Over the years, Tenney's theoretical and critical work on the music of other composers has had a profound impact on the contemporary music community. In addition, he has energetically supported the work of his peers, and that of younger composers. Documentation of these activities is beyond the scope of this paper (though the reader can perhaps catch a glimpse of it in the selected references in the appendices), except in those efforts which have resulted in "formal" manifestation, for much of Tenney's work in this regard is simply a result of his ever vital activity in contemporary music, and justifiably resists annotation.

The Chronological Development of Carl Ruggles' Melodic Style is an attempt by Tenney to use the computer, in a purely statistical way, to quantitatively shed some light on the singular nature of Ruggles' approach to melody and the way it evolved throughout his compositional life. This analysis was facilitated by the fact that in all of Ruggles' music (only eight pieces, if the four Evocations are counted as one work) there is a clearly discernable melodic line. Tenney extracted the melody from each and subjected them to several rather simple statistical analyses, dealing with two significant factors in Ruggles' melodic style: the avoidance of consonance and pitch class repetition. A third, rather simple measure is the general intervallic distribution in the music.

"Significant changes in Ruggles' melodic style are manifested in my statistical results in three ways: (1) a gradual shift in the distribution of melodic-interval frequencies, (2) a more and more effective avoidance of early pitch-class recurrences, and (3) an increase in the frequency and proximity of dissonant relations within his melodic lines."

(from page 1 of Ruggles article)

A detailed analysis of Tenney's results would be superfluous here, and the reader is referred to the paper itself (see Appendix II for a reference), which presents these analyses in some detail. However, it might be instructive to briefly summarize Tenney's method. The computer program was written to provide five different measures for any given piece:

- the interval-frequency distribution (percentage of total intervals of any given interval)
- 2) length of strings of different pitch classes (LSDP)
- average of above for each piece (ALSD)
- 4) length of strings of consonant intervals (LSCI) or number of pitches prior to the current pitch that are not related by minor second or its

equivalents.

5) the average length of such strings for a piece. (ALSC). The majority of the paper is an analysis of the way these statistics change through the course of Ruggles' music. Example XV.1, the final graph from the paper, approximately inverse relationship of the functions mapped by Ruggles' forward trend in avoiding pitch class repetition (ALSD) and the use of intervals other than the minor second. Note that even an average decrease of about one unit in average length of string where a minor second does not occur (from 3.8 to about 2.8 in this case) is of statistical significance considering the quantity of data, and clearly represents a stylistic trend of importance. (The ALSD function in this graph is even more convincing). The measures and graphs of this article chronicle in a rather precise and objective way the continuous trend in Ruggles' music towards the kind of pure atonal chromaticism that he clearly sought, and the measures that Tenney selected seem to be an accurate way of describing, at least in part, the way Ruggles sought to achieve this effect. The method is also useful in that it provides strong formal and statistical evidence for our intuition regarding Ruggles' music. What I think is equally interesting as Tenney's careful illumination of the work of one of America's greatest and least understood composers, is way that it relates to his own music, which except for Monody and a few other early pieces, has very little to do with melodic development. It is implicit in Tenney's study that although Ruggles chose melody as one of his principal expressive dimensions, what is important is the consistency of the search for its refinement, and the great care taken to produce a surface structure which is an integral manifestation of large generative ideas. In this way, the nature of Tenney's thoughts on Ruggles' music say much about the parallel development in his own music, which also seems ever to be engaged in a process of refinement.

Very little can be said about Conlon Nancarrow's dies for Player Piano, mainly because of my respect for the pitfalls of the kind of recursion that might result with this present article. Until Tenney's work on Nancarrow, very little had been written on him (with the notable exception of Gordon Mumma's fine liner notes to the now out of print Columbia record). Tenney's thoughts on the Studies for Player Piano are more than a fist step and an introduction, they go a long way towards providing a large view of that remarkable body of work which is Nancarrow's music, and provide a necessary bridge for both listener and scholar the between music and its comprehension. Recently, Nancarrow's music has been getting more of the kind of attention it deserves, and Tenney's share in the repsonsibility for this cannot be questioned. Once again, I would refer the interested reader to the article itself, which contains many in-depth "studies" of the Studies themselves.

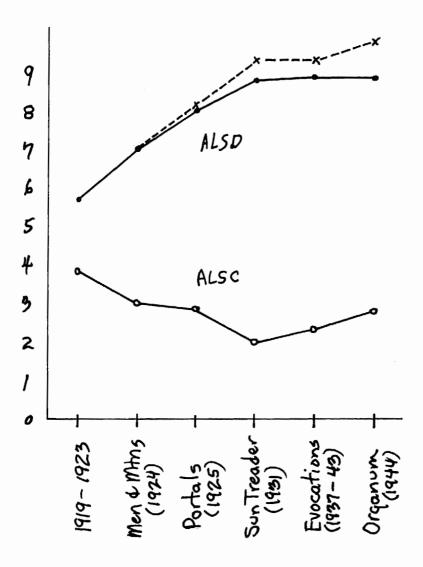


Figure 27 ALSD and ALSC as a function of chronological sequence.

(Example reprinted from Perspectives of New Music, Fall-Winter 1977.)

One of the introductory paragraphs in the article, does, however, say quite a bit about the nature of Tenney's own musical personality, his interests, and his conception of contemporary music:

"Over the last three years it has been my good fortune not only to meet the man, but to acquire a nearly complete collection of scores and recordings of the Studies. It is a dazzling experience to listen to the whole set in numerical sequence - an experience not unlike the one many of us had a decade or so ago when we heard the first recordings of the complete works of Webern. And on the basis of my own growing familiarity with the Studies for Player Piano, I predict that the 21stcentury historians will rank Conlon Nancarrow - with Edgard Varese, Olivier Messiaen, John Cage, Harry Partch, Karlheinz Stockhausen, Iannis Xenakis, and perhaps a very few others - as one of the most important composers of this third quarter of the 20th century. Moreover, I believe that Nancarrow's Studies will stand with the most innovative works of Ives, Schoenberg, Stravinsky, Webern (and "a very few others") as the most significant works composed since 1900, in terms of their ultimate influence on the progressive development and evolution of our powers of musical perception. I am aware that these predictions may seem extravagant to some, but I am convinced that, when Nancarrow's music is as accessible and widely known as that of his contemporaries and immediate predecessors, its importance will be just as widely recognized, and there will remain no room for doubt."

Tone Roads...

In the early 1960's, Tenney along with Philip Corner and Malcolm Goldstein (and with the help and frequent participation of many others, including Carolee Schneemann and Elizabeth Monroe who did several beautiful posters and programs, Norma soprano Marder, Burton Kaplan, composer/publisher Dick Higgins, George Flynn, Max Neuhaus...) "formed" the Tone Roads Ensemble. Initially the intent was to play the then little-performed music of Ives, and subsequently a few other radical American composers (Ruggles, Cage, Feldman, Varese, etc.) were added. The group later began to include the work of several younger composers on its concerts, and eventually some of Tenney's music was played. The group was important in its initial response to what was at the time a serious lack of contemporary music in N.Y. (not to mention outside of N.Y.). The performances, of which a few tapes are still around, are extraordinary, both in their tremendous attention to detail,

and in their real sensitivity to a music which had almost never been heard. In his program notes to the Dec. 1963 concert, Tenney describes both the nature of Ives' music and perhaps his own thoughts on American music:

"Ives' image of diverse but intersecting "tone roads", so aptly characterizing the form and spirit of the two pieces of that name on our program, may also serve as a symbol of the vital experimental tradition in American music since 1900. Sometimes convergent ("All roads lead to the Centre - in a race to Town Meetin'", Tone Roads No. 1), sometimes not ("There are many roads, you know, besides the Wabash", Tone Roads No.3), they were indeed "rough and rocky". Hewn in the very process of moving from one vantage-point to another, and not meant to be travelled too often (either in style or in comfort), they have nevertheless altered the modern musical landscape irrevocably. It remains a lonely territory, but the younger composer today may feel a little less lonely in discovering these paths carved out so firmly by others."

Earlier, in the notes for the all-Ives concert of May 11 (1963), Tenney succinctly states his feeling for Ives' music:

"But the music of Charles Ives represents both the culmination of one era and the beginning of another, and although the full significance of his contribution is far from being realized, we believe that this is due primarily to a lack of sufficient opportunities to actually hear the music. It has a vitality that speaks for itself, far better than any words can, and more frequent performances - especially of those pieces that have not yet been played at all - will be all that is needed to demonstrate its significance. And as his work becomes a more integral part of our common musical experience, that experience will be greatly enriched, and Ives' name will be given its rightful place in the living history of music."

The Tenney/Corner/Puffer recordings of the Ives songs (on Folkways) remains to this day one of the finest and most sensitive presentations of the Ives pieces, and anyone who has been fortunate enough to hear Tenney perform the Concord Sonata will attest to the fact that Tenney's understanding and devotion to the music of Ives is unsurpassed. Since the days of Tone Roads, Tenney's activities as a conductor, pianist and educator of this music have not subsided, and indeed he seems to get more energetic in these activities every year.

But perhaps the most important musical and personal relationship of Tenney's career has been to Varese and his music. This can be seen in Tenney's frequent references to the importance of Varese's work on his own, and also in the obvious lasting effect that the friendship has had on his own music, life and career.

"If I speak here of the man, more than the music, it is only because of my absolute certainty that the music will take care of itself - such is its herent vitality and durability. The only danger is that it may be too quickly absorbed by the academies - those funereal institutions dedicated to the "proper" burial of a man's lifework, when they have not been allowed to bury the man himself. And this will be done with blatant disregard of the central esthetic premises of the work. Music "must resign itself to the rigours of creative unrest, to the discipline of constant tension, to plunge again into its normal state of permanent revolution." Again, "...the word 'evolution' is generally used when the startling changes that have taken place in the past are discussed in the present, for they have ceased to startle. But radical changes in music written today are considered not evolutionary, but dangerous and destructive. And they are. Dangerous to inertia and destructive of habits." All this may be drawn from the music, of course, but what will happen when "Integrales," say, has become as familiar to our ears as a symphony by Beethoven? Will we remember this most essential lesson - that every truly creative act is "dangerous and destructive," that music's "normal state" is one of "permanent revolution"?...

"...He loved the City, and its sounds, and it was from him that we learned to hear such sounds as musical material. "I have always looked upon the dustrial world as a rich source of beautiful sounds, an unexplored mine of music in the matrix...whole symphonies of new sounds have come into the modern industrial world and have been all our lives a part of our daily consciousness." As we learn to listen to these sounds, we may also learn new ways of listening to music. "The public to whom music is addressed should shake off its apathy and allow itself to be taught to discern the true nature of music and the necessity for a constant revision of values." That is, not just once, or once every few years, but constantly. Otherwise, such "values" are utterly useless to us. They become stagnant, and the vitality of our perceptions dies with them.'

(from Edgard Varese, by James Tenney)