.50  0.00  2.03  0.00       -3.84 -1.86

        2  1.50  1.13 23.00 21.00 21.50  4.42  2.83  3.62  5.00  4.75  4.81  0.00  5.71  0.00     0.00  0.00

  5  0.38  0.00 16.00  4.42  4.50  4.50  0.00  5.81  0.64        0.65  0.64
  6  1.13  0.00 21.00  2.83  4.50  4.00  0.00  2.12  0.00       -1.74 -1.78

        3  1.50  1.13 16.00 21.00 19.75  4.42  2.83  3.62  4.50  4.25  4.31  0.00  3.18  0.00    -0.80 -0.08

              1  6.38  1.50 16.89 19.75 18.65  2.25  3.62  2.90  3.33  4.31  3.91  0.00  0.00  0.00     0.00  0.00

  7  0.38  0.00 15.00  4.42  4.00  3.80  0.00  5.89  0.64        0.64  0.64
  8  0.38  0.00 20.00  4.42  3.80  3.60  0.00  2.09  0.00       -1.81 -0.03
  9  0.38  0.00 13.00  4.42  3.60  3.40  0.00  2.15  0.00        0.03 -0.02
 10  1.13  0.00 18.00  2.83  3.40  2.80  0.00  2.19  0.00        0.02 -1.64

        4  2.25  1.13 15.00 18.00 17.00  4.42  2.83  4.02  3.90  3.10  3.40  0.00  3.44  0.04     0.07  0.00

 11  0.38  0.00 20.00  4.42  2.80  2.60  0.00  5.80  0.64        0.62  0.65
 12  1.50  0.00 18.00  2.42  2.60  2.30  0.00  2.03  0.00       -1.86 -2.74
 13  1.50  0.19 16.00  2.42  2.30  2.00  0.00  7.60  0.00        0.73 -0.24

        5  3.38  1.50 20.00 16.00 17.33  4.42  2.42  3.08  2.70  2.15  2.34  0.00  3.42  0.00    -0.00 -0.43

              2  5.63  3.38 17.00 17.33 17.20  4.02  3.08  3.46  3.40  2.34  2.77  0.00  2.30  0.00     0.00  0.00

 14  0.25  0.00 15.00  5.00  2.00  2.00  0.00  9.40  0.53        0.19  0.86
 15  0.25  0.00 13.00  5.00  2.00  2.00  0.00  1.29  0.00       -6.28 -0.00
 16  0.25  0.00 11.00  5.00  2.00  2.00  0.00  1.29  0.00       -0.00 -0.11
 17  1.50  0.00 18.00  2.42  2.00  2.00  0.00  1.44  0.00        0.10 -4.27

        6  2.25  1.50 15.00 18.00 16.33  5.00  2.42  4.35  2.00  2.00  2.00  0.00  4.89  0.21     0.30  0.12
```

```
18  0.75  C.00 15.00  3.42  2.00  2.40  0.00  7.58  0.65        0.81  0.48
19  0.25  C.00 11.00  5.00  2.40  2.40  0.00  3.91  0.00       -0.94  0.63
20  0.25  C.00 10.00  5.00  2.60  2.60  0.00  1.46  0.00       -1.68 -0.00
21  0.25  C.00  9.00  5.00  2.80  2.80  0.00  1.46  0.00       -0.00 -0.29
22  1.50  C.00 16.00  2.42  3.00  4.00  0.00  1.88  0.00        0.23 -3.24

      7  3.00  1.50 15.00 16.00 14.25  3.42  2.42  4.17  2.20  3.50  2.95  0.00  4.29  0.00     -0.14 -0.13

           3  5.25  3.00 15.33 14.25 15.14  4.35  4.17  4.25  2.00  2.95  2.54  0.00  2.58  0.00     0.11 -0.16

23  0.75  C.00 13.00  3.42  4.00  5.00  0.00  7.97  0.63        0.76  0.49
24  0.25  0.00  9.00  5.00  5.00  5.00  0.00  4.06  0.00       -0.96  0.69
25  0.25  C.00  8.00  5.00  5.00  5.00  0.00  1.26  0.00       -2.22 -0.00
26  0.25  0.00  7.00  5.00  5.00  5.00  0.00  1.26  0.00       -0.00 -0.36
27  1.31  0.00 15.00  2.61  5.00  4.00  0.00  1.71  0.00        0.26 -2.97

      8  2.81  1.31 13.00 15.00 12.60  3.42  2.61  4.20  4.50  4.50  4.63  0.00  4.84  0.13      0.11  0.15

28  0.19  0.00 18.00  5.42  4.00  4.00  0.00  6.80  0.77        0.75  0.78
29  1.50  C.00 16.00  2.42  4.00  2.00  0.00  1.48  0.00       -3.61 -4.03
30  1.50  C.00 15.00  2.42  2.00  4.00  0.00  7.42  0.00        0.80 -0.10
31  3.75  C.38 14.00  1.09  5.00  2.00  0.00  8.16  0.00        0.09 -1.68

      9  6.94  3.75 18.00 14.00 14.76  5.42  1.09  2.83  4.00  3.50  3.30  0.00  4.09  0.00     -0.18 -1.68

           4  9.75  6.94 12.60 14.76 14.13  4.20  2.83  3.23  4.63  3.30  3.68  0.00  3.00  0.00     0.14 -0.87

                1 27.00  9.75 18.65 14.13 16.03  2.90  3.23  3.40  3.91  3.68  3.32  0.00  0.00  0.00     0.00  0.00

32  1.50  C.00 13.00  2.42  2.00  3.00  0.00 21.83  0.62        0.63  0.62
33  1.88  0.00 20.00  2.09  3.00  5.00  0.00  8.33  0.00       -1.62 -0.18

     10  3.38  1.88 13.00 20.00 16.89  2.42  2.09  2.25  2.50  4.00  3.33  0.00 10.96  0.55      0.63  0.48

34  0.38  0.00 23.00  4.42  5.00  5.00  0.00  9.82  0.47        0.15  0.79
35  1.13  0.00 21.00  2.83  5.00  4.50  0.00  2.03  0.00       -3.84 -1.86

     11  1.50  1.13 23.00 21.00 21.50  4.42  2.83  3.62  5.00  4.75  4.81  0.00  5.71  0.00     -0.92  0.44

36  0.38  0.00 16.00  4.42  4.50  4.50  0.00  5.81  0.64        0.65  0.64
37  1.13  0.00 21.00  2.83  4.50  4.00  0.00  2.12  0.00       -1.74 -1.78

     12  1.50  1.13 16.00 21.00 19.75  4.42  2.83  3.62  4.50  4.25  4.31  0.00  3.18  0.00     -0.80 -0.08

38  0.38  0.00 15.00  4.42  4.00  3.80  0.00  5.89  0.64        0.64  0.64
39  0.38  0.00 20.00  4.42  3.80  3.60  0.00  2.09  0.00       -1.81 -0.01
40  0.38  0.00 14.00  4.42  3.60  3.40  0.00  2.12  0.00        0.01 -0.05
41  1.13  0.00 20.00  2.83  3.40  2.80  0.00  2.22  0.00        0.04 -1.68

     13  2.25  1.13 15.00 20.00 18.17  4.42  2.83  4.02  3.90  3.10  3.40  0.00  3.42  0.00      0.07 -0.00

           5  8.63  2.25 16.89 18.17 18.52  2.25  4.02  3.19  3.33  3.40  3.78  0.00  5.59  0.54     0.46  0.61

42  0.38  0.00 13.00  4.42  2.80  2.60  0.00  5.95  0.64        0.63  0.64
43  1.13  0.00 18.00  2.83  2.60  2.30  0.00  2.12  0.00       -1.81 -1.73
```

```
        14  1.50  1.13 13.00 18.00 16.75  4.42  2.83  3.62  2.70  2.45  2.51  0.00  3.43  0.06       0.00  0.11

 44  0.38  0.00 12.00  4.42  2.30  2.30  0.00  5.79  0.64        0.63  0.64
 45  1.13  0.00 18.00  2.83  2.30  2.00  0.00  2.10  0.00       -1.76 -1.77

        15  1.50  1.13 12.00 18.00 16.50  4.42  2.83  3.62  2.30  2.15  2.19  0.00  3.06  0.00      -0.12 -0.17

 46  0.38  0.00 11.00  4.42  2.00  2.00  0.00  5.82  0.62        0.64  0.59
 47  1.50  0.00 16.00  2.42  2.00  3.50  0.00  2.36  0.00       -1.46 -2.53
 48  1.88  0.00  9.00  2.09  3.50  5.00  0.00  8.33  0.00        0.72 -0.16

        16  3.75  1.88 11.00  9.00 12.00  4.42  2.09  2.97  2.00  4.25  3.42  0.00  3.59  0.00       0.15 -0.56

               6  6.75  3.75 16.75 12.00 14.06  3.62  2.97  3.26  2.51  3.42  2.95  0.00  2.19  0.00      -1.55 -0.37

                    2 15.38  6.75 18.52 14.06 16.56  3.19  3.26  3.22  3.78  2.95  3.41  0.00  2.85  0.00       0.00  0.00
 49  0.38  0.00  6.00  4.42  5.00  5.00  0.00  9.69  0.47        0.14  0.79
 50  1.13  0.00  8.00  2.83  5.00  4.50  0.00  2.03  0.00       -3.78 -1.86

        17  1.50  1.13  6.00  8.00  7.50  4.42  2.83  3.62  5.00  4.75  4.81  0.00  5.60  0.37       0.36  0.38

 51  0.38  0.00 13.00  4.42  4.50  4.50  0.00  5.81  0.59        0.65  0.53
 52  1.13  0.00  8.00  2.83  4.00  3.00  0.00  2.73  0.00       -1.13 -1.18

        18  1.50  1.13 13.00  8.00  9.25  4.42  2.83  3.62  4.50  3.50  3.75  0.00  3.46  0.00      -0.62  0.00

 53  0.38  0.00 14.00  4.42  3.00  3.00  0.00  5.97  0.59        0.54  0.64
 54  1.13  0.00  8.00  2.83  3.00  2.50  0.00  2.15  0.00       -1.78 -1.73

        19  1.50  1.13 14.00  8.00  9.50  4.42  2.83  3.62  3.00  2.75  2.81  0.00  3.45  0.00      -0.00  0.08

 55  0.38  0.00 15.00  4.42  2.50  2.50  0.00  5.87  0.64        0.63  0.64
 56  0.38  0.00  9.00  4.42  2.50  2.25  0.00  2.09  0.00       -1.81 -0.04

        20  0.75  0.38 15.00  9.00 12.00  4.42  4.42  4.42  2.50  2.38  2.44  0.00  3.16  0.00      -0.09  0.58

 57  0.38  0.00 16.00  4.42  2.25  2.00  0.00  2.18  0.08        0.04  0.11
 58  1.13  0.00 15.00  2.83  2.00  2.00  0.00  1.94  0.00       -0.12 -1.95

        21  1.50  1.13 16.00 15.00 15.25  4.42  2.83  3.62  2.13  2.00  2.03  0.00  1.34  0.00      -1.36 -1.18

               7  6.75  1.50  7.50 15.25 10.56  3.62  3.62  3.71  4.81  2.03  3.25  0.00  3.00  0.28       0.27  0.29

 59  0.38  0.00  9.00  4.42  2.00  2.00  0.00  5.72  0.66        0.66  0.65
 60  1.00  0.00 14.00  3.00  2.00  2.00  0.00  2.00  0.00       -1.87 -1.56

        22  1.38  1.00  9.00 14.00 12.64  4.42  3.00  3.71  2.00  2.00  2.00  0.00  2.91  0.33       0.54  0.12

 61  0.25  0.00  8.00  5.00  2.00  2.00  0.00  5.10  0.66        0.61  0.71
 62  0.25  0.00 16.00  5.00  2.00  2.00  0.00  1.47  0.00       -2.48  0.14
 63  1.13  0.00 15.00  2.83  2.00  2.00  0.00  1.26  0.00       -0.16 -3.54

        23  1.63  1.13  8.00 15.00 14.08  5.00  2.83  4.28  2.00  2.00  2.00  0.00  2.57  0.00      -0.13 -0.15

               8  3.00  1.63 12.64 14.08 13.42  3.71  4.28  4.02  2.00  2.00  2.00  0.00  2.11  0.00      -0.42  0
```

```
64  0.38  0.00  9.00  4.42  2.00  2.00  0.00  5.72  0.70         0.78  0.63
65  1.00  0.00 14.00  3.00  2.00  2.50  0.00  2.12  0.00        -1.70 -1.47

        24  1.38  1.00  9.00 14.00 12.64  4.42  3.00  3.71  2.00  2.25  2.18  0.00  2.97  0.10       0.13  0.06

66  0.25  0.00  8.00  5.00  2.50  2.50  0.00  5.23  0.66         0.59  0.72
67  0.25  0.00 16.00  5.00  2.50  2.50  0.00  1.47  0.00        -2.56  0.14
68  0.38  0.00 15.00  4.42  2.50  2.50  0.00  1.26  0.00        -0.16 -0.70

        25  0.88  0.38  8.00 15.00 13.29  5.00  4.42  4.81  2.50  2.50  2.50  0.00  2.78  0.00      -0.07  0.51

69  0.38  0.00  9.00  4.42  2.50  3.00  0.00  2.15  0.21         0.41  0.01
70  0.25  0.00 14.00  5.00  3.00  3.00  0.00  2.12  0.00        -0.01  0.28
71  0.25  0.00  8.00  5.00  3.00  3.50  0.00  1.53  0.00        -0.38 -0.12

        26  0.88  0.25  9.00  8.00 10.14  4.42  5.00  4.81  2.75  3.25  2.96  0.00  1.35  0.00      -1.06  0.02

72  0.25  0.00 16.00  5.00  3.50  4.00  0.00  1.71  0.19         0.11  0.26
73  0.38  0.00 15.00  4.42  4.00  3.50  0.00  1.26  0.00        -0.36 -0.70

        27  0.63  0.38 16.00 15.00 15.40  5.00  4.42  4.71  3.75  3.75  3.75  0.00  1.32  0.00      -0.02 -0.07

               9  3.75  0.63 12.64 15.40 12.67  3.71  4.71  4.39  2.18  3.75  2.70  0.00  1.84  0.00      -0.15  0.27

74  0.38  0.00  9.00  4.42  3.50  3.50  0.00  2.15  0.21         0.41  0.01
75  0.25  0.00 14.00  5.00  3.50  3.00  0.00  2.12  0.00        -0.01  0.22
76  0.25  0.00  8.00  5.00  3.00  2.50  0.00  1.66  0.00        -0.28 -0.04

        28  0.88  0.25  9.00  8.00 10.14  4.42  5.00  4.81  3.50  2.75  3.21  0.00  1.42  0.06       0.07  0.05

77  0.25  0.00 16.00  5.00  2.50  2.00  0.00  1.71  0.04         0.03  0.05
78  3.00  0.00 15.00  1.42  2.00  4.00  0.00  1.63  0.00        -0.05 -8.76
79  3.25  0.13 20.00  1.30  4.00  6.00  0.00 15.91  0.00         0.90 -0.27

        29  6.50  3.25 16.00 20.00 17.54  5.00  1.30  2.57  2.25  5.00  3.97  0.00  1.34  0.00      -0.06 -7.31

              10  7.38  6.50 10.14 17.54 16.66  4.81  2.57  2.84  3.21  3.97  3.88  0.00  1.35  0.00      -0.37 -3.33

                     3 20.88  7.38 10.56 16.66 13.50  3.71  2.84  3.57  3.25  3.88  3.19  0.00  1.65  0.00      -0.72 -0.96

 1 63.25 20.88 16.03 13.50 15.33  3.40  3.57  3.41  3.32  3.19  3.30  0.00  0.00  0.00

80  0.25  0.00 18.00  5.00  6.00  6.00  0.00 20.13  0.57         0.21  0.94
81  0.25  0.00 16.00  5.00  6.00  6.00  0.00  1.29  0.00       -14.60 -0.11
82  1.50  0.00 23.00  2.42  6.00  6.00  0.00  1.44  0.00         0.10 -4.20

        30  2.00  1.50 18.00 23.00 21.50  5.00  2.42  4.14  6.00  6.00  6.00  0.00 11.12  0.77       0.88  0.65

83  0.75  0.00 20.00  3.42  6.00  6.00  0.00  7.48  0.65         0.81  0.49
84  0.25  0.00 16.00  5.00  6.00  6.00  0.00  3.81  0.00        -0.96  0.67
85  0.25  0.00 15.00  5.00  6.00  6.00  0.00  1.26  0.00        -2.02 -0.00
86  0.25  0.00 14.00  5.00  6.00  6.00  0.00  1.26  0.00        -0.00 -0.36
87  0.50  0.00 22.00  4.00  6.00  5.00  0.00  1.71  0.00         0.26 -0.63

        31  2.00  0.50 20.00 22.00 18.63  3.42  4.00  4.48  6.00  5.50  5.88  0.00  3.84  0.00      -1.89  0.38
```

```
 88  0.25  0.00 19.00  5.00  5.00  5.00  0.00  2.80  0.43       0.39  0.47
 89  0.25  0.00 15.00  5.00  5.00  4.50  0.00  1.47  0.00      -0.90 -0.02
 90  0.25  0.00 14.00  5.00  4.50  4.00  0.00  1.51  0.00       0.02 -0.00
 91  0.25  0.00 13.00  5.00  4.00  3.50  0.00  1.51  0.00      -0.00 -0.22
 92  0.50  0.00 21.00  4.00  3.50  2.50  0.00  1.84  0.00       0.18 -0.59

       32  1.50  0.50 19.00 21.00 17.17  5.00  4.00  4.80  5.00  3.00  3.96  0.00  2.36  0.00     -0.63  0.01

 93  0.25  0.00 18.00  5.00  2.50  2.00  0.00  2.92  0.43       0.37  0.50
 94  0.25  0.00 14.00  5.00  2.00  2.00  0.00  1.47  0.00      -0.98  0.14
 95  0.25  0.00 13.00  5.00  2.00  2.00  0.00  1.26  0.00      -0.17 -0.00
 96  0.25  0.00 12.00  5.00  2.00  2.00  0.00  1.26  0.00      -0.00 -0.26
 97  1.50  0.00 20.00  2.42  2.00  2.50  0.00  1.59  0.00       0.21 -3.87

       33  2.50  1.50 18.00 20.00 17.70  5.00  2.42  4.48  2.25  2.25  2.17  0.00  2.35  0.00     -0.01 -0.84

             11  8.00  2.50 21.50 17.70 18.78  4.14  4.48  4.46  6.00  2.17  4.39  0.00  5.84  0.69      0.77  0.61

 98  0.75  0.00 16.00  3.42  2.50  3.00  0.00  7.75  0.65       0.79  0.50
 99  0.25  0.00 13.00  5.00  3.00  3.00  0.00  3.91  0.00      -0.98  0.68
100  0.25  0.00 12.00  5.00  3.00  3.00  0.00  1.26  0.00      -2.10 -0.00
101  0.25  0.00 11.00  5.00  3.00  3.00  0.00  1.26  0.00      -0.00 -0.24
102  0.50  0.00 18.00  4.00  3.00  3.50  0.00  1.56  0.00       0.19 -0.79

       34  2.00  0.50 16.00 18.00 15.00  3.42  4.00  4.48  2.75  3.25  2.97  0.00  4.31  0.50      0.46  0.55

103  0.25  0.00 15.00  5.00  3.50  4.00  0.00  2.80  0.46       0.44  0.47
104  0.25  0.00 11.00  5.00  4.00  4.00  0.00  1.47  0.00      -0.90  0.14
105  0.25  0.00 10.00  5.00  4.00  4.00  0.00  1.26  0.00      -0.17 -0.00
106  0.25  0.00  9.00  5.00  4.00  4.00  0.00  1.26  0.00      -0.00 -0.24
107  0.50  0.00 16.00  4.00  4.00  4.50  0.00  1.56  0.00       0.19 -0.79

       35  1.50  0.50 15.00 16.00 12.83  5.00  4.00  4.80  3.75  4.25  4.04  0.00  1.96  0.00     -1.20  0.04

108  0.25  0.00 13.00  5.00  4.50  5.00  0.00  2.80  0.46       0.44  0.47
109  0.25  0.00  9.00  5.00  5.00  5.00  0.00  1.47  0.00      -0.90  0.14
110  0.25  0.00  8.00  5.00  5.00  5.00  0.00  1.26  0.00      -0.17 -0.00
111  0.25  0.00  7.00  5.00  5.00  5.00  0.00  1.26  0.00      -0.00 -0.16
112  3.00  0.00 15.00  1.42  5.00  5.00  0.00  1.47  0.00       0.14 -9.21

       36  4.00  3.00 13.00 15.00 13.56  5.00  1.42  4.28  4.75  5.00  4.98  0.00  1.87  0.00     -0.05 -3.12

             12  7.50  4.00 15.00 13.56 13.80  4.48  4.28  4.44  2.97  4.98  4.26  0.00  2.29  0.00     -1.55 -0.92

113  1.88  0.00  8.00  2.09  5.00  5.00  0.00 14.99  0.63       0.90  0.36
114  0.38  0.00 20.00  4.42  5.00  5.00  0.00  9.59  0.00      -0.56  0.74
115  1.88  0.00 15.00  2.09  5.00  3.00  0.00  2.49  0.00      -2.86 -3.04

       37  4.13  1.88  8.00 15.00 12.27  2.09  2.09  2.87  5.00  4.00  4.55  0.00  7.73  0.48      0.76  0.20

116  0.75  0.00  8.00  3.42  3.00  2.50  0.00 10.06  0.66       0.75  0.57
117  0.38  0.00 20.00  4.42  2.50  2.00  0.00  4.30  0.00      -1.34  0.51
118  1.00  0.00 15.00  3.00  2.00  2.00  0.00  2.12  0.00      -1.03 -1.42

       38  2.13  1.00  8.00 15.00 13.41  3.42  3.00  3.61  2.75  2.00  2.31  0.00  6.15  0.00     -0.26  0.55

119  0.25  0.00  8.00  5.00  2.00  2.00  0.00  5.13  0.64       0.59  0.69
```

```
120  0.25   0.00 20.00  5.00  2.00  2.00  0.00  1.59  0.00       -2.24  0.13
121  1.00   0.00 15.00  3.00  2.00  2.00  0.00  1.38  0.00       -0.15 -2.72

       39  1.50  1.00  8.00 15.00 14.67  5.00  3.00  4.33  2.00  2.00  2.00  0.00  2.74  0.00      -1.25  0.06

122  0.25   0.00  8.00  5.00  2.00  2.00  0.00  5.13  0.71        0.73  0.69
123  0.25   0.00 20.00  5.00  2.00  2.00  0.00  1.59  0.00       -2.24  0.13
124  0.25   0.00 15.00  5.00  2.00  2.00  0.00  1.38  0.00       -0.15 -0.04
125  0.25   0.00  8.00  5.00  2.00  2.00  0.00  1.44  0.00        0.04 -0.10
126  0.25   0.00 20.00  5.00  2.00  2.00  0.00  1.59  0.00        0.09 -0.18

       40  1.25  0.25  8.00 20.00 14.20  5.00  5.00  5.00  2.00  2.00  2.00  0.00  2.57  0.00      -0.06  0.54

127  0.25   0.00 15.00  5.00  2.50  2.50  0.00  1.87  0.19        0.15  0.23
128  0.25   0.00  8.00  5.00  2.50  2.50  0.00  1.44  0.00       -0.30 -0.10
129  0.25   0.00 20.00  5.00  2.50  2.50  0.00  1.59  0.00        0.09 -0.18

       41  0.75  0.25 15.00 20.00 14.33  5.00  5.00  5.00  2.50  2.50  2.50  0.00  1.18  0.00      -1.17 -0.09

130  0.25   0.00 15.00  5.00  3.00  3.00  0.00  1.87  0.19        0.15  0.23
131  0.25   0.00  8.00  5.00  3.00  3.00  0.00  1.44  0.00       -0.30 -0.10
132  0.25   0.00 20.00  5.00  3.00  3.00  0.00  1.59  0.00        0.09 -0.28
133  3.25   0.13 14.00  1.30  4.00  2.50  0.00  2.02  0.00        0.22 -8.17

       42  4.00  3.25 15.00 14.00 14.06  5.00  1.30  4.07  3.00  3.25  3.20  0.00  1.29  0.00       0.08 -6.66

           13 13.75  4.00 12.27 14.06 13.52  2.87  4.07  3.80  4.55  3.20  3.19  0.00  4.40  0.00       0.48 -0.18

                4 29.25 13.75 18.78 13.52 15.03  4.46  3.80  4.15  4.39  3.19  3.79  0.00  3.24  0.29       0.49  0.09

134  0.25   0.00 21.00  5.00  2.50  2.00  0.00 18.56  0.90        0.89  0.91
135  0.25   0.00 13.00  5.00  2.00  2.00  0.00  1.59  0.00      -10.66  0.21
136  1.00   0.00 12.00  3.00  2.00  2.00  0.00  1.26  0.00       -0.26 -3.10

       43  1.50  1.00 21.00 12.00 13.67  5.00  3.00  4.33  2.25  2.00  2.04  0.00  9.86  0.78       0.87  0.69

137  0.25   0.00  8.00  5.00  2.00  2.50  0.00  5.17  0.70        0.76  0.65
138  0.25   0.00 20.00  5.00  2.50  3.00  0.00  1.83  0.00       -1.82 -0.04
139  1.00   0.00 14.00  3.00  3.50  3.00  0.00  1.90  0.00        0.04 -1.83

       44  1.50  1.00  8.00 14.00 14.00  5.00  3.00  4.33  2.25  3.25  3.00  0.00  3.06  0.00      -2.22  0.02

140  0.25   0.00 21.00  5.00  3.00  2.50  0.00  5.38  0.66        0.65  0.68
141  0.25   0.00 13.00  5.00  2.50  2.00  0.00  1.71  0.00       -2.14  0.19
142  0.25   0.00 12.00  5.00  2.00  2.00  0.00  1.38  0.00       -0.24 -0.06
143  0.25   0.00  8.00  5.00  2.00  2.50  0.00  1.47  0.00        0.06 -0.24
144  0.25   0.00 20.00  5.00  2.50  3.00  0.00  1.83  0.00        0.20 -0.04

       45  1.25  0.25 21.00 20.00 14.80  5.00  5.00  5.00  2.75  2.75  2.40  0.00  3.00  0.00      -0.02  0.55

145  0.25   0.00 14.00  5.00  3.50  3.00  0.00  1.90  0.11        0.04  0.18
146  0.25   0.00 21.00  5.00  3.00  3.00  0.00  1.56  0.00       -0.22  0.06
147  0.25   0.00 13.00  5.00  3.00  3.00  0.00  1.47  0.00       -0.06  0.14
148  0.25   0.00 12.00  5.00  3.00  3.00  0.00  1.26  0.00       -0.16 -0.17
149  0.25   0.00  8.00  5.00  3.00  3.50  0.00  1.47  0.00        0.14 -0.24
150  0.25   0.00 20.00  5.00  3.50  4.00  0.00  1.83  0.00        0.20 -0.04

       46  1.50  0.25 14.00 20.00 14.67  5.00  5.00  5.00  3.25  3.75  3.21  0.00  1.35  0.00      -1.22 -0.07
```

	14	5.75	1.50	13.67	14.67	14.26	4.33	5.00	4.65	2.04	3.21	2.67	0.00	5.19	0.43	0.15	0.71
151	C.25	0.00	14.00	5.00	4.50	4.00	0.00	1.90	0.11	0.04	0.18						
152	0.25	0.00	21.00	5.00	4.00	4.00	0.00	1.56	0.00	-0.22	0.06						
153	0.25	0.00	13.00	5.00	4.00	4.00	0.00	1.47	0.00	-0.06	0.14						
154	0.25	0.00	12.00	5.00	4.00	4.00	0.00	1.26	0.00	-0.16	-0.17						
155	0.25	0.00	8.00	5.00	4.00	4.50	0.00	1.47	0.00	0.14	-0.24						
156	C.25	0.00	20.00	5.00	4.50	5.00	0.00	1.83	0.00	0.20	-0.04						
	47	1.50	0.25	14.00	20.00	14.67	5.00	5.00	5.00	4.25	4.75	4.21	0.00	1.44	0.10	0.06	0.13
157	0.25	0.00	14.00	5.00	5.50	5.00	0.00	1.90	0.11	0.04	0.18						
158	C.25	0.00	21.00	5.00	5.00	5.00	0.00	1.56	0.00	-0.22	0.06						
159	C.25	C.00	13.00	5.00	5.00	5.00	0.00	1.47	0.00	-0.06	0.06						
160	0.25	0.00	12.00	5.00	5.00	4.50	0.00	1.38	0.00	-0.06	-0.06						
161	0.25	C.00	8.00	5.00	4.50	4.50	0.00	1.47	0.00	0.06	-0.08						
162	0.25	0.00	20.00	5.00	4.50	4.50	0.00	1.59	0.00	0.07	-0.00						
	48	1.50	0.25	14.00	20.00	14.67	5.00	5.00	5.00	5.25	4.50	4.83	0.00	1.26	0.00	-0.15	0.04
163	0.25	0.00	12.00	5.00	4.50	4.00	0.00	1.59	0.04	0.00	0.07						
164	0.25	0.00	8.00	5.00	4.00	4.00	0.00	1.47	0.00	-0.08	-0.08						
	49	0.50	0.25	12.00	8.00	10.00	5.00	5.00	5.00	4.25	4.00	4.12	0.00	1.21	0.00	-0.04	0.14
165	0.25	0.00	20.00	5.00	4.00	4.00	0.00	1.59	0.06	0.07	0.05						
166	1.00	0.00	15.00	3.00	4.00	3.50	0.00	1.50	0.00	-0.06	-2.58						
	50	1.25	1.00	20.00	15.00	16.00	5.00	3.00	4.00	4.00	3.75	3.80	0.00	1.04	0.00	-0.16	-2.04
	15	4.75	1.25	14.67	16.00	14.53	5.00	4.00	4.74	4.21	3.80	4.29	0.00	1.52	0.00	-2.41	-0.60
167	0.25	0.00	8.00	5.00	3.50	3.00	0.00	5.38	0.70	0.72	0.68						
168	0.25	0.00	20.00	5.00	3.00	3.00	0.00	1.71	0.00	-2.15	0.12						
169	1.00	0.00	15.00	3.00	3.00	2.50	0.00	1.50	0.00	-0.14	-2.58						
	51	1.50	1.00	8.00	15.00	14.67	5.00	3.00	4.33	3.25	2.75	2.88	0.00	3.17	0.38	0.67	0.08
170	0.25	0.00	8.00	5.00	2.50	2.00	0.00	5.38	0.70	0.72	0.68						
171	0.25	0.00	20.00	5.00	2.00	2.00	0.00	1.71	0.00	-2.15	0.03						
172	3.25	C.13	14.00	1.30	2.00	3.00	0.00	1.66	0.00	-0.03	-10.10						
	52	3.75	3.25	8.00	14.00	14.00	5.00	1.30	3.77	2.25	2.50	2.45	0.00	2.91	0.00	-0.09	-2.34
	16	5.25	3.75	14.67	14.00	14.19	4.33	3.77	3.93	2.88	2.45	2.57	0.00	2.43	0.00	0.37	-1.33
	5	15.75	5.25	14.26	14.19	14.32	4.65	3.93	4.44	2.67	2.57	3.13	0.00	2.93	0.00	-0.10	-0.09
173	0.25	0.00	13.00	5.00	3.00	3.00	0.00	18.38	0.92	0.91	0.93						
174	0.25	0.00	12.00	5.00	3.00	3.00	0.00	1.26	0.00	-13.57	-0.55						
175	1.50	0.00	20.00	2.42	3.50	3.50	0.00	1.96	0.00	0.36	-2.89						
	53	2.00	1.50	13.00	20.00	18.13	5.00	2.42	4.14	3.00	3.50	3.38	0.00	9.71	0.62	0.70	0.53
176	0.75	0.00	16.00	3.42	3.50	4.00	0.00	7.63	0.60	0.74	0.46						

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 177  1.50  0.00 13.00  2.42  4.00  5.00  0.00  4.15  0.00       -0.84 -0.89
 178  1.88  0.00  6.00  2.09  5.00  5.00  0.00  7.84  0.00        0.47 -0.19

         54  4.13  1.88 16.00  6.00 10.36  3.42  2.09  2.64  3.75  5.00  4.59  0.00  4.53  0.00     -1.14 -0.06

                  17  6.13  4.13 18.13 10.36 12.90  4.14  2.64  3.13  3.38  4.59  4.19  0.00  5.67  0.53      0.57  0.49

 179  0.38  0.00  9.00  4.42  5.00  5.00  0.00  9.33  0.47        0.16  0.79
 180  1.13  0.00  8.00  2.83  5.00  4.50  0.00  2.00  0.00       -3.66 -1.91

         55  1.50  1.13  9.00  8.00  8.25  4.42  2.83  3.62  5.00  4.75  4.81  0.00  4.80  0.20      0.06  0.34

 181  0.38  0.00 13.00  4.42  4.50  4.50  0.00  5.81  0.65        0.66  0.64
 182  1.13  0.00  8.00  2.83  4.50  4.00  0.00  2.12  0.00       -1.74 -1.69

         56  1.50  1.13 13.00  8.00  9.25  4.42  2.83  3.62  4.50  4.25  4.31  0.00  3.17  0.00     -0.52 -0.02

 183  0.38  0.00  9.00  4.42  4.00  4.00  0.00  5.69  0.62        0.63  0.61
 184  1.13  0.00  4.00  2.83  4.00  3.00  0.00  2.24  0.00       -1.54 -1.61

         57  1.50  1.13  9.00  4.00  5.25  4.42  2.83  3.62  4.00  3.50  3.63  0.00  3.25  0.00      0.02 -0.07

 185  0.38  0.00  6.00  4.42  3.00  3.00  0.00  5.85  0.62        0.62  0.63
 186  1.50  0.00  8.00  2.42  3.00  2.00  0.00  2.15  0.00       -1.72 -2.49
 187  1.50  0.00  4.00  2.42  2.00  3.00  0.00  7.51  0.00        0.71 -0.05

         58  3.38  1.50  6.00  4.00  6.00  4.42  2.42  3.08  3.00  2.50  2.56  0.00  3.46  0.00      0.06 -0.25

 188  0.56  0.00  3.00  3.83  3.00  4.00  0.00  7.91  0.32        0.05  0.58
 189  0.19  0.00  1.00  5.42  4.00  5.00  0.00  3.32  0.00       -1.38  0.50
 190  3.00  0.00  1.00  1.42  5.00  1.00  0.00  1.66  0.00        0.00  0.00

         59  3.75  3.00  3.00  1.00  1.30  3.83  1.42  3.55  3.50  3.00  3.15  0.00  4.32  0.00      0.00  0.00

                  18 11.63  3.75  8.25  1.30  5.10  3.62  3.55  3.44  4.81  3.15  3.40  0.00  2.91  0.00      0.00  0.00

                                6 17.75 11.63 12.90  5.10  7.79  3.13  3.44  3.34  4.19  3.40  3.68  0.00  3.20  0.00      0.00  0.00

   2 62.75 17.75 15.03  7.79 12.80  4.15  3.34  3.99  3.79  3.68  3.59  0.00  3.24  0.00

CORE USAGE       OBJECT CODE=   10568 BYTES,ARRAY AREA=   72180 BYTES,TOTAL AREA AVAILABLE=  444415  BYTES

DIAGNOSTICS        NUMBER OF ERRORS=       0, NUMBER OF WARNINGS=       0, NUMBER OF EXTENSIONS=       0

COMPILE TIME=     0.75 SEC,EXECUTION TIME=     3.14 SEC,     15.17.13    TUESDAY       8 AUG 78    WATFIV - JAN 1976 V1L5

         C$STOP
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