

REPLY TO MICHAEL KASSLER

Matt C. Hughes

I wish to thank you and Mr. Michael Kassler for the review [*Current Musicology* 1966:82–86] of my unpublished thesis, *Tonal orientation in Scriabin's preludes: an analysis on the basis of information theory*. There are, however, several inaccuracies and many sections of the review that I feel are unnecessarily complicated—all of which warrant comment.

My thesis makes no claim that this type of analysis would either partially or fully chronologically organize any group of compositions. The purpose of this type of analysis, as devised in my thesis, is to pinpoint varying degrees of tonal complexity. It can readily show differences in this regard (if there are any) among any given group of compositions notated in "primitive symbols of current common musical notation" (p. 82). The fact that they should fall in exact chronological order would appear unlikely, although not impossible, depending upon the sampling. As every analytical tool has its limitations, those of quantitative musicological research are obvious and should warrant no comment.

Mr. Kassler writes: "However, as will be evident, Hughes's characterization of his treatment of the Scriabin preludes as information-theoretic in the Shannon tradition is mistaken" (p. 83). Indeed, it would be mistaken, and at no time do I make such a claim. My procedure was not only inspired by a basic idea proposed by the esteemed Wilhelm Fucks but extends it as given by F. Winckel in "Die informationstheoretische Analyse musikalischer Strukturen", (*Die Musikforschung* 17:1–14, 1964). I think Dr. Fucks's name should have been mentioned in the review, as his idea was certainly an important factor in the development of this technique.

In a footnote Mr. Kassler states: "I have made no attempt to check Hughes's numerical calculations in general, though . . . I did find some errors. Occasionally decisions were required by the calculator that are not included in the calculation procedures Hughes presents. For example, in the left-hand part of the antepenultimate measure of Op. 11, No. 1, Hughes apparently assigned to each note the bit value of $1/3$, whereas the bit value $2/5$ seems to me correct" (p. 83). Mr. Kassler is correct in assuming that the bit value in question is $1/3$. Although the rather unorthodox arrangement of the beat offers an interesting performance problem, it does not mathematically. Since Op. 11, No. 1 contains nearly six measures of this type of unconventional arrangement at the end of the composition, and if performance were possible according to Mr. Kassler's calculations, I find that the right hand would finish approximately one measure before the left.

"Because some of Hughes's verbal constructions are idiolectal and unkeyed to standard English, I am unsure that I have reproduced always the meaning he would convey" (p. 83). Likewise, this statement may also serve as a characterization of Mr. Kassler's writing style. I wonder whether his terms 'note-type' and 'note-type-type' are an essential contribution to musicological terminology.

"Hughes writes that tonal orientation 'is meant to be the occurrence of each note and its durational value' (p. 15). But this is not of much help"

(p. 85). Assuredly, one sentence is of little value; but perhaps the rest of the paragraph from which the quotation was lifted would elucidate matters, particularly since I continue after the above quote that this would be discussed later.

"We find that Hughes neither articulates any specific hypotheses about Skriabin's preludes nor puts the data to any significant use" (p. 86). The hypotheses concerning my thesis are clearly stated on p. 14. The question arises as to what Mr. Kassler expected my thesis to prove. I intended it to show concise amounts of what I call and define as tonal complexity.

"And surely Hughes deserves criticism for having become engaged in a data-collection procedure . . . without justification of the unconventional measurement criteria" (p. 86). Apparently, Mr. Kassler is undecided in this criticism. After having stated my main concern, namely, "tonal orientation" versus "tonal organization", Mr. Kassler continues: ". . . the necessity for unusual measurements should cause no surprise" (p. 85).

". . . and with hardly any comment on the results other than 'they are here'" (p. 86). Any analysis can only show what is *there*. The question, however, is *what* is there?

MATT C. HUGHES
Austin, Texas

REPLY TO MATT C. HUGHES

Michael Kassler

Mr. Hughes's reply accuses me of inaccuracies, but the accusation appears to be gratuitous, for he mentions none.

Some comments by way of surrebuttal:

1. The phrase 'information theory' has come to mean specifically the field whose development stems from the classical Shannon articles and whose current state is illustrated by the content of such journals as the *IEEE Transactions on Information Theory*. To speak today of information theory not in the Shannon tradition is oxymoronic.

2. Re Opus 11, No. 1: Footnote 2 of my review indicated the presence of a rhythmic problem caused by the composition's being noted not in the current common musical notation (CCMN). Hughes has interpreted (for instance) the measures excerpted in Ex. 1 as if Ex. 2 were their CCMN equivalent; in my review, I said that "the bar placement seems to disallow Hughes's 'five-against-three' interpretation"—if the bar had been placed after the second note of the left-hand group of three notes, rather than before, I would have left Hughes's interpretation unquestioned. Example 3 is the CCMN equivalent of Ex. 1 I would tentatively propose (based only on consultation of the Edward B. Marks reprinted edition). Since my version clearly does not have the right hand finishing before the left and does have a left-hand note 'bit value' of $2/5$, Hughes's finding of an error in my commentary must be 'lost'.

3. Hughes apparently believes that merely by naming the results of his internal-evidential procedures a 'measure of tonal complexity' he has