



## Linear Analysis—A Cure for Pitch-Class Set Analysis?: A Reply

Ethan T. Haimo



REFERENCE: <http://www.mtosmt.org/issues/mto.97.3.2/mto.97.3.2.latham.html>

KEYWORDS: Latham, Schoenberg, Forte, atonality, set theory

ABSTRACT: Edward Latham reviewed and criticized the author's "Atonality, Analysis, and the Intentional Fallacy" (*Music Theory Spectrum* 18.2 [Fall 1996]: 167–99). The author replies.

---

[1] In his recent review of my article, "Atonality, Analysis, and the Intentional Fallacy,"<sup>(1)</sup> Edward Latham seriously misrepresents or distorts my positions, and misreads (or simply misunderstands) my arguments. Since a detailed response to all of his criticisms would take an inordinate amount of space, I must limit my remarks to the most serious.

[2] Although he concedes that my "critique of Forte's segmentational decisions is perceptive and valid" (par. 7) Latham proceeds to suggest that my argument is fatally flawed because I did not take Forte's recent work into consideration. Latham goes on to state that Forte's article "Pitch-Class Set Analysis Today" (which was discussed at length in my critique) "is actually Forte's own attempt to signal the *end* of an initial phase in the evolution of pitch-class set theory and the beginning of a new phase in which a more sophisticated analytical method might be developed" (par. 11). Latham asserts that Forte has "presented a general outline of such a method in 'New Approaches to Linear Analysis'" (par. 11) and has expanded upon this idea in subsequent writings. This leads Latham to chide me for not discussing a recent article by Forte on Schoenberg's Op. 15: "it seems rather surprising (and unfortunate) that he chooses to ignore this particular article" (par. 13).

[3] The clear implication of this line of argument is that my critique of Forte's methods of pitch-class set analysis is invalid (or at least moot) because Forte's own work has long ago satisfactorily addressed the problems I discussed. In Latham's view, pitch-class set analysis of Schoenberg's music remains a viable approach because Forte has developed a more sophisticated method for its application—linear analysis—a method that (presumably) is free from the problems raised in my article. If so, then the real problem seems to be my ignorance of (or willful disinterest in) the recent theoretical literature, not any problems with Forte's (recent) writings.

[4] I beg to differ. In no way do the articles Latham cites satisfactorily address any of the problems that were raised in my article.

[5] Latham is correct that Forte has developed a new approach (linear analysis) for the application of pitch-class set analysis. In recent years, Forte has applied this new idea to a wide variety of compositions from the end of the nineteenth and beginning of the twentieth centuries.<sup>(2)</sup> However, there is nothing in any of these more recent articles to indicate that pitch-class set analysis, as preached and practiced in his earlier essays, has been replaced by this new method. Rather, it seems abundantly clear that this newer method is being offered as a supplement to, not a complete replacement for, the earlier idea. This is particularly evident in that these later articles cite the earlier work as authority, not as items that need correction. Normally, when a scholar wishes to correct or improve upon his or her earlier scholarship, he or she does so by explicitly acknowledging the deficiencies or problems in his or her earlier writings. If Forte had wished to make it clear to the scholarly world that the segmentations in his earlier applications of pitch-class set analysis were arbitrary and inconsistent then he needed to have stated so explicitly. If linear analysis was meant to correct the flaws in earlier methods of pitch-class set analysis, Forte should have admitted, for example, that Perle and Taruskin were right in their critiques, and that what Latham calls the “undaunted” application of pitch-class set analysis to Schoenberg’s music (among others) has, in fact, led to serious problems. Forte then could have gone on to state that he had developed a new method of pitch-class analysis that successfully addresses those problems—linear analysis. To my knowledge, Forte has never done this. In the absence of such an acknowledgment, it must be assumed that he stands by his earlier work.

[6] But it is not just the absence of such a clear acknowledgment that shows that Forte stands by his earlier work. There are explicit citations that confirm this to be the case. For example, Latham criticizes me for failing to consider Forte’s article “Pitch-Class Set Genera and the Origin of Modern Harmonic Species” (1988). Latham states that this was “intended to supercede [sic] the K and Kh relations as a means of describing the relationships among the different sets employed (or discovered, pace Haimo) in a composition, the system of genera is clearly a further refinement of pitch-class set theory, and as such it, too, needs to be included in any evaluation of the theory and its analytical application” (par. 14). If the reader had read only Latham’s review and did not look up the article cited, the reader would undoubtedly conclude that there were some important and substantive refinements of pitch-class set theory in that article that addressed the problems I identified and thereby invalidated my critique. The reader might also assume that Forte’s post-genera thinking might very well have led Forte—as Latham suggests—to revise his analysis of Op. 11, No. 1 and include the “tonal” sets he had studiously omitted in the analysis I had critiqued.

[7] That is simply not the case. And the reader can garner just how misplaced Latham’s criticism is by opening the article in question to the page where Forte discusses Schoenberg’s Op. 11, No. 1 (page 238). If there are important refinements here that I needed to have taken into consideration, then why does Forte simply assert about Op. 11, No. 1 that its “pitch-class set vocabulary . . . consists of exactly six hexachords, six pentachords, two tetrachords, and two trichords”?<sup>(3)</sup> And what does Forte give as the source for this assertion? None other than the very article that was the centerpiece of my critique, “The Magical Kaleidoscope”.<sup>(4)</sup> From this one instance (and this is merely a representative example) it is clear that Forte stands by his previous work and is building new ideas on that foundation.

[8] That was, of course, the reason why I chose to concentrate my critique on the foundation. Since Forte’s subsequent work (as well as that of numerous other scholars) is dependent on that foundation, a critique of pitch-class set analysis needs to concentrate on determining how solid that foundation is. That, in turn, dictated why I concentrated so much attention on relatively old articles like “Sets and Nonsets”.<sup>(5)</sup> When I examined Forte’s analysis of Op. 11, No. 1, it was just not clear to me what his rationale was for choosing some pitch-class sets and excluding others. There seemed to be no rational reason for his choices. This prompted me to track down this idea and determine what were the bases for his selection. As it happens, the only place that this was clearly stated was in “Sets and Nonsets”.

[9] But what of Latham’s implication that Forte’s most recent writings deal successfully with the problems raised in my article? Latham finds it “surprising (and unfortunate)” that I chose “to ignore” (par. 13) Forte’s recent analysis of Schoenberg’s Op. 15. Again, the implication seems to be that whatever problems might have existed before, they have been fixed in the recent writing. If this is so, Latham would be absolutely right to criticize my article.

[10] Sadly, this is not the case. It would be well beyond the scope of a response to a review to go into the kind of detail necessary to make a thorough argument in support of this assertion, so I trust the reader will understand if I merely limn the

outlines of what my argument would be.

[11] My critique of Forte’s analysis of Op. 11, No. 1 rested on the easily verifiable assertion that Forte’s method fails his own criterion of testability (i.e., using pitch-class set analysis, different analysts will not produce analyses that intersect in significant ways). Instead, an objective pitch-class set analysis (which is a type two analysis) of Schoenberg’s music simply yields an unwieldy, random, almost unlimited, mass of sets. The only way that Forte can produce a specific, limited, list of sets upon which he claims the work to be based, is by a biographical hypothesis (a type one assertion)—i.e., that Schoenberg consciously and intentionally chose a specific number of hexachords (six) and pentachords (also six) for numerological reasons and that some of the specific sets chosen had clear autobiographical or stylistic motivations (e.g., EsCHBEG and others). The documentary record proves this biographical hypothesis to be false (because of what is actually in the documentary record, not because any and all documents are—as Latham falsely imputes to my “seeming naivete” —automatic “get out of jail free cards”). Therefore, the analysis fails as either a type one or a type two statement.

[12] Precisely the same problems surface in Forte’s analysis of Op. 15.<sup>(6)</sup> Forte’s choice of tetrachords in general, and specific tetrachords in particular, as the basic motives of Op. 15, plainly fails the criterion of testability and thus cannot work as a pure type two analysis. (That is, independent analysts, given the same material and using the same method, would not come up tetrachords, only tetrachords, and only these tetrachords.) It is hardly coincidental then, that Forte makes recourse to various type one assertions to shore up his argument, precisely as in the analysis discussed in my article. Thus, Forte sees Schoenberg as slipping musical equivalents of his own, of Mathilde Schoenberg’s, and of Richard Gerstl’s names into the music. In other words, he has tried to justify what should have been a pure type two analysis with type one rationalizations. That would be bad enough, but the biographical claims he advances are not viable: occasional letters completely buried in a complicated fabric are not ciphers placed there by the composer, they are fictions imposed by the analyst on the music.<sup>(7)</sup>

[13] Therefore, for precisely the reasons outlined in my article, this recent analysis fails both as either a type one or a type two assertion. It does not (cannot) work on its own; similarly, the biographical hypotheses advanced are patently false. Contrary to Latham’s insinuations, nothing in Forte’s subsequent writings has satisfactorily addressed the problems I raised in my discussion of his analysis of Op. 11, No. 1.

[14] Unfortunately, this type of criticism—criticism by insinuation—is endemic in the review. Throughout his review, Latham stoops to sarcasm and scorn, but, tellingly (as detailed in the case discussed in paragraphs 9–13, above), he fails to back up his criticisms with relevant facts. Thus he states that I present “a tidy, if not entirely objective, encapsulation”, without identifying what lacked objectivity in my encapsulation. He sarcastically dismisses the facsimiles I included in my article by stating that I produce “several handsome plates of very official-looking sketch materials,” (par. 2) but does not address the extraordinarily revealing contents of those sketches (my Plate 3 proves that Schoenberg was blissfully unaware of anything resembling pitch-class sets until as late as 1926). Moreover, he hints that there is something terribly wrong in my using the analysis of Op. 11 No. 1 from “The Magical Kaleidoscope” and not the later version from “Pitch Class Set Analysis Today” (par. 7). Indeed, I am alleged to have admitted that the later version contains much more information. Of course, he does not offer a single, substantive reason why this— even if true—would make any difference in the argument I presented. And he couldn’t, since the version I used *was* the more detailed version. (Need I add that Forte himself cites the “The Magical Kaleidoscope” version and not the “Pitch Class Set Analysis Today” version in “Pitch-Class Set Genera”?)

[15] If Latham disagrees with my argument, he should stick to the issues and should not demean himself and the cause he supports by resorting to groundless insinuations, misplaced sarcasm, unseemly ridicule, and unsubstantiated accusations. That he felt obliged to do so suggests that he has a very weak case and knows it.

---

**Ethan T. Haimo**  
**University of Notre Dame**  
**Department of Music**  
**University of Notre Dame**  
**Notre Dame, IN 46556**  
[ethan.t.haimo.1@nd.edu](mailto:ethan.t.haimo.1@nd.edu)

---

## Footnotes

1. Edward D. Latham, Review of Ethan Haimo's Article "Atonality, Analysis, and the Intentional Fallacy," *Music Theory Spectrum* 18.2 (Fall 1996): 167–199; *Music Theory Online* 3.2 (1997).

[Return to text](#)

2. The article that first outlined this method is: Allen Forte, "New Approaches to Linear Analysis," *Journal of the American Musicological Society* 41.2 (Summer 1988): 315–48.

[Return to text](#)

3. Allen Forte, "Pitch-Class Set Genera and the Origin of the Modern Harmonic Species," *Journal of Music Theory* 32.2 (Fall 1988): 187–270.

[Return to text](#)

4. Allen Forte, "The Magical Kaleidoscope: Schoenberg's First Atonal Masterwork, Opus 11, No. 1," *Journal of the Arnold Schoenberg Institute* 5.2 (November 1981): 127–68.

[Return to text](#)

5. Allen Forte, "Sets and Nonsets in Schoenberg's Atonal Music," *Perspectives of New Music* 11 (1972): 43–64.

[Return to text](#)

6. Allen Forte, "Concepts of Linearity in Schoenberg's Atonal Music: A Study of the Opus 15 Song Cycle," *Journal of Music Theory* 36.2 (Fall 1992): 285–382.

[Return to text](#)

7. It is revealing to compare the fictitious ciphers imposed by Forte on Schoenberg's music with genuine ciphers placed in a composition by a composer of Schoenberg's circle. See Barbara Dalen, "Freundschaft, Liebe, und Welt: the secret programme of the Chamber Concerto," *The Berg Companion*, ed. Douglas Jarman, 123–140. Dalen makes an absolutely airtight case for the ciphers she finds, backed up by clear, unequivocal, documentary and musical evidence. Forte has no such support.

[Return to text](#)

---

## Copyright Statement

**Copyright © 1997 by the Society for Music Theory. All rights reserved.**

[1] Copyrights for individual items published in *Music Theory Online* (MTO) are held by their authors. Items appearing in MTO may be saved and stored in electronic or paper form, and may be shared among individuals for purposes of scholarly research or discussion, but may *not* be republished in any form, electronic or print, without prior, written permission from the author(s), and advance notification of the editors of MTO.

[2] Any redistributed form of items published in MTO must include the following information in a form appropriate to the medium in which the items are to appear:

This item appeared in *Music Theory Online* in [VOLUME #, ISSUE #] on [DAY/MONTH/YEAR]. It was authored by [FULL NAME, EMAIL ADDRESS], with whose written permission it is reprinted here.

[3] Libraries may archive issues of MTO in electronic or paper form for public access so long as each issue is stored in its entirety, and no access fee is charged. Exceptions to these requirements must be approved in writing by the editors of MTO, who will act in accordance with the decisions of the Society for Music Theory.

This document and all portions thereof are protected by U.S. and international copyright laws. Material contained herein may

be copied and/or distributed for research purposes only.

Prepared by Lee A. Rothfarb, General Editor and Tahirih Motazedian, Editorial Assistant