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Generating STEAM: Haydn and the Arts in General Education at a "Career-Oriented" Institute of Technology

by Michael E. Ruhling

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I. Introduction

I teach at Rochester Institute of Technology, in the traditional classroom and as conductor of its orchestra. RIT, a self-identified "career-oriented university" focusing on the STEM disciplines (Science-Technology-Engineering-Mathematics), has no music degree program, and consequently not much in the way of infrastructure and library resources for teaching and learning music, and only limited opportunity for students to study or practice their instruments privately. RIT's administration has announced that they would like to "put the A in STEAM" as a strategic goal, realizing the importance of education in the arts as a part of a solid university education. However, certain challenges are sure to remain for the foreseeable future.

RIT's educational scaffolding—the arts and humanities within general education at an institute of technology—does beget certain challenges. Requiring prerequisites for arts classes is difficult, thus I can't have any expectation that students will come to class with any knowledge of music at all, and there is little opportunity for students to pursue the topic in any deep or thorough way that course sequencing would facilitate. When a student registers for a class I teach, or the RIT Orchestra, there is a very good chance that the course will be the only academic experience s/he will have in the arts, and probably the humanities in the broader sense. Thus, my primary objective as their teacher is to open their minds to the arts and humanities through music, giving them a basis for understanding, and the tools for assessing, various modes of human expression. Over my eighteen years of teaching at RIT, and the many long hours I have spent sitting at my computer screen, trying to shape the most effective syllabi for such courses, I have come to realize that eighteenth-century music, and in particular the music of Joseph

Haydn, is in many ways best suited for developing the tools necessary for twenty-first century college students to come to terms with the arts under this educational model.

The reasons for this are many, but all seem to testify to a commonality between the relationship twenty-first-century students have to the arts, and the emerging eighteenth-century "general" audience to the music composers wrote for it. When I read one of the many fine essays that have appeared over the past twenty years or so regarding the relationship of eighteenth-century composers and audiences, I am struck by the similarities of those audiences to my students.¹ These are the twenty-first century equivalents of the Londoners gathered along the Thames in 1717 hearing Handel's music float by, perhaps the congregation of Bach's Thomaskirche. They resemble the audiences Leopold Mozart often described to his son, or Haydn's "inexperienced listener."² In each of these cases the audience description is part of a consideration of intelligibility and approbation being the desired outcomes, and, as Evan Bonds observed, the "the burden of intelligibility lies with the composer."³ Indeed, seeking the approbation of audiences having a broad spectrum of knowledge and experience, or at least assumed to be so by composers no longer writing for specific, known patrons, was a central concern for eighteenth-century composers.

¹ For example, Mary Sue Morrow, *Concert Life in Haydn's Vienna: Aspects of a Developing Musical and Social Institution* (Stuyvesant NY: Pendragon Press, 1989); David P. Schroeder, *Haydn and the Enlightenment* (Oxford: Clarendon Press, 1990), especially chs. 9-10; Simon McVeigh, *Concert Life in London from Mozart to Haydn* (Cambridge: Cambridge University Press, 1993); Mary Hunter, "Haydn's London Piano Trios and His Salomon Sting Quartets: Private vs. Public?" in *Haydn and His World*, ed. Elaine Sisman (Princeton: Princeton University Press, 1997), 103-120; Elaine Sisman, "Haydn's Career and the Idea of the Multiple Audience," in *The Cambridge Companion to Haydn*, ed. Caryl Clark (Cambridge: Cambridge University Press, 2005), 3-14; Tom Beghin, "'Delivery, Delivery, Delivery!' Crowning the Rhetorical Process of Haydn's Keyboard Sonatas," and Mark Evan Bond, "Rhetoric versus Truth: Listening to Haydn in the Age of Beethoven," in *Haydn and the Performance of Rhetoric*, ed. Tom Beghin and Sander Goldberg (Chicago: University of Chicago Press, 2007), 131-170 and 109-129, respectively; Melanie Lowe, *Pleasure and Meaning in the Classical Symphony* (Bloomington, IN: Indiana University Press, 2007).

² See Schroeder, *Haydn and the Enlightenment*, 126.

³ Bond, "Rhetoric versus Truth," 111.

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In teaching my students about the arts and music, the burden reaching the “inexperienced listener” falls to me. This goal of intelligibility, I would suggest, shaped eighteenth-century music into a level of clarity that is most likely to be understood by my students, as it was for its first audiences. What is presented must have a level of acceptance and accessibility, and lead to a recognition of the virtues that can result from the experience, at least on the surface. A veneer of accessibility invites the initiated students to dig deeper into the music, thereby challenging their own conventions of understanding. This, in turn, broadens their acceptance of the various representational and metaphoric devices under which all arts operate.

But intelligibility and approbation are only part of the composer’s burden. Eighteenth-century social and aesthetic theorists such as Shaftesbury, Mattheson, and Burke, commented on art’s capability to improve, to refine, to uplift the individual and society through the cultivation of intellect and “taste.”⁴ Composers recognized this, and in many cases accepted this goal as a moral obligation. They sought to keep the goals of *approbation* and *cultivation* in some kind of balance: Bach anchored his cantatas—his musical sermons—with familiar chorale tunes; operas clearly differentiated dramatic tasks through different types of music, and offered commentary on social conditions; Haydn’s late symphonies contained “an extraordinary integration of opposites,”⁵ providing clarity, yet also, as David P. Schroeder argues, introduces them to, and “leads them by the hand”⁶ through, a high level of complexity. It is this aspect that is most compelling to me as a teacher, and parallels my goals for my students of the arts in this general education context: to make them members of an “Enlightened” public, leading the dilettante, by the hand if necessary, into the realm of the *Kenner*, knowledgeable of

⁴ Anthony Ashley Cooper, Third Earl of Shaftesbury, *Characteristics of Men, Manners, Opinions, Times*, 4th edition (London, 1727; discussed in Schroeder, Chapter 1 “Haydn and Shaftesbury,” in *Haydn and the Enlightenment*, 9-20); Johann Mattheson, *Der vollkommene Capellmeister* (Hamburg, 1739; edited and translated into English by Ernest C. Harriss, UMI Press, 1981); Edmund Burke, *A Philosophical Enquiry into the Origin of our Ideas of the Sublime and Beautiful*, 2nd edition (London: R. & J. Dodsley, 1759; reprinted by Dover Publications, 2008).

⁵ Schroeder, 101.

⁶ Schroeder, 18, arguing a concept from Shaftesbury, 206.

and interested in the workings of the arts to a level that allows them to participate in discourse about them. In effect, I aim to establish my own twenty-first-century salon culture. Consequently, the music of the eighteenth century (especially that of Haydn and Handel), and the many contemporaneous and current essays about it, have become my most effective pedagogical tools.

II. Broad concepts.

So, how do we get to the eighteenth-century salon? What broad ideas do students need to grasp? And how does eighteenth-century music take them by the hand and lead them there? I've found that three important broad concepts require introduction, and that the students need to be convinced of these concepts not just once, but every day—

1. Something actually happens. (There are observable, concrete facts, separate from emotional responses to the artwork.)
2. The role of representation and metaphor.
3. The importance of setting and occasion.

1. Early on I surprise my students by telling them that art is not principally about "personal expression" on the part of the creator, or only about an immediate, gut reaction to the work of art by its receiver. Rather, it is about communicating ideas through tangible, identifiable events, or gestures, specific to the art form. *Something actually happens*. Such things can be observed, discussed, analyzed, assessed (left-brain activities), outside of, or rather beyond, our own emotional responses to them. This does not require some divinely-acquired gift of creativity, but an acceptance of their tangibility and a realization of what those things are. The clarity and transparency of much eighteenth-century music presents these events, these gestures, sufficiently uncluttered as to allow students to focus on them. Indeed, one could argue it was designed to do so. Simple chorale tune settings at the ends of cantatas, the clearly articulated sections of concertos differentiating sections of stability with sections of

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instability, the smaller forces of the eighteenth-century orchestra treated in a more heterogeneous manner (as Webster points out⁷) enhanced by "period" instruments, clear articulation of meter, uncomplicated harmonies with strong cadential pull—these are basic "elements of music" cleanly distilled by composers in the music itself. They require little further filtering, only their recognition as the identifiable events and gestures specific to the art form, ready to be assessed.

2. The events, once identified, can then be analyzed within a context of *metaphor and representation*, through which an art work aims to uncover deeper meaning than the thing being represented can by itself. These are the ideas being communicated by the totality of the gestures, not along a line of communication, but within a communicative or rhetorical web containing composer, performer, and receiver, with arrows of information going in all different directions.⁸ Such metaphorical representation requires an understanding of "convention" as defined as a tacet agreement between the work of art and the receiver regarding the meaning of gestures. Students seem to accept the concept of artistic convention fairly easily. What is most challenging is getting them to accept that such conventions have been changeable in history. Our current cultural references are not the same as those of the Enlightenment, therefore our assessment of eighteenth-century art is well served by uncovering the eighteenth-century perspective the best that we can.⁹ A discussion of the word "sublime," starting with students' own definitions and then getting to Burke's definitions in *A Philosophical Enquiry Into the*

⁷ James Webster, "Haydn, (Franz) Joseph," in *Grove Music Online* (Oxford: Oxford University Press, 2007-2016). In §7 "Style, aesthetics, compositional method" Webster observes, "[Aspects of Haydn's style] include lean orchestration (Haydn: 'no superfluous ornaments, nothing overdone, no deafening accompaniments'), in which the planes of sound do not compactly blend but remain distinct. . . ."

⁸ I've found Tom Beghin's and Sander Goldberg's book *Haydn and the Performance of Rhetoric* particularly illuminating regarding this web of rhetoric.

⁹ Some examples from the mountain of studies in eighteenth-century hermeneutics: Wye Jamison Allanbrook, *Rhythmic Gesture in Mozart: 'Le Nozze di Figaro' and 'Don Giovanni'* (Chicago: University of Chicago Press, 1983); V. Kofi Agawu, *Playing with Signs: A Semiotic Interpretation of Classical Music* (Princeton: Princeton University Press, 1991); Thomas Tolley, *Painting the Cannon's Roar: Music, the Visual Arts and the Rise of an Attentive Public in the Age of Haydn, c.1750 to c.1810* (Burlington, VT: Ashgate, 2001); Raymond Monelle, *The Musical Topic: Hunt, Military and Pastoral* (Bloomington, IN: Indiana University Press, 2006); Robert O. Gjerdingen, *Music in the Galant Style* (Oxford: Oxford University Press, 2007).

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Origin of our Ideas of the Sublime and Beautiful is quite helpful in opening this door.¹⁰ Once the historical perspective nut has been cracked, looking at Telemann's *style polonais*, or Haydn's juxtaposition of a minuet to a ländler trio, or how his humor works on us, broadens students' concepts of metaphor. Questioning them about why Handel, in the familiar "Hallelujah" Chorus, chose to bring in the valve-less trumpets and timpani exactly at that moment, or why imitative polyphony occurs with the text "... and He shall reign for ever and ever," or why Beethoven chose to use basses rather than timpani for the second-movement opening "drumrolls" in the "Eroica," or other such easily heard musical events, leads them further and further into the details of the music, and at the same time broadens for them the spectrum of understandable and acceptable communicative modes. To be sure, some of the most profound growth in my students in this regard occurs in the RIT Orchestra, as we discuss written articulations, metric clarity, and balance issues in eighteenth-century repertoire, in light of their preconceptions about such things regarding the more familiar music of later composers such as Brahms and Tchaikovsky (or at least current approaches to that music).

3. Finally, the ideas conveyed in the arts, and the use of gestures to convey them, are shaped by *place and occasion*. An overview of the church-theatre-chamber divisions of Mattheson¹¹ and others, of the sonata-symphonic stylistic trends, and of the salon culture¹² helps clarify this. More importantly, students come to realize that the best understanding of the art comes from *experiencing* it as closely as possible in its initially intended setting. Electronic and other secondary representations or reproductions, particularly when experienced in solitude, offer only a limited understanding of the live

¹⁰ Burke's text has become one of my favorites in these courses, both for its usefulness in establishing some Enlightenment ideas and for its comparative discussion of the several arts, particularly literature. On the sublime, see also James Webster, "The Creation, Haydn's Late Vocal Music, and the Musical Sublime," *Haydn and His World*, ed. Elaine Sisman (Princeton, NJ: Princeton University Press, 1997): 57-102, and "Sublime and the pastoral in *The Creation* and *The Seasons*," *The Cambridge Companion to Haydn*, ed. Caryl Clark (Cambridge: Cambridge University Press, 2005): 30-44.

¹¹ *Der vollkommene Capellmeister*.

¹² Again, Beghin's and Goldberg's *Haydn and the Performance of Rhetoric* is most helpful, in particular Elizabeth Le Guin's chapter "A Visit to the Salon de Parnasse," 14-35.

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experience for which these works were composed. For many students, the concert attendance requirements I have in all of my classes leads them to their first exposure to live music. A situation that allows inquisitive interaction with the performers, as in the eighteenth-century salon, enhances this experience. Our university setting, where we have classroom courses and performing ensembles, makes such experiences possible.

We all have our favorite pieces to teach various things, and there are many works I could discuss here as pedagogical tools. I will describe just a few that I use in different types and levels of courses, and reflect on how they help achieve the three broad concepts outlined above to a degree appropriate for each course type/level.

III. Haydn's works in an introductory (100-level) performing arts/ humanities course.

Almost any of Haydn's symphonies and later string quartets demonstrate such things as the large-scale general concepts such as development of the sonata cycle and individual movement forms, the clarity of melody in the violins supported by a simple, generally slow-moving harmony, and a certain predictability in phrase structure. Dance movements and finales tend to exhibit the highest level of predictability and transparency, thus requiring the least amount of further distillation of the elements, and so I turn to them most often. But as with many textbooks, to draw students' attention to more subtle details of instrumental interplay, I find myself relying on the "Gott erhalte" movement of the "Emperor" String Quartet in C Major, Op. 76 no. 3.¹³

1. *Something actually happens* (many things, of course) in this movement. The theme is usually familiar to at least one of the students in the class, and it is easily traceable throughout. I draw their attention to the opening statement of it in the first violin, registrally above the other material, and we observe repetitious melodic patterns (bars 1-4 repeat 4-8, and bars 12-16 repeat 16-20), and that the first two segments (bars 1-8

¹³ Portions of the entire movement are discussed herein, and so it is impractical to include a score example. If the reader does not have a score but wishes to see it, one is available at IMSLP.

and 8-12) of the melody each ascend, while the final segment (bars 12-20) falls. We trace the melody's passing among the four instruments, each time surrounded by new material. Students note how during the first variation the theme in the second violin becomes an anchor by its repetition and its register, and yet the ornamental first violin part holds primacy for most listeners because of its higher register and faster rhythmic activity. Having just these two parts playing makes these observations clear. With variation II we dig into the somewhat more difficult concept of expectation regarding tessitura: despite material higher in the first violin, the theme is clarified by 1) the cello playing the theme higher than we would expect it to, and 2) the second violin playing a countermelody in its low register, remaining generally only a third above the cello. Also noted is the viola serving as the bass here and there. Tessitura continues to be the guiding discursive topic in the remaining variations, as the viola plays the theme in variation III almost entirely above the staff, and in the final variation all instruments move into a higher tessitura at bar 84, only to return to a more normal register at the end.

2. *Metaphor and representation.* Once these specific musical technical observations are noted, discussion regarding effect or meaning becomes more focused and related to "the facts." The upward and downward movements of the theme in specific places control our level of intensity and relaxation by creating a sense of registral "gravity" that at first heightens our expectations (creates "potential energy"), then lets us roll back down to a restful conclusion. Comparisons to Sisyphus help illuminate this idea.¹⁴ Noting that every instrument gets the theme, and furthermore the mixing of traditional quartet roles in variation III, become metaphorical of Enlightenment egalitarian ideals, *pace* Goethe,¹⁵ which we then also tie into the topic of the tune, Kaiser Franz. And finally in

¹⁴ Sisyphus also helps me with sonata form's tonal "potential energy" creation in expositions and release in recapitulations when we look at first movement forms. Perhaps his fated punishment has not been in vain after all.

¹⁵ "One hears four intelligent people conversing with one another. . . ." See Reginald Barrett-Ayres, *Joseph Haydn and the String Quartet* (New York: Schirmer Books, 1974), 7, and William Drabkin, *A Reader's Guide to Haydn's Early String Quartets* (Westport, CT: Greenwood Press, 2000), 3, for discussions of this idea.

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the last variation, the high tessitura of all of the instruments, particularly the first violin, seems to effect a sense of delicacy and smallness or sweetness (related to the "Beautiful" in Burke¹⁶), or perhaps distance and hence "dreaminess," and raises our expectations about coming back to earth, which are fulfilled in the closing bars, thus offering us rest.

3. *Setting and occasion*: Live performance. The use of a string quartet makes it very easy to give students a live performance in class. Students not only hear these things with a full acoustical body not possible with their earbuds or tiny computer speakers, but they also *see* the theme passed around, the physical adjustments necessary for playing in higher registers, the eye contact and other non-verbal communication of the players, and the subtle ways the players' bodies react to the raised tension and relaxation of the music. This begins to give them some understanding of the importance of the live setting for more fully experiencing the music as it was intended. Furthermore, armed with the select technical facts they observed and the representational and metaphorical ideas, or effects, related to them, students are encouraged to engage the players in discussion about this or that aspect, and so we generate our own salon activity, which helps bring to life (literally) for the students that important historical/cultural setting of Haydn's quartets.

IV. Haydn's works in advanced (200- and 300-level) music courses.

While I do offer nominally upper-level music history period courses, including "Era of Haydn, Mozart, and Beethoven," it is still the case that students who register may never have had a music course before. Thus, the same pedagogical concepts and goals of the 100-level course are necessary for the period course, with the fundamental differences being how much time I can spend with any one piece and therefore how much depth of understanding I can require, and an increase in the number of works I can teach for the composers of the period.

¹⁶ See Burke, 86.

When teaching the music of the late eighteenth century in this period course, Haydn's "Farewell" Symphony No. 45 in F-sharp Minor is most illuminating because of what it is *not*. I suggest to the class that while the histrionics of the closing measures of the finale, with the musicians exiting one by one until only Haydn and Tomasini are left to complete the work, are most obviously effective for getting the message of homesickness across to his magnificence Prince Nikolaus, the entire work "problematizes" the symphonic genre based on the Prince's (and our) expectations to such an exaggerated degree as to generate and maintain disquietude from the opening of the first movement onward.¹⁷ This sustained disquietude then represents extreme dissatisfaction . . . message delivered. Positing this at the outset as an overarching *metaphor and representation* goal (broad concept 2) allows us to look more closely at such things as the keys and their relationship to the instruments and thus the piece's inherent technical difficulty, its syncopation, the thematic arrangement in the first movement, and even the use of the *bariolage* in the exposition (bars 45-7) but not the recapitulation of the finale—this extra-ordinary physically notable technique in the second theme becomes 1/2-step motion in f-sharp and then c-sharp (bars 138-40 and 144-46), creating a bridge to the new slow theme's entrance (see Example 1). Focusing on these *things that happen* (broad concept 1) raise the interest of the events themselves for the students, as well as bring into relief the more traditional, or rather expected, structural and stylistic characteristics (that I hope they have learned before this) that *don't* happen. Needless to say, if I can arrange for a performance of this work, such aspects are only amplified by hearing it live and observing the physical gestures of the players (broad concept 3).

¹⁷ Needless to say, James Webster's *Haydn's 'Farewell' Symphony and the Idea of Classical Style* (Cambridge: Cambridge University Press, 2004) is most illuminating in contextualizing the work, as are his comments about Haydn the "problematiser" in his *Grove Music Online* article.

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Example 1: Haydn, Symphony No. 45 in F-sharp minor, mvt. IV,
 bars 45-7, 138-40, 144-46. Bariolage in Vn1 becomes 1/2-step.

The image displays three staves of musical notation in F-sharp minor. The first staff shows a sequence of notes with a '4 0' marking above the first two notes. The second and third staves show more complex rhythmic patterns with slurs and accents.

V. Haydn's works in advanced (200- and 300-level) interdisciplinary humanities courses.

RIT's particular STE(A)M curricular scaffolding does allow for, and in some ways encourages, interdisciplinary courses, including some taught with professors in other disciplines. Recalling that students at RIT may only have one course in the arts and humanities, team-taught interdisciplinary courses, especially "Music and the Stage" and "Nineteenth-Century Philosophy and Music," have been most effective in illuminating interrelated aspects of the arts and humanities, and thereby creating a broader salon atmosphere. Because of the interdisciplinary ties, and the broader look at the humanities, the three pedagogical concepts outlined above are more effective when approached in a different order: first establish the historical *settings and occasions* in which the arts function, then explore the topics of *metaphor and representation* which are the inherent linchpins of the interrelated disciplines, and finally focus on the *things that actually happen* to highlight the differences in ways the disciplines communicate their ideas.

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Each time we taught "Music and the Stage" the theatre professor and I spent considerable time on comedy, in particular *commedia dell'arte* literature. Eventually we get to the public opera houses of 1780s Vienna and Prague with Beaumarchais and *Le nozze di Figaro* or Tirso/Molière and *Don Giovanni*, but not before introducing students to the details of the more traditional *commedia* characters and *lazzi*, and the comedies of Goldoni. After studying select scenes of *The Servant of Two Masters*, with students reading parts and discovering the expected actions and reactions of the various characters, we turn to Prince Nikolaus's Eszterháza court opera house (including members of his troupe) and Haydn's *Il mondo della luna* to animate the consistent aspects of Goldoni's comedies such as the seven characters, pairs of lovers, "play within a play," etc.,¹⁸ using a contemporaneous musical representation. Many of our students appreciate how this story focuses on science and discovery, and the ethical questions raised in the story.¹⁹ With an overview of the court opera establishment of Haydn's "enlightened" royal patron (*setting and occasion*, broad concept 3) and the familiarity of the character types coming to the fore based on the materials up to that point, the opera's characterizations offer many ways of using the *metaphor and representation* (broad concept 2) expectations to explore the specifics of the music of the period and genre (broad concept 1).

Haydn's arias nicely establish the *commedia* characteristics of the players. Buonafede's exhibiting characteristics of both Pantalone and the Dottore gives a nice representation of the basso buffo role, and Ernesto's comparatively *seria*-style opening aria indicates his *primo innamorato* role. His dissembling as the hero Hesperus in the the second act's play-within-the-play "on the moon" brings logic to his assignment as a castrato, the only

¹⁸ A useful brief summary of Goldoni libretti's dramatic tools appears in Thomas Bauman, "The Eighteenth Century: Comic Opera," in *The Oxford Illustrated History of Opera*, ed. Roger Parker (Oxford: Oxford University Press, 1996), 88-91.

¹⁹ The dvd of the Theatre an der Wien performance released by C Major Entertainment in 2010 modernized the telescope into a virtual-reality machine, which enhances the appeal of this story for our students. See Charles Downey's review of this dvd in *HAYDN: Online Journal of the Haydn Society of North America*, vol. 2.2 (Fall 2012). Later in the semester we address similar questions surrounding science and discovery with Brecht's *Life of Galileo*, including a brief look at Hanns Eisler's incidental music.

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time Haydn would write such a role in an opera (taking advantage of the presence of Pietro Gherardi in Eszterháza that season). Particularly exemplary of the ways musical details generate characters are the successive arias of the three women in Act I.²⁰ Flaminia's brilliant C-major maestoso "Ragion nell'alma siede" (No. 16), with its bright orchestration, long 28-bar introduction, frequent melismas, wide leaps (7ths, 10ths), and dal Segno structure, show her as the *prima* counterpart of Ernesto. Next, Clarice's *seconda* position is established with "Son fanciulla da marito" (No. 18), a quick minuet in A major, with a shorter orchestral introduction (only 11 bars) than sister Flaminia's, a decidedly more syllabic style of singing except for a lengthy melisma searching for resolution on the word *cercico*, and simpler wind writing. Finally, Lisetta jumps into her comic "Una donna come me" (No. 20) without the formality of an orchestral introduction, in a decidedly syllabic style that recalls the 2/4 contredanse meter of Cecco's earlier "Mi fanno ridere" (No. 14) but changes to a more rustic 6/8 middle section, accompanied by very simple orchestral writing, hence solidifying her Colombina-type servant status. Within each of these arias are also some specific word-painting techniques, and comparing the arias in Act I to those in Act II's upside-down world of the play-within-the-play enhances the details of their characterization.

Beyond the specifics of these arias, *Il mondo della luna* also clearly presents other operatic conventions such as ballet/pantomime (the Act II pastoral ballet is a fine spot to show how instrumentation and gestures, such as the horn and bassoon orchestration and echo effects, set scenes and generate "topics"), stock aria types (e.g. the mock rage of Ernesto's/Hesperus's aria "Sempre pace, sempre amore," Flaminia's "Ste la mia stella si fa mia guida" simile text, and Ecclitico's and Clarice's Act III love duet "Un certo ruscelletto"), each with its own word painting and mimetic devices, and the wonderful Act II *imbroglio* ensemble finale and Act III ensemble reconciliation, complete with the story's optimistic moral.²¹

²⁰ A Youtube video of *Il mondo della luna* can be viewed at <https://www.youtube.com/watch?v=lfVZPbDphNU>. The three arias discussed run from 39:18 to 53:30.

²¹ The first chapter of Pierpaolo Polzonetti's *Italian Opera in the Age of the American Revolution* (Cambridge; Cambridge University Press, 2011), "The changing world on the moon," is very good reading

Perhaps it goes without saying that introducing students in the interdisciplinary course "Nineteenth-Century Philosophy and Music" to *The Creation* at the very beginning of the syllabus offers a solid glimpse of the waning Enlightenment as the door closes on the eighteenth century. *The Creation* is particularly effective in conveying the period's mimetic ethos, and the artistic representation of the sublime. The latter makes for an easy jumping off point to Kant, Michaelis, Schiller, Goethe, Beethoven, and E. T. A. Hoffmann, thus into Romanticism.

Of course, the straightforward mimetic tools of "Strait opening her fertile womb" (No. 27) offer an uncluttered look at musically representing sound and motion, from which other more subtle connections can be made in the rest of the work. Of particular interest to the students here is how the musical devices of mimesis put them "in mind" of a character or mood *before* the thing represented is referenced by Raphael in the text (the essence before the word). Once the idea of mimesis is clear, and the details of the musical tools that produce it (melody, meter, orchestration, harmony, etc.) are evident, we turn to the concept of the sublime in *The Creation*. This topic has received much ink, so there is no need to go into many details here.²² However, a few remarks are in order.

I devote much time to comparisons of *The Creation* and Burke's *A Philosophical Enquiry*. My first step is to draw attention to the fact that the authors of the texts used for the libretto of the oratorio—biblical writers and Milton—are those most often referenced (along with Homer) by Burke in his discussion of the sublime in the literary arts. Then I focus on the music and its relationship to Burke (with some help from Jim Webster's "*The Creation, Haydn's Late Vocal Music, and the Musical Sublime*"²³). Of

assignments for students in this class. The second chapter, also regarding this opera, proves to be too theoretically detailed for the general-education level of the students.

²² See James Webster, "*The Creation, Haydn's Late Vocal Music, and the Musical Sublime*," *Haydn and His World*, ed. Elaine Sisman (Princeton, NJ: Princeton University Press, 1997): 57-102, and "Sublime and the pastoral in *The Creation* and *The Seasons*," *The Cambridge Companion to Haydn*, ed. Caryl Clark (Cambridge: Cambridge University Press, 2005): 30-44.

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the many specific spots in the oratorio that can be used for demonstration, two have proven most effective. In the final chorus "Sing the Lord ye voices all" I note that the texts "The Lord is Great" (*Des Herren Ruhm*) and "Amen" are sung over and over again to the same motives, with the first of these reiterated locally by the instruments alone (see Example 2). But as the chorus runs its course the instruments begin to precede the word with the motives, and by the final bars (until the last statement) the motives are present in the instruments seemingly independent of the words. The instrumental motives have so firmly become the concept for the listener that the words are no longer necessary. Thus, when the chorus sings "Sing to the Lord, all voices," the instruments, by playing these motives, seem to *sing* "The Lord is Great" and "Amen." With singers and instruments all doing this, we are overwhelmed by the concepts of these words. In Burke's sublime terms, "The shouting of multitudes, . . . so amazes and confounds the imagination, that in this staggering, and hurry of the mind, the best established tempers can scarcely forbear being borne down, and join in the common cry, and common resolution of the crowd."²⁴ Additionally, this crowd of singers and instruments—"all"—has a sense of the infinite, including the heavenly host.

Example 2: Haydn, *The Creation*, "Sing the Lord ye voices all."
Text motives.



In this philosophy and music course, I save the *facta est lux* ("and there was Light") moment of No. 1 for the end of the discussion of *The Creation*, because it calls up a pivotal aesthetic question crucial to our leaving the Enlightenment and introducing the

²³ *Haydn and His World*, ed. Elaine Sisman (Princeton, NJ: Princeton University Press, 1997): 57-102. Webster's Table 1: "Invocation of the Sublime through Contrast" (65) and Table 3: "Classes of Sublime Passages" (70) are quite helpful for students.

²⁴ *A Philosophical Enquiry*, 61.

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Romantic in music: is music proper only in invoking the sublime through imitation (mimesis), as Burke would have it,²⁵ or can it actually generate the sublime, even for the briefest moment? Haydn's representation of the *facta est lux* instant neatly reflects Burke's statement about the destructive power of "the light and glory which flows from the divine presence; a light which by its very excess is converted into a species of darkness . . . by overcoming the organs of sight, [it] obliterates all objects."²⁶ The sudden full-force *ff* is enough to demonstrate to the students the *metaphorical* effect (concept 2) of the moment, which, in Burke's terms (through Webster), juxtaposes privation and magnificence. Students are then directed to look at the *specific musical events* (concept 1) that cause this juxtaposition, including the change in mode, generally soft dynamics leading up to the *ff*, the avoidance of traditional melodic material, and the use of mutes by the instruments, all leading to a complete change in character the instant the light is created—a keen representation of darkness into light. However, we also note that all of the instruments, including trumpets and timpani, are marked *ff* while the voices on the word "light" are marked *f*. I point out that such a marking of the trumpets and timpani *ff* and voices *f* occurs only one other time in all of Haydn's music (Mass in B-flat "Theresienmesse" "Dona nobis pacem" bars 192-end), and so it is highly unusual. Does Haydn, then, intend us to hear the word "Light" sung by the chorus, or is it obliterated by the sound of the orchestra, as the "light flowing from the divine presence . . . obliterates all objects"? If the word is obliterated, can we not suggest that Haydn here is not only mimetically representing a sublime moment, but that he is also generating an actual, real sublime instant, "in which all [of the soul's] motions are suspended, with some degree of horror . . . [and] the mind is so entirely filled with its object, that it cannot entertain any other, nor by consequence reason on the object which employs it"?²⁷ With these questions considered (and some review of the "Representation of Chaos"), we kick in the door of nineteenth-century Romanticism.

²⁵ See Burke's discussion of "The Beautiful in Sounds," in *A Philosophical Enquiry*, 95-6.

²⁶ *A Philosophical Enquiry*, 59-60.

²⁷ *Ibid.*, 39.

VI. Haydn's works in college orchestra within a general education context.

Having no degree program in music, the RIT Orchestra serves as a humanities elective within the general education curriculum, and as stated above, may be the only arts/humanities educational course students experience. Therefore, rehearsing for and performing concerts are not its only activities. As with my more traditional classroom courses, I have found the three pedagogical concepts listed above are necessary here, too, but in a more cross-referential, interactive way. The RIT Orchestra has studied many symphonies by Haydn, and his "Harmoniemesse" with the RIT Singers, and each has illuminated aspects of these concepts in its own way. Perhaps the most successful work for educating the orchestra students about the stylistic details of music of the eighteenth-century, the effectiveness of music as metaphor and representation, and the importance of setting and occasion, has been the Symphony No. 60 in C "Il Distratto."²⁸ From a "how to play the style" standpoint, it has everything: a slow, majestic introduction and bright allegro molto in the first movement, relaxed pastoral ("walk through the park") andante second movement, stately ("powdered-wig") menuetto and rustic trio third movement, stormy (*Sturm und Drang*) presto fourth movement, a slow aria-like lamentation fifth movement, and lighthearted "happy ending" finale. This variety allows me to address matters of articulation, metric clarity, phrasing, balance, dynamics, etc., especially how to treat each tempo and movement type differently (apropos to discussions in L. Mozart, J. J. Quantz, C. P. E. Bach, and others—pedagogical concept 1).

²⁸ As I below draw attention to moments from the entire piece, access to the whole score is helpful. The Robbins Landon score on IMSLP can be seen at http://ks.imslp.info/files/imglnks/usimg/e/e8/IMSLP31736-PMLP72187Haydn_Sinfonia_Hob_I_60__C.pdf

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As the orchestra begins to get a handle on these concepts we look at the "drama" of the piece, in particular its relationship to the play presumed to be the one for which this music was composed, and the specific ways Haydn represents his Distracted one.²⁹ Such dramatic representations (concept 2) help us understand the "Classical" style better and therefore clarify how to treat the specific technical playing requirements (concept 1). For example, we see how the first theme of the first movement seems to be unsettled between 6/8 and 3/4, and adjust our metric sense, and how we interpret staccato markings, accordingly (bars 24-32). Understanding the "wandering off" of the second theme, where we are set up for a nice four+four-bar phrase only to get stuck on a two-measure passage and long notes that die away, until we are shaken back into the completion of the theme by an abrupt *fortissimo* (bars 66-83), improves our phrase articulation and treatment of the *perdendo* (and I will wander off into the orchestra and start talking to someone, until the *fortissimo* brings me back to the podium). The relaxed nature of the pastoral second movement keeps us from playing it too slow. Playing the serious menuetto with a good solid sense of meter and clearly articulated phrasing makes the rustic drones and six-bar phrase of the trio (bars 43-48) all the more witty. In the adagio movement five the pizzicato violas and basso, and the Alberti-pattern second violin create a sense of operatic accompaniment for the yearning lamentation violin 1 melody, requiring an enhancement of their expressive playing. Etc., etc. Engaging students in discussions about these matters in rehearsal, as if we were in a salon, makes them better players, and gives them the broader understanding of the arts and humanities that a course within a general education structure should.

VII. Conclusion.

So while students at RIT are certainly geared towards those courses that they perceive will get them the job, with only minimal attention given to the arts and humanities, the music of Haydn gives me plenty of raw material for helping students broaden their

²⁹ A discussion of this appears in A. Peter Brown, *The Symphonic Repertoire Vol. II, The First Golden Age of the Viennese Symphony: Haydn, Mozart, Beethoven, and Schubert* (Bloomington: Indiana University Press, 2002), 147-53. I distribute Brown's synopsis of Regnard's play *Le distrait* (page 151) to my players.

understanding of the arts and humanities. As with the emerging general audience at the end of the eighteenth century, its clarity, humor, depth, and profundity allow for a chance to achieve a student's approbation, and thus interest in pursuing the arts further. Haydn's music clearly presents *things that happen*, are neatly attached to the conventional language of *metaphor and representation* of his time, all enhanced by an understanding of *setting and occasion*, including live performance and, when possible, a live performance in a salon setting that encourages discussion.

VIII. Works Cited

- Agawu, V. Kofi. *Playing with Signs: A Semiotic Interpretation of Classical Music*. Princeton: Princeton University Press, 1991.
- Allanbrook, Wye Jamison. *Rhythmic Gesture in Mozart: 'Le Nozze di Figaro' and 'Don Giovanni'*. Chicago: University of Chicago Press, 1983.
- Barrett-Ayres, Reginald. *Joseph Haydn and the String Quartet*. New York: Schirmer Books, 1974.
- Bauman, Thomas. "The Eighteenth Century: Comic Opera." In *The Oxford Illustrated History of Opera*, edited by Roger Parker, 84-121. Oxford: Oxford University Press, 1994.
- Beghin, Tom. "Delivery, Delivery, Delivery!' Crowning the Rhetorical Process of Haydn's Keyboard Sonatas." In *Haydn and the Performance of Rhetoric*, edited by Tom Beghin and Sander Goldberg, 131-70. Chicago: University of Chicago Press, 2007.
- Bond, Mark Evan. "Rhetoric versus Truth: Listening to Haydn in the Age of Beethoven." In *Haydn and the Performance of Rhetoric*, edited by Tom Beghin and Sander Goldberg, 109-129. Chicago: University of Chicago Press, 2007.
- Brown, A. Peter. *The Symphonic Repertoire Vol. II, The First Golden Age of the Viennese Symphony: Haydn, Mozart, Beethoven, and Schubert*. Bloomington: Indiana University Press, 2002.

Ruhling, Michael E. "Generating STEAM: Haydn and the Arts in General Education at a "Career-Oriented" Institute of Technology."
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- Burke, Edmund. *A Philosophical Enquiry into the Origin of our Ideas of the Sublime and Beautiful*, 2nd edition. London: R. & J. Dodsley, 1759. Reprinted by Dover Publications, 2008.
- Downey, Charles T. "Review of Nikolaus Harnoncourt and the Theater an der Wien, *Il Mondo della Luna*." *HAYDN: Online Journal of the Haydn Society of North America*, vol. 2.2 (Fall 2012).
- Drabkin, William. *A Reader's Guide to Haydn's Early String Quartets*. Westport, CT: Greenwood Press, 2000.
- Gjerdingen, Robert O. *Music in the Galant Style*. Oxford: Oxford University Press, 2007.
- Hunter, Mary. "Haydn's London Piano Trios and His Salomon Sting Quartets: Private vs. Public?" In *Haydn and His World*, edited by Elaine Sisman, 103-120. Princeton: Princeton University Press, 1997.
- Lowe, Melanie. *Pleasure and Meaning in the Classical Symphony*. Bloomington, IN: Indiana University Press, 2007.
- McVeigh, Simon. *Concert Life in London from Mozart to Haydn*. Cambridge: Cambridge University Press, 1993.
- Mattheson, Johann. *Der vollkommene Capellmeister*. Hamburg: 1739. Edited and translated into English by Ernest C. Harriss, UMI Press, 1981.
- Monelle, Raymond. *The Musical Topic: Hunt, Military and Pastoral*. Bloomington, IN: Indiana University Press, 2006.
- Morrow, Mary Sue. *Concert Life in Haydn's Vienna: Aspects of a Developing Musical and Social Institution*. Stuyvesant NY: Pendragon Press, 1989.
- Polzonetti, Pierpaolo. *Italian Opera in the Age of the American Revolution*. Cambridge: Cambridge University Press, 2011.
- Robbins Landon, H. C. *The Collected Correspondence and London Notebooks of Joseph Haydn*. London: Barrie and Rockliff, 1959.
- Schroeder, David P. *Haydn and the Enlightenment*. Oxford: Clarendon Press, 1990.
- Shaftesbury, Anthony Ashley Cooper, Third Earl of. *Characteristics of Men, Manners, Opinions, Times*, 4th edition, London: 1727.

Ruhling, Michael E. "Generating STEAM: Haydn and the Arts in General Education at a "Career-Oriented" Institute of Technology."

HAYDN: Online Journal of the Haydn Society of North America 6.1 (Spring 2016), <http://haydnjournal.org>.

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Sisman, Elaine. "Haydn's Career and the Idea of the Multiple Audience." In *The Cambridge Companion to Haydn*, edited by Caryl Clark, 3-14. Cambridge: Cambridge University Press, 2005.

Tolley, Thomas. *Painting the Cannon's Roar: Music, the Visual Arts and the Rise of an Attentive Public in the Age of Haydn, c.1750 to c.1810*. Burlington, VT: Ashgate, 2001.

Webster, James. "The Creation, Haydn's Late Vocal Music, and the Musical Sublime." In *Haydn and His World*. edited by Elaine Sisman, 57-102. Princeton, NJ: Princeton University Press, 1997.

_____. "Haydn, (Franz) Joseph." In *Grove Music Online*. Oxford: Oxford University Press, 2007-2016.

_____. *Haydn's 'Farewell' Symphony and the Idea of Classical Style*. Cambridge: Cambridge University Press, 2004.

_____. "Sublime and the pastoral in *The Creation* and *The Seasons*." In *The Cambridge Companion to Haydn*. edited by Caryl Clark, 30-44. Cambridge: Cambridge University Press, 2005.

Abstract

Teaching music within a general education scaffolding at a self-identified "career-oriented university" focused on the STEM disciplines (Science-Technology-Engineering-Mathematics), with no music degree program, offers many challenges. Over my eighteen years at such a place, where I teach in the traditional classroom and am conductor of its orchestra, I have come to recognize a striking similarity between the relationship my students have with music, and the arts and humanities in the broader sense, and the new emerging "general" audiences of the late eighteenth century. Thus, my goal as a teacher is not unlike Handel's, Haydn's, and Mozart's goal of seeking approbation of the presented materials to the "inexperienced listeners" so as to spark deeper interest. My lower- and upper-level courses, and my college orchestra, are likely the only academic experiences students will have with the arts and humanities, and so a few basic concepts are crucial to their understanding: 1) something actually happens; 2)

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the role of representation and metaphor; 3) the importance of setting and occasion. In all of the levels and types of courses, several Haydn works have proven exemplary for achieving and consistently reiterating these basic concepts, consequently opening students up to the larger communicative, aesthetic, and intellectual ideas of the arts and humanities.