

# LEARNING FROM MASTERS OF MUSIC CREATIVITY

SHAPING COMPOSITIONAL EXPERIENCES IN MUSIC  
EDUCATION

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*Abstract: There are several possible ways for investigating the creative process in musical composition in order to induce certain assumptions about the nature of the compositional experience that may provide a certain philosophical framework for shaping compositional experiences in music educational settings at all levels. By taking an approach mainly based on writings and interviews of twentieth and twenty-first century composers, such as Boulez, Ferneyhough, Foss, Ligeti, Xenakis, Reich, Reynolds, Schoenberg, Stockhausen, and Varèse, among others, Eleni Lapidaki illustrates certain parameters about their actual compositional process. Implications for music education are suggested for immersing student composers in learning experiences that respect their intuitions, search for their individuality, and place emphasis on innovation and creative freedom as inseparable from expression in their compositions.*

Asked in an interview how he could explain the creative processes involved in his composing, Gunther Schuller readily admits that the element of mystery that

lies beyond rational explanation plays an important part in the creation of his music:

As an artist—and I believe I am a thinking artist, not hopefully a mindless artist—it doesn't bother me that I don't know everything about either the creative process or its progeny. I am happy to know that it works, and that in the main I can rely on it and the way it functions. The fact that there are unrevealed and incomprehensible mysteries in the creative-arts process and in our evaluation of its products does not disturb me, although it arouses my curiosity. But I don't have to know how something works in order to use it.<sup>1</sup>

The present study, however, is based on the premise that a music teacher needs indeed to grasp how this creative process works in a real world context in order to foster and expand the student composers' craft of composition in educational settings at all levels. More specifically, the present study involves the investigation of the compositional process as seen from several twentieth and twenty-first century influential composers' viewpoints that may help us gain insight into a domain coated with a colorful diversity of personal experiences and theoretical speculations.

The composers chosen for examination include the following: Luciano Berio, Pierre Boulez, Robert Erikson, Brian Ferneyhough, Lucas Foss, György Ligeti, Tristan Murail, Steve Reich, Roger Reynolds, Arnold Schoenberg, Karlheinz Stockhausen, Edgar Varèse, and Iannis Xenakis, among others. The choice of these individuals was dictated by my wish to include composers from as wide a variety of compositional styles as possible including serialism, avant-garde, modernism, minimalism, musique concrète, and electronic music and who placed emphasis on innovation and creative freedom as inseparable from expression. Their musical styles which opened up new possibilities of expression encompass, as Elaine Birkin wrote, "free form, unequal time segments, fuzzy or non-tonality, angled contours, rapid change, multi-hued harmonies, dense texture, dissonance, mixed—or no—meters, an exploration of instrumental resources, and more."<sup>2</sup>

The choice of the above-named composers by no means implies a value judgment on my part about the importance either of their accounts or of their compositions and their respective styles. It is simply that their writings, lectures, and interviews demonstrate a dedication toward capturing the subtleties of the creative process and are especially elaborate in their description of the nature of creativity, in contrast to others who are *not* as prone to divulge their feelings about their creative process. In order to draw any kind of philosophical implications, I strongly believe that one should have in mind what Arthur Danto wrote in *Beyond the Brillo Box*: "Variation in style may have historical explanation but

no philosophical justification, for philosophy cannot discriminate between style and style.”<sup>3</sup>

I have carefully selected and linked together thoughts and emotions from their interviews and writings, as connected with the realities of the creation of music viewed from the internal frame of reference of the composers themselves. Since there is not one single reality but many, I attempted to show how they “challenge each other, recoil from each other, reflect each other, ignore each other, tease each other, are blind to each other,”<sup>4</sup> to draw on the opening words of Harold Pinter’s powerful Nobel lecture on *Art, Truth and Politics* on December 7, 2005. The testimonies of the composers concerned bear on questions about (a) the role of the conscious and the unconscious in music creativity, (b) how the compositional process gets started, and (c) how the compositional process moves forward.

In my exploration of the composers’ realities of their creative processes, I chose to present this material using an approach not so common in academic discourse: a collage-like dialogic as a structural device of fecundation as used by the composers themselves. Therefore, the composers’ words are, where helpful, extensively quoted, instead of being conveyed by means of paraphrases. Commentaries refer merely to research in philosophy, psychology, and music education that bear on problems posed by the composers themselves concerning the creative processes. This approach will, I hope, maintain the discussion of the composers’ realities of music creativity as vivid, dramatic, and edifying as possible and, in turn, help the reader grasp the peculiarities of experiences while composing music.

### VALUE OF COMPOSERS’ VIEWS FOR MUSIC EDUCATION.

It is hoped that the themes that emerge by setting twentieth and twenty-first century professional composers’ accounts of certain compositional experiences or phases of their creative processes against one another will provide a philosophical framework for teaching composition. I strongly believe that it is important for music educators at all levels of instruction to become mediators of professional composers’ creative concerns for their student composers. Thus, music educators could bridge the gap between classroom music and real world music.<sup>5</sup>

Furthermore, the knowledge of how professional composers compose offers the potential of finding the missing link in music education; that is, the writing of music by students within the school curriculum. As Bernard Andrews wrote about the benefits of “investigating the life reflections of Canada’s senior composers” for the Genesis Project, which aims to advance music composition in Canadian classrooms:

Students will have the opportunity to express themselves in a new way, that is, by writing their own music in a systematic way. . . . Such involvement may deepen their understanding of musical relationships and how one articulates feelings through sounds beyond rudimentary improvisational and creative activities currently available.<sup>6</sup>

With so many researchers of music education looking at the compositional processes of students in classrooms<sup>7</sup> and music technology laboratories,<sup>8</sup> it would be very helpful to acknowledge and draw philosophical implications for music composition in schools from recognized composers' voices about their individual composing realities. This may be especially effective since the composers under examination are in the service of discovery and idealistic seekers of the new in order to reject musical conventions and to shock accustomed listeners into an awareness of their mired condition.

It is hoped that the direct access to these composers' thoughts about the subjective experience of composing Western art music in the second half of the twentieth and the beginning of the twenty-first century may also promote the image of a fragmented culture whose ghettoization in music education is a serious impediment to the development of a comprehensive aesthetic education.

### THE COMPOSER, THE CONSCIOUS, AND THE UNCONSCIOUS

What may be of issue in almost all composers' views is that the main or essential mechanisms of the composers' creative faculty are both the unconscious inspiration and the conscious desire and effort to produce a musical work. In other words, there is a striking unanimity among composers that the role of the unconscious is vital in order to start and/or to complete a work to their own satisfaction. It is interesting to note that such attitudes are not restricted to composers of the Romantic period where we might expect to find them.<sup>9</sup>

Arnold Schoenberg's book, *Style and Idea*, contains the clearest and most systematic picture of his compositional process which encompasses both inspiration "that gives its undemanded blessing" and the conscious working out of a composition:

Only one thing is certain . . . : without inspiration neither could be accomplished. There are times when I am unable to write a single example of simple counterpoint in two voices, such as I ask sophomores to do in my classes. And in order to write a good example of this sort, I must receive the co-operation of inspiration.<sup>10</sup>

For Ligeti "instinctive" and "constructive," seen as complimentary modes, are the basic rules of musical creativity:

In my music the musical instinct plays an important role. Nevertheless, this instinct must never be over evaluated, so that this alone guides the compositional result. . . . During the composing, the instinctive and the constructive aspects are complimentary modes.<sup>11</sup>

Writing in 1978, Stockhausen, for whom musical creation is founded on metaphysical and religious percepts, admits that the act of composition (the “incarnation” of the mentally conceived musical image) also demands the necessary combination, in the composer’s terms, of “intuition” and “mental construction.”<sup>12</sup> In an interview with Iara Lee in Frankfurt in August 1997 for her film, *Modulations*, Stockhausen’s response about the role of intuition in his work was that

[i]ntuition transforms every normal action into something special that one doesn’t know oneself. So I am a craftsman, I can start working with sounds, with apparatuses and find all sorts of new combinations. But when I want to create something that amazes me and moves me, I need intuition. I don’t mean an intellectual idea. I need . . . to become involved, to come into a state where I do something without knowing why I do it. . . .<sup>13</sup>

Moreover, Boulez defines the fundamental components of creativity as “imagination” and “intelligence.” Writing about the composer’s creative faculty, Boulez made the following statement:

Creative mechanisms are nothing without imagination, but they are also nothing without the training that immeasurably strengthens them and perpetually enriches the means at their disposal.<sup>14</sup>

Finally, with regard to the unconscious Boulez sums up most composers’ belief about its significant role in the compositional process:

A great part is played by the imagination, which is the most irrational of our faculties. Why should our imaginations carry us at some given moment in one direction rather than another? This is a complex problem and difficult to explain: all that one can say is that the unconscious plays an incalculable role.<sup>15</sup>

Nonetheless, these self-observations about the complementary roles of the unconscious and conscious aspects of musical creativity do not cover the wide range of claims in psychological research on creativity. The contrasting views of psychological research illuminate the tension between, on the one hand, researchers<sup>16</sup> who deny that moments of instinct, intuition, or insight have any significant importance for creative processes and are “mysterious gifts disconnected from knowable psychological processes”<sup>17</sup> and, on the other hand,

researchers<sup>18</sup> who imply that creativity is little more than building on an initial intuition or insight. More specifically, David Feldman stated that creative individuals show “a natural tendency of the mind to take liberties with what is real, mostly in non-conscious ways. These transformations, nonetheless, have the possibility of becoming conscious.”<sup>19</sup> But rather than putting the one view against the other, the majority view claims that insight is a necessary and rather complementary component of creativity, along with the conscious checking of the insight’s validity.<sup>20</sup>

It is noteworthy that the unconscious aspect of the composer’s imaginative experience has not been adequately discussed in the research concerning music creativity in music education. In fact, most theoretical considerations underscore the idea that imagination in creative thinking is confined to a complex process of consciously shuffling already experienced or “funded” meanings<sup>21</sup> and the concomitant role of problem-solving during the creative act.<sup>22</sup> So, it is in respect to the role of the unconscious that we seem to be in the dark.

The philosopher, however, will have to enlighten us on the manner in which the above-mentioned synthesis of the old and the new comes about.<sup>23</sup> The problem does not consist of delineating the old elements and differentiating them as such, but of examining the origin of the new elements or of disproving the assertion that anything new was born.<sup>24</sup> I strongly believe that, if we cannot explain this process, then we must acknowledge it as a mystery.<sup>25</sup> Mysteries are not solved by encouraging us not to declare them to be mysteries.<sup>26</sup>

### THE BEGINNING OF THE COMPOSITIONAL PROCESS

Summing up most composers’ experiences, we may say that composition is a rather slow activity that starts either “out of nothing” or with a process of silent hearing, seeing, touching, feeling, transforming, or improvising. On the one hand, discussing how he starts composing a piece, Steve Reich speaks of a chance-like conception and working out of his musical compositions, as if they originate out of nowhere. In his words, “Material may suggest what sort of a process it should be run through, and processes may suggest what sort of material should be run through them. If the shoe fits, wear it.”<sup>27</sup>

Xenakis also admits that he starts a composition “out of nothing”:

I have no basic material. In every case I start out of nothing. I consider this to be right because I try to break away from the past. . . . I don’t force myself into a predetermined structure, I want to navigate freely.<sup>28</sup>

Lucas Foss states in this regard,

[s]ince age seven, I’ve been composing and have never stopped composing:

yet, the creative process is as elusive to me as it has ever been. I still do not know where the notes will come from when I accept a commission for a new work. As I sit down I often panic. I stare at the empty space of music paper. How can I say that my piece will be ready for performance next January when I do not have a recipe for making it happen?<sup>29</sup>

He goes on to say,

What is an idea? Years ago I organized a symposium in Buffalo featuring Xenakis, Cage, Gregory Corso, and others. . . . The question Cage chose to ask me was, “What is an idea?” I was nonplussed for a moment. Then I found myself declaring, “An idea occurs when there is chaos, and suddenly you see relationships; when you find meaning where you’ve looked before and there seemed to be only disorder.”<sup>30</sup>

On the other hand, in response to a question about what comes first as the idea of a piece, Ferneyhough remarked in an elaborate manner:

I have to say, it depends entirely on the piece. Usually I would say that the first sensation, the experience which begins to persuade me that I am actually going to write a piece, is very often a cross between a tactile, a visual and an aural one. That is, I tend to perceive a mass, almost a tangible sculptural or sculpted mass, in some sort of imagined space which is made up of these various elements. . . . That can quite often be allowed to revolve in my mind for some considerable time—it might be a year or 18 months—before it clicks together with whatever else is buzzing around in my mind at the time.<sup>31</sup>

Ligeti explains that he finds his way into a composition by improvising on the piano:

The naïve initial musical idea can be described as music in the raw state. It could be quite possible for the music to be heard in this state—indeed, it is thus heard when I am improvising on the piano—but the sound, measured against the standards I regard as adequate for the structure and form of the piece, is far too primitive.<sup>32</sup>

Unused or undeveloped material of a finished composition has also been the ground for a new composition. In an interview with Joshua Cody, artistic director of the Ensemble Sospeso in Chicago in 1993, Pierre Boulez recalled, “Absolutely: it’s [the compositional activity] a tree which gives another tree which is another tree.”<sup>33</sup>

Moreover, this inner thinking process is not put into motion in an instant with a single flash of inspiration, but is the result of a complex, careful, and

painstaking preparation before the composer starts writing a composition. As Boulez remarked, "It is only very seldom that the composer finds himself in the presence of a world that he has glimpsed . . . in a single flash of heightened awareness, a world he then has to bring into actual existence."<sup>34</sup>

However, Schoenberg gave the following example of the conception of sound images that had already taken a completed form in his head before he started writing the piece, when he discussed the compositional act of his *First String Quartet*. He composed parts of the work in his head while taking a long walk and then he put them down on paper upon his arrival home. "Even a fast writer could not copy them in less time than it took me to compose them."<sup>35</sup>

Composers may also be stimulated by the actual sound of a musical instrument or a remarkable performer. When Ligeti was commissioned to write a companion piece for Brahms' *Horn Trio*, he declared, "When the sound of an instrument or a group of instruments or the human voice finds an echo in me, in the musical idea within me, then I can sit down and compose. [O]therwise I cannot."<sup>36</sup>

Extra-musical images may also provide the composer with ideas and material and contribute to musical creativity. This was certainly the case with Varèse who often borrowed his ideas from higher mathematics or astronomy but gradually gave them an expressive overall musical shape beyond the blindfold use of mathematical formulas or scientific processes. "I am often inspired by higher mathematics or astronomy simply because these sciences stimulate my imagination and give me the impression of movement and rhythm,"<sup>37</sup> he wrote for the program notes for his piece, *Intégrales*.

Furthermore, one can find many examples of composers whose direct personal (autobiographical) emotional exaltation triggered the unformed mass of creative volition. In order to realize the creative potential of this volition, some composers need to have something for it to react against.<sup>38</sup> Xenakis, however, asserted that "all truly creative people escape this foolish side of work, the exaltation of sentiments. They are to be discarded like the fat surrounding meat before it is cooked."<sup>39</sup> In a letter to Helen Heffernan, Schoenberg took a similar view: "It has always been my belief that a composer speaking of his own problems speaks at once of problems of mankind. But he does it in a symbolical way."<sup>40</sup>

In addition, there are interesting accounts of composers who dream their music. In most cases, dreams provide them with sound images *per se*; they do not act as a stimulus capable of being transformed into musical material. Ferneyhough who describes how he found a score "in front of him in a dream" illustrates an example of this type of creative process:

I was tremendously encouraged by the feeling that even at moments of intense . . . almost desperation, at not being able to compose, one was creat-



ing these complete pieces inside oneself. So that even if they were works that would never see the light of day, it gave me a whole new perspective about what creativity is, about where creativity is located in the human spirit.<sup>41</sup>

Varèse also describes a colorful dream in which he heard two fanfares. *Fanfare no. 1* of the dream is to be found in mm. 3–4 and *Fanfare no. 2* in mm. 19–20 of *Arcana*.<sup>42</sup> A childhood dream also provided Ligeti a musical stimulus when composing *Atmosphères*.<sup>43</sup> Apart from delivering entire compositions or supplying musical material and ideas, as these examples show, dreams can also solve certain problems of the creative process. They may be the result of a continuous conscious and unconscious brooding over a problem, which previously occupied the composer's consciousness.

In sum, what becomes clear from most of the above mentioned accounts is that what is first given as the composer's conception of a germinal idea or a mass of musical and extra-musical ideas and dreams needs to be internalized, questioned, transformed, and crystallized in the composer's mind. In other words, to compose does not mean to merely carry out an initial idea. The composer reserves the right to change his or her mind after the conception of an idea. As Foss claims, "To me these moments are my best moments, because I don't change my mind unless I have an idea."<sup>44</sup>

### MOVING THE COMPOSITIONAL PROCESS FORWARD

The abstract adventure of the conception of an initial musical or non-musical idea or image has the capacity to generate a whole range of possibilities, choices, and problems, which may, consequently, open up to the composer a new perspective for discovery. Indeed, for most composers this problem-solving and choice-making process is one of discovery, as composers' accounts testify. More specifically, in most cases composers tend first to consciously discover what they are trying to say, or might say, and move that discovery of something to say toward converting it into musical form. In other words, their main concern is the foundation and development of a musical language through an arduous process of choice-making. Composer Tristan Murail, in conversation with Kirk Noreen and Joshua Cody, describes this concern as follows:

I remember a student, once, who showed me the beginnings of a composition; his sketches were systematic permutations of chords, and I told him to be careful, to always seek the musical idea. It has to tell you something. This doesn't mean a narrative, of course, not a story; but it must communicate something.<sup>45</sup>

Another important facet of music creativity is that the choice-making process is fulfilling, even though torturous.

The choices I make when I compose music, for example. They are distressing, for they imply renouncing something. Creation thus passes through torture. But a torture which is sane and natural. That is what is most beautiful: to decide at any moment, to act, to renounce, to propose something else. It is great. The joy is the fulfillment of living. That's what it means to live.<sup>46</sup>

In addition, Stockhausen, in an interview with Ken Hollings in March 1999, discloses the persistent quality of creativity and the demand for dedicated, extensive, and disciplined work for a convincing compositional outcome: "What is important is spending time, unlimited time, on composing. . . . What I wrote last night I have changed this morning because during the night I have woken up and changed something."<sup>47</sup>

Schoenberg, likewise, argued that after the conception of the initial idea for a piece his compositional output was the result of strenuous and burdensome work:

Alas, human creatures, if they be granted a vision, must travel the long path between vision and accomplishment; a hard road where, driven out of Paradise, even geniuses must reap their harvest in the sweat of their brows.<sup>48</sup>

Another important facet of the compositional act is that sounds are internalized during the choice-making process.<sup>49</sup> In fact, the musical sounds that may be of interest to the composer each time are constantly brought to consciousness and, thus, listened to, compared with other sounds in memory, put into groups of sounds and silence, combined with other sounds into textures, or categorized and balanced in terms of duration, loudness, space, timbre, and instrumentation. Robert Erikson emphasizes the importance of conscious cognitive processes in the compositional act as follows: "I believe that when I am imagining, combining, categorizing, and comparing sounds I am doing something like thinking."<sup>50</sup>

Of course, it appears that there are different strategies which lead to the solution of the musical problems throughout the compositional process. Twentieth and twenty-first century composers often work within self-imposed or deliberate technical restraints, in order to produce a specific composition, such as algorithmic functions (Xenakis, Varèse), computational processes (Stockhausen), the physics of sound as such (Varèse), numerical relationships (Schoenberg), scientific processes (Stockhausen), and constraints imposed by the existing technology. In his book, *The Aesthetics of Survival*, composer George Rochberg points out that "a composition may be based on a theory or hypothesis of which the composition itself becomes a form of proof subject to validation by aural perception."<sup>51</sup>

Nonetheless, the above-mentioned composers seem to be in agreement that

these restrains provide them with a kind of pretext that gradually disappears and gets absorbed into the process of composition of the work. For instance, Xenakis, like Varèse, believed that “it was always up to the composer to exercise his artistic responsibility of choice and taste.”<sup>52</sup> It is also interesting to note that Varèse pointed out that we must not utilize “electronics as a *Deus ex machina* that will compose for us.”<sup>53</sup>

Likewise, explaining his desire not to allow scientific processes and physical phenomena to be reflected in his music, Stockhausen told Lee in an interview: “So probably after the first contact with these new means the computer can make naturally combinations up to an infinite number. The choice of what is interesting for us is the most important. And then you see that’s not too easy.”<sup>54</sup>

In sum, self-imposed restrictions or “boundary conditions”<sup>55</sup> seem to provide composers with a kind of pretext to choose from an otherwise chaotic multitude of compositional possibilities that, however, gradually disappears and gets absorbed into the process of composition which is characterized by the composers’ aesthetic perceptions and choices.

## THE COMPOSER BETWEEN TRADITION AND INNOVATION

The problem about the way composers choose the material of their original musical language raises questions about the validity of certain musical influences on the composers and the relevance of historical and social contexts. Music needs a context—an historical and cultural framework—within which to grow. Therefore, it is not surprising that influences from the musical world in which the composer lives play an important role in the creative process. Referring to the influence of compositional techniques being used by his contemporaries, Berio said in an interview:

As for the serial technique . . . I grew gradually, organically into this, and it was a kind of a natural developmental process for me. I didn’t fall from the horseback of Saul on the way to Damascus and receive a revelation; no, long before I met Dallapiccola while I was still in the conservatory, I was aware of things, I was developing. Actually, the most important thing is constant growing, constant development.<sup>56</sup>

Most composers need to build on musical material of the past, in order to produce a new and personal style. Thereby the past is seen as being comprised by a static system of rules and techniques that needs to be innovated and emancipated during the composers’ search for their own musical identity. The tension, however, between influences of Western art music of the past and the desire for originality is described by Pierre Boulez, in an interview with Cody in 1993, as follows:

I don't like to write something that could have been written by somebody else. That's really maybe the death of me! If I write something, I want that to be exclusively mine. There is influence, yes, but the influence has been so absorbed that you cannot specify it, really. I can see it, because I know the source; and if I tell someone, then they can see a relationship, vaguely. But if I don't say a word, nobody will see it. That's the main thing.<sup>57</sup>

Along these lines, to illustrate the problem of musical influences, Foss remarks:

Yes, influences are enriching, and they can be found in every work of art, even the most original. . . . The fact that Stravinsky used the classics as a major influence is obvious. What is interesting is how he used them, how he turned Bach into Stravinsky. I strongly suggest that we play down basics like who influenced whom, and instead study the way the influence is transformed; in other words: how the artist made it his own. The prerequisite: love. If one uses music that one does not really love, then one will not succeed in making it one's own.<sup>58</sup>

Ligeti and Xenakis who were admittedly influenced by Bartók expressed their desire to free themselves from the old master's influence in this way: Ligeti, on the one hand, said that "in the early 1950s, I began to feel that I had to go beyond Bartók," while Xenakis argued that "slowly it dawned on me that I had to be much freer, much more individual."<sup>59</sup>

Furthermore, non-Western music became, as soon it was available, a source of musical material and, thus, an additional domain that did not merely elicit particular problems in composers' decision-making process, but rather appeared to "reopen the possibility which the musical tradition ha[d] closed"<sup>60</sup> and *transform* their musical thinking.

In many cases, the use of non-Western musical material can be regarded as an attempt on the part of the composers of the second part of the twentieth century and the beginning of the twenty-first century to react against the ideology and hegemony of the European musical culture and the cultural colonialism that is associated with them. For instance, what appears important for Reich's compositions is the way in which he has amalgamated the Western tradition and heterogeneous elements of drumming techniques after the composer returned from Africa. These elements were profoundly to transform his musical thinking. Along these lines, Boulez writes about his fascination with non-Western music:

When I was a young man, I listened to records of the music of other civilizations, especially those of Africa and the Far West. The beauty of this music came as a violent shock to me, because it was so far removed from our own

culture and so close to my own temperament; but I was quite as struck by the concepts behind these elaborate works of art. Nothing I found was based on the “masterpiece,” on the closed cycle, on passive contemplation or narrowly aesthetic pleasure.<sup>61</sup>

Although the musical medium is reputedly abstract, other art forms, such as visual art, film, literary texts, and poems, among others, have been significant sources of influence on composers’ creative process. These art forms gave composers the impetus to transpose, interpret, or play with their unique parameters of both structure and content. Schoenberg, for example, wrote the following about Stefan George’s poetry:

With the songs after George, I succeeded in approaching an ideal of form and expression which I envisaged for years, without having the strength or assurance to realize it. Now, however, I am conscious of having broken through the barriers of aesthetic.<sup>62</sup>

Along these lines, in a conversation with Wolfgang Fink that took place in May 1999 at IRCAM in Paris, Boulez describes the influence of Mallarmé’s text on his composition, *Pli selon pli* (*Fold by Fold*):

The body of the text is important to me, although I’m also playing with the text when, for example, I ornament a syllable to the point where one can hardly follow the text any longer—because the ornamentation of the melodic line is so distracting that one loses the thread.<sup>63</sup>

Furthermore, for some composers the musical influence can emerge from the development of computer technology. However, it appears that the main concern is not merely with getting into step with the new technological acquisitions but deciding on their intrinsic relation to the actual musical context. In other words, composers seem to be vigilant not to simply become spectators of the music created by their own computer tools but to maintain, to some extent, creative control over the tonal and temporal substance of their music. When asked in a recent interview whether advances in technology are harmful to musical composition or not, Boulez gave the following answer:

There is a lot to be said about technology, and there is certainly no lack of fiddling about by what I call “handymen.” These people don’t know how to write music, don’t know how to structure it, and so technology becomes their way out. Naturally they depend on gadgets, and gadgets wear out very quickly! Once they’ve figured something out, they’re on to the next thing. On the other hand, composers who try to link technology to their musical thoughts are completely different. Technology does indeed change, but it also adapts by building on existing formats. When you compose works for a

specific technology and a more sophisticated one comes along, you have to adapt your thinking. But I think this is going to slow down, because technological changes are much less dazzling now than they were thirty years ago.<sup>64</sup>

Along these lines, even composers who use digital technology as a tool of creative freedom and emancipation, like Stockhausen, Reynolds, and Xenakis, among others, declared a frustration with technology due to either its “docile conformism”<sup>65</sup> or its “automatic rationality”<sup>66</sup> that can sometimes lead the composer “in a kind of music that we are hearing far too much of too often.”<sup>67</sup>

In sum, the compositional process proceeds in a kind of personal and social tension. In many cases, composers are faced with the tensive conflict between staying with tradition and breaking new ground at each step in the process. Thus, one might conclude that the creative process springs from a systematic viewpoint determined by a number of choices in which certain beliefs, ideas, and influences—by no means isolated from the rest of the composer’s life—play a dominant role in the search for new possibilities of expression. The more powerful and varied these choices are, the greater the effort the composer makes to juxtapose and superimpose, to develop and transform them, according to his or her aesthetic sense and aspiration to transgress aesthetic and commercial conventions, until the work is finished.

### SOME IMPLICATIONS FOR MUSIC EDUCATION

If a general educational approach is to emerge from the alloy of composers’ experiences of their music creativity, it rests on the realization that the creative process involves a diversity of idiosyncratic conscious and unconscious traits. Therefore, to draw direct educational implications from each and every one of the ideas that belong distinctively to a particular composer or composers, would be an oversimplification on my part, as these implications would be based on limited or incomplete evidence.

Nevertheless, there are a few elusive beliefs that underlie the creative concerns, attitudes, and realities of the composers discussed above that enable us to draw indirect and non-utilitarian educational implications. After all, the creative process is an elusive cultural activity with no recipes for making it happen. In this light, the common thread of composers’ idiosyncratic concerns and practices that captures the overall aura of their music creativity pertains to (a) the intangibility of the unconscious throughout the compositional process,<sup>68</sup> (b) the development of musical individuality,<sup>69</sup> and (c) the desire to transgress existing rules and codes, due to their personal and social conflict between tradition and innovation.<sup>70</sup>

Thinking reflectively about these beliefs and drawing philosophical music

educational implications from them may help us expand our role as music educators when teaching composition at all levels of music instruction. In turn, by making student composers in different classroom settings grasp the essence of influential professional composers' creative concerns, even if they do not intend to become professional composers, we can help them immerse in learning experiences that respect the mysteries of their intuitions, liberate their own practices of critical thinking in music, and dare to create innovative music that expresses against-the-prevailing-grain musical beliefs and ideas.

### THE INTANGIBILITY OF STUDENT COMPOSERS' UNCONSCIOUS

It becomes clear that it is notoriously difficult to adopt any general attitude as a music educator with regard to students' composing. For composing, like any cultural activity, is rooted in the intricate relation between one's subjective self and the world around it—in one's subjective truth—as we have observed in all the composers discussed in this paper who expressed this notion in many different ways and on many occasions. In other words, the idea of composing music implies the overriding presence of the personality of the composer which is influenced for the most part by the unconscious.

Therefore, it is critical that the music teacher be seen as the facilitator of students' compositional processes helping students explore and continuously discover their own creative personalities and, thus, empowering their personal involvement with music. Any creative work needs individual attention and encouragement for each vision and personal experience are different.

Moreover, the teacher's tutelage in the area of the self in general and the unconscious or the imagination in particular cannot be direct. In fact, it is very hard if not impossible to teach a person in which direction to set his or her imagination in motion.<sup>71</sup> Imagination must be recognized as a mystery, which cannot be conveyed without loss. And this limitation of teaching is as it should be. After all, the quality of mystery is a common theme in nearly every composer's account.<sup>72</sup> Once a mystery is manipulated, something of it may become numb. One can only imply how things are, how things reveal themselves from the unconscious. No one should attempt anything more. Failing this, musical creativity remains a predictable academic exercise.<sup>73</sup> It is mainly the materialization (Schoenberg), the mental construction (Ligeti), the intellectual mechanisms (Boulez), or the conscious working out of a composition which can be observed and, thus, assisted by the music teacher.

### DEVELOPING MUSICAL INDIVIDUALITY

The experiences composers undergo when they start a composition are a delicate and intricate matter. As we discussed before, the compositional process starts with a process of silent hearing, touching, feeling, transforming, and improvising on initial musical or non-musical ideas, which are by no means isolated from the rest of the composer's life. As Harvey explains, "External stimuli become part of the internal psychic reality: one catches a glimpse of oneself in things that excite or have significance for one."<sup>74</sup> Therefore, a music teacher interested in encouraging the creative development of student composers would do well to give significance to their experiences of life, their preferences in music and other art forms, science, and technology, and their creative ideals and contexts, as well.

Music teachers need to possess the generosity to refuse to deny student composers the freedom to reflect their own insights back to them and, in turn, influence the teachers' musical reality.<sup>75</sup> Indeed, it is important that music teachers try to establish students gradually as original, independent personalities who try to internalize sounds and, thus, unite themselves with their environment in a continuous creative process. In fact, the passion and energy that student composers infuse in their original ideas will then help them to generate these sounds into music. In other words, to consciously discover what they are trying to say, or might say, and then move that discovery of something to say toward converting it to the musical language or style of the composition is what professional composers do.

Music teachers, therefore, wishing student composers to express and exercise all their ideas, should grant them ample time to work on their compositions, as most professional composers do, according to their own above-mentioned accounts about a long period of time (or gestation time) between the conception of a germinal idea or mass of ideas and its successive internalization, transformation, and crystallization in the mind. After all, no musical idea is bad. And if it does not work, at least one gets it out, and one should have time to move on to the next one.

In addition, music teachers would do well to acquire profound and ever-widening musical knowledge in order to provide their student composers with diverse (but not rigid) sets of tools or techniques to solve rational problems and bring musical meaning and order to their compositions. Especially with younger children, who have limited prior musical experiences, yet an insatiable desire to learn new things and an inclination to imitate, music teachers should first encourage them to make acquired knowledge and influences *their own*, in order to feel competent and content. Once this happens, then one day they will discover a new



idea or ideas to excite them and experiment with instead in search for their musical individuality, as most composers operate according to their own accounts.

In sum, music knowledge or techniques and the activation of the student composers' desire for discovery and innovation should evolve together through balanced stimulation. As Paul Woodford claims:

Unless students develop the disposition to grow in musical belief and knowledge and to develop their musical individuality by exerting control over their own musical thinking and learning, they will remain subject to the dictates of the group.<sup>76</sup>

### TEACHING COMPOSITION TO TRANSGRESS

The range of components that may influence the compositional process is wide. Musical beliefs, styles, and techniques from different historical periods of Western art music, music from non-Western cultures, art forms other than music, and technology have always been some of the sources of creativity advocated by the composers discussed. In most cases, however, as shown earlier, there seems to be convincing evidence that professional composers are guided by tradition, even if new journeys are being undertaken. As Harvey points out, "Composers, however, do not work in a vacuum."<sup>77</sup>

Therefore, the earnest learning about music and other artistic endeavors, past and contemporary, that stimulate the student composers' mind into creativity is very important. Student composers have the opportunity to discover the things, past and present, that may find a resonance in themselves and thus instill, develop, and transform their creativity into something original and, hopefully, innovative.

Composing music teachers and collaborating composers need to be part of a *learning community of composers* in the classroom.<sup>78</sup> They need to allow their student composers to share in the evolution of their own musical thinking, discoveries, influences, and day-to-day progress, along with the student composers. As Toynebee wrote, "We should all be creators together, and in this way transform the limited social practice of music making into something universal and collective."<sup>79</sup> That means that music teachers would do well to compose.<sup>80</sup> Unfortunately, as Mary Kennedy claims, "there remains an elusiveness about composing that causes many persons, and especially teachers, to avoid stepping into what they deem as uncharted waters."<sup>81</sup>

In a learning community of composers, then, students will have the opportunity to learn how their teachers themselves make use of the available knowledge and how they allocate their knowledge sources to the various problems as they

arise during the compositional act. However, music teachers' compositional processes should not become the prototypes of critical thinking in music but the trigger of productive musical conflict, resistance, transformation, and transgression, which have been important sources of creativity advocated by the composers discussed.<sup>82</sup>

In addition, peer beliefs, compositions, criticisms, and feedback are indispensable elements for increasing intellectual interaction and challenging the student composers' musical beliefs and ideas before, during, and after their creative endeavors.<sup>83</sup> In other words, everybody should provide a source for transformation and transgression and must be given the space to be this impetus for others and receive expression from others, in order to achieve creative freedom. As Karl Marx argued:

Only in community with others has each individual the means for cultivating his gifts in all directions; only in the community, therefore, is personal freedom possible. . . . In the real community the individuals obtain their freedom in and through their association.<sup>84</sup>

## CONCLUSION

While music creativity has been a component of music education research for decades, some of the themes arising from professional composers' experiences of their creativity, such as the significance of the unconscious, the apprehension towards discovering ones' *own* musical language, or the personal and social tension between tradition and innovation, among others, have not been adequately recognized in the literature of music education. For example, while most composers express an awareness of the limits of conscious creative thinking in music, most music education researchers tend to carve up the composer students' composing into cognitive *intentional* acts and/or study the meanings the latter attribute to these acts. By doing this, I strongly believe that musical creativity in general and composing in particular run the risk of becoming a predictable academic exercise, which merely demands problem-solving skills on the part of the student composers (or alleged "critical thinkers").

With regard to the composers concern to consciously discover what they are trying to say, or might say, and then move that discovery of something to say toward converting it to the musical language or style of a composition, music educators have limited themselves to asking students to be more reflective about how and what they compose without, however, being themselves equipped with the knowledge to provide each one of their student composers with the appropriate musical means or techniques suitable for his or her own unique creative problems. For instance, one may ask the question, "How many music educators

are equipped with the knowledge to convincingly help the student composer of a rap song or a composition for a video game expand his or her knowledge and expressive palette?”

Furthermore, music educators have also place inadequate philosophical emphasis on the personal and social tension between tradition and innovation that appears to be another major concern of most professional composers of the twentieth and twenty-first centuries. On the one hand, there is an increasing tendency, on the part of composers, to include popular musics beyond the Western art tradition of classical music, as an innovative component of teaching composition. On the other hand, only few music educators appear to draw their composer students’ attention to the importance of the personal and social conflict between staying within a tradition or code, even if it is the Western popular music tradition, and breaking new ground at each step in the creative process and, possibly, shaping new traditions or codes. As Estelle Jorgensen rightly wrote, “Culture is a precious human undertaking, and the host of musics, arts, languages, religions, myths, and rituals that comprise it need to be carefully transmitted to the young and *transformed in the process*.”<sup>85</sup>

Even though the question arises as to the extent to which children’s experience of composing resonates with those of professional adult composers, it seems that the general themes that underlie the opinions of the latter are not irrelevant or immaterial for real-world issues concerning the music creativity of any person of any age and music background, if he or she wants to compose. After all, all people’s unconscious needs to remain intangible, all people’s expression searches for individuality or identity, and, finally, all people live in a conscious or subconscious tension with the various codes and forms of dominating forces or “symbolic power”<sup>86</sup> in their ecosystems, starting with their caregivers, their teachers, and their peers.

Furthermore, learning about the creative concerns of the composers chosen for examination (for example, Berio, Boulez, Erikson, Fernyhough, Ligeti, Murail, Nono, Reich, Reynolds, Rochberg, Schoenberg, Stockhausen, Varèse, and Xenakis, among others) may help music educators imbue a new refreshing aura of boldness, surprise, and a sense of breaking through old rules and stepping into new territories in their music composition teaching. For these individuals were genuine “modernists”—that is, artists in the service of innovation and “code shaping,”<sup>87</sup> willful iconoclasts, and de-idealizing idealistic seekers of the new within Western musical thought, risking audience popularity due to an intended, in most cases, discomfort of listening.

In this light of the search for continuous musical innovation, music educators and student composers may go on, through, and beyond the overture of music creativity, beginning the trek toward something else that doubts conven-

tional and/or popular codes, transgresses the boundaries of the traditional composing experience in schools, and challenges established notions of creativity in music education. Nevertheless, further research is needed in which women's voices can be heard that may offer an emancipatory perspective for the instruction of composition in education which will "challenge the political domination of men."

## NOTES

Note: I am grateful to the composer Professor Rokus de Groot, Director of the Musicology Department, University of Amsterdam, Netherlands, for his careful reading of earlier versions of the paper and his insightful comments, for which this paper is much richer.

<sup>1</sup>Gunther Schuller, *Musings* (New York: Oxford University Press, 1986), 248.

<sup>2</sup>Elaine R. Barkin, "Conjunctions and Affinities," par. 39 (Composing, Labeling and Music Talk section, par. 10), *Gender. Education. Music. Society* 1, no. 3 (Fall 2003), <http://music.boisestate.edu/gems/Barkinarticle.htm>. Accessed March 1, 2005.

<sup>3</sup>Arthur C. Danto, *Beyond the Brillo Box: The Visual Arts in Post-Historical Perspective* (Berkeley and Los Angeles, CA: University of California Press, [1992] 1998), 231.

<sup>4</sup>Harold Pinter, "Art, Truth and Politics. Nobel Lecture," par. 3, in The Nobel Foundation Web page (December 7, 2005), <http://nobelprize.org/literature/laureates/2005/pinter-lecture-e.html>. Accessed January 5, 2006.

<sup>5</sup>Jonathan Savage, "Informal approaches to the Development of Young People's Composition Skills," *Music Education Research* 5, no. 1 (March 2003): 81–85.

<sup>6</sup>Bernard W. Andrews, "How Composers Compose: In Search of the Questions," *Research Issues in Music Education* 2, no. 1 (September 2004), <http://www.stthomas.edu/rimeonline/vol2/andrews1.htm>. Accessed March 1, 2005.

<sup>7</sup>For example, see Margaret Barrett, "Invented Notations: A View of Young Children's Musical Thinking," *Research Studies in Music Education* 8 (June 1997): 2–14; Pamela Burnhard and Betty Anne Younker, "Problem-solving and Creativity: Insights from Students' Individual Pathways," *International Journal of Music Education* 22, no. 1 (April 2004): 59–76; Maud Hickey, "Creativity Research in Music, Visual Art, Theater, and Dance," in *New Handbook of Research on Music Teaching and Learning*, eds., Richard Colwell and Carol P. Richardson (New York: Oxford University Press, 2002), 398–415; Mary A. Kennedy, "Listening to Music: Compositional Processes of High School Composers," *Journal of Research in Music Education* 50, no. 2 (Summer 2002): 94–110; and Siu-Lan Tan and Megan E. Kelly, "Graphic Representations of Short Musical Compositions," *Psychology of Music* 32, no. 2 (April 2004): 191–212.

<sup>8</sup>See, for example, Scott Emmons, "Analysis of Musical Creativity in Middle School Students Through Composition Using Computer-assisted Instruction: A Multiple Case Study" (PhD diss., The University of Rochester, Eastman School of Music, 1998); Göran Folkestad, Berner Lindström, and David J. Hargreaves, "Compositional Strategies in Computer-based Music-making," *British Journal of Music Education* 15, no. 1 (1998): 83–97; Hickey, "The Computer as a Tool in Creative Music Making," *Research Studies in Music Education* 8 (June 1997): 56–70; Peter MacInnis, "Experiencing and Under-

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<sup>9</sup>Jonathan Harvey, *Music and Inspiration* (London: Faber and Faber, 1999); Jacques Maritain, *Creative Intuition in Art and Poetry* (Kingsport, TN: Kingsport Press, 1953).

<sup>10</sup>Arnold Schoenberg, *Style and Idea* (London: Faber and Faber, 1975), 151.

<sup>11</sup>György Ligeti, *György Ligeti in Conversation With Péter Várnai, Josef Häusler, Claude Samuel and Himself* (London: Eulenberg, 1983), 33–34.

<sup>12</sup>Karlheinz Stockhausen, *Texte zur Musik [Texts to Music]* (Cologne: DuMont, 1978).

<sup>13</sup>Stockhausen, "Karlheinz Stockhausen. Interview by Lara Lee for Modulations. Introduction by James Wesley Johnson," par. 27, *Perfect Sound Forever* (January 1999), <http://www.furious.com/perfect/stockhauseninterview.html>. Accessed January 2001.

<sup>14</sup>Pierre Boulez, *Orientalisms* (Cambridge, MA: Harvard University Press, 1986), 125.

<sup>15</sup>*Ibid.*, 126.

<sup>16</sup>See, for example, Dean Keith Simonton, "Creativity, Leadership and Chance," in *The Nature of Creativity*, ed., Robert J. Sternberg (Cambridge, UK: Cambridge University Press, 1988), 340–361; Herber J. Walberg, "Creativity and Talent as Learning," in *The Nature of Creativity*, ed., Sternberg, 43–75; Robert W. Weisberg, "Problem Solving and Creativity," in *The Nature of Creativity*, ed., Sternberg, 271–297; and Howard E. Gruber and Sara N. Davis, "Inching our Way up to Mount Olympus: the Evolving-Systems Approach to Creative Thinking," in *The Nature of Creativity*, ed., Sternberg, 243–260.

<sup>17</sup>Gruber and Davis, "Inching our Way up to Mount Olympus," 265.

<sup>18</sup>See, for example, David H. Feldman, "Creativity: Dreams, Insights, and Transformation," in *The Nature of Creativity*, ed., Sternberg, 271–297.

<sup>19</sup>*Ibid.*, 289.

<sup>20</sup>See, for example, Howard Gardner, "Creative Lives and Creative Works: A Synthetic Scientific Approach," in *The Nature of Creativity*, ed., Sternberg, 2981–324; Pat Langley and Randolph Jones, "A Computational Model of Scientific Insight," in *The Nature of Creativity*, ed., Sternberg, 177–201; E. Paul Torrance, "The Nature of Creativity as Manifest in its Testing," in *The Nature of Creativity*, ed., Sternberg, 43–75; and Graham Wallas, *The Art of Thought* (New York: Harcourt Brace and Co., 1926).

<sup>21</sup>For example, see John Dewey, *Art as Experience* (New York: G. P. Putnam's Sons, [1934] 1980); Louise Duchesneau, *The Voice of the Muse: A Study of the Role of Inspiration in Musical Composition* (Frankfurt am Main, Germany: Peter Lang Verlag GmbH, 1986); James C. Engell, *The Creative Imagination: Enlightenment to Romanticism* (Cambridge, MA: Harvard University Press 1981); Mary Reichling, "Dewey, Imagination, and Music: A Fugue on Three Subjects," *Journal of Aesthetic Education* 25, no. 3 (Fall 1991): 61–78; and Daniel Stempel, "Revelation on Mount Snowdon: Wordsworth, Coleridge and the Fichtian Imagination," *The Journal of Aesthetics and Art Criticism* 29, no. 3 (Spring 1971): 371–384.

<sup>22</sup>See, for example, Peter Webster, "Creative Thinking in Music: Advancing a Model,"

in *Creativity and Music Education*, eds., Timothy Sullivan and Lee Willingham (Toronto: Canadian Music Educators' Association, 2002), 16–34.

<sup>23</sup>Anton Ehrenzweig, *The Hidden Order of Art: A Study in the Psychology of Artistic Imagination* (Berkeley and Los Angeles, CA: University of California Press, 1971); Maritain, *Creative Intuition in Art and Poetry*.

<sup>24</sup>Eliseo Vivas, "Naturalism and Creativity," in *Creativity in the Arts*, ed., Vincent Tomas (Englewood Cliffs, N.J.: Prentice Hall, 1964).

<sup>25</sup>See Eleni Lapidaki, "L'imagination au pouvoir!: Some Philosophical Riddles Providing Practical Suggestions for Music Teaching and Learning," in *Proceedings of the 10th Anniversary Conference 'Musical Creativity,'* European Society for the Cognitive Sciences of Music, University of Liege, Liege, Belgium, 5–8 April 2002.

<sup>26</sup>Mircea Eliade, *The Sacred and the Profane* (New York: Harper and Row Torchbook, [1959] 1961).

<sup>27</sup>Steve Reich, *Writing About Music* (New York: New York University Press, 1974), 9.

<sup>28</sup>Bálint András Varga, *Conversations with Iannis Xenakis* (London: Faber and Faber, 1996), 61.

<sup>29</sup>Lucas Foss, "A Twentieth Century Composer's Confession about the Creative Process," par. 3, in The Amherst Saxophone Quartet Website (July 11, 2005), <http://wings.buffalo.edu/org/asq/Foss.htm>. Accessed January 5, 2006.

<sup>30</sup>*Ibid.*, par. 20.

<sup>31</sup>James Boros and Richard Toop, eds., *Brian Ferneuhough. Collected Writings* (Amsterdam: Harwood Academic Publishers, 1995), 260.

<sup>32</sup>Ligeti, György Ligeti in *Conversation with Péter Várnai, Josef Häusler, Claude Samuel and Himself*, 124.

<sup>33</sup>*Boulez in Conversation with Joshua Cody*, par. 9, in The Ensemble Sospeso New York Website (1993), [http://www.sospeso.com/contents/articles/boulez\\_p2.html](http://www.sospeso.com/contents/articles/boulez_p2.html). Accessed July 20, 2004.

<sup>34</sup>Harvey, *Music and Inspiration*, 25.

<sup>35</sup>Schoenberg, *Style and Idea*, 61.

<sup>36</sup>Ligeti, György Ligeti in *Conversation with Péter Várnai, Josef Häusler, Claude Samuel and Himself*, 22–23.

<sup>37</sup>Giacomo Manzoni, "Edgar Varèse," trans. Stephen Hastings, in Casa Ricordi Website (August 1989), <http://www.ricordi.com/Compositori/Dettaglio.asp?IdCompositore=346>. Accessed July 5, 2002.

<sup>38</sup>See, for example, Paul Griffiths, *New Sounds, New Personalities: British Composers of the 1980s* (London: Faber and Faber, 1985); Harvey, *Music and Inspiration*; and Ursula Sturzbecher, ed., *Werkstattgespräche mit Komponisten [Workshop Conversations with Composers]* (Cologne, Germany: Gerig Verlag, 1971).

<sup>39</sup>Iannis Xenakis, "Xenakis on Xenakis." *Perspectives of New Music* 25, no. 1–2, (Winter and Summer 1987): 16–64, 48.

<sup>40</sup>Harvey, *Music and Inspiration*, 52.

<sup>41</sup>Boros and Toop, *Brian Ferneuhough. Collected Writings*, 262.

<sup>42</sup>Edgar Varèse, *Écrits* (Paris: Christian Bourgois, 1983).

<sup>43</sup>Harvey, *Music and Inspiration*, 23–24.

<sup>44</sup>Foss, “A Twentieth Century Composer’s Confession about the Creative Process,” par. 16.

<sup>45</sup>*Tristan Murail in Conversation with Kirk Noreen and Joshua Cody*, par. 28, in The Ensemble Sospeso New York Website (November 1999), <http://www.sospeso.com/contents/19992000/ircam.html>. Accessed July 20, 2004.

<sup>46</sup>Xenakis, “Xenakis on Xenakis,” 45.

<sup>47</sup>*The Timeless Power of the Divine: Stockhausen in Conversation with Ken Hollings*, par. 9 (last section), in Karlheinz Stockhausen Website, [http://www.stockhausen.org/timeless\\_power.html](http://www.stockhausen.org/timeless_power.html). Accessed July 20, 2004. The article originally appeared in *The Wire Magazine*, no. 184, June 1999.

<sup>48</sup>Schoenberg, *Style and Idea*, 108.

<sup>49</sup>See Bennett Reimer, *A Philosophy of Music Education: Advancing the Vision*, 3rd ed. (Upper Saddle River, NJ: Prentice Hall, 2003).

<sup>50</sup>Robert Erickson, “Composing Music,” *Perspectives of New Music* 26, no. 2 (Summer 1988): 86–96, 91.

<sup>51</sup>G. Rochberg, *The Aesthetics of Survival* (Ann Arbor, MI: The University of Michigan Press), 152.

<sup>52</sup>Gerard Pape, “Varèse the Visionary,” *Computer Music Review* 23, no. 2 (June 2004): 19–25, 21.

<sup>53</sup>Varèse, *Écrits*, 150, quoted in Pape, “Varèse the Visionary,” 21.

<sup>54</sup>*Stockhausen. Interview by Iara Lee for Modulation*, 99), para. 15, in Perfect Sound Forever (January 1999), <http://www.furious.com/perfect/stockhauseninterview.html>. Accessed July 5, 2003.

<sup>55</sup>Stephen McAdams, “Problem-solving Strategies in Music Composition: A Case Study,” *Music Perception* 21, no. 3 (Spring 2004): 391–429, 427.

<sup>56</sup>Rossana Dalmonte and András Varga Bálint, eds., *Luciano Berio: Two Interviews* (New York: Marion Boyars, 1985), 9.

<sup>57</sup>*Boulez in Conversation with Joshua Cody*, par. 4, [http://www.sospeso.com/contents/articles/boulez\\_p4.html](http://www.sospeso.com/contents/articles/boulez_p4.html).

<sup>58</sup>Foss, “A Twentieth Century Composer’s Confession about the Creative Process,” par. 12.

<sup>59</sup>Harvey, *Music and Inspiration*, 63.

<sup>60</sup>Mario Vieira de Carvalho, “‘New Music’ Between Search for Identity and Autopoiesis Or, the ‘Tragedy of Listening,’” *Theory, Culture and Society* 16, no. 4 (1999): 127–135, 132.

<sup>61</sup>Boulez, *Orientations*, 145.

<sup>62</sup>Harvey, *Music and Inspiration*, 58.

<sup>63</sup>Wolfgang Fink, “Pierre Boulez in Conversation with Wolfgang Fink about *Pli selon Pli*,” trans. R. Evidon, par. 16, in Deutsche Grammophon Website (May 1999), <http://www.deutschegrammophon.com/special/insighttext.htm?ID=boulez-pliselonpli&DETAIL=2>. Accessed May 3, 2003.

<sup>64</sup>Stephane Villemin, "A Talk with Pierre Boulez," *American Record Guide* 66, no. 2, (March/April, 2003): 5–7.

<sup>65</sup>Mya Tannenbaum, *Conversations with Stockhausen*, trans. David Butchart (Oxford, UK: Clarendon, 1987), 29.

<sup>66</sup>Xenakis, "Xenakis on Xenakis," 42.

<sup>67</sup>Roger Reynolds, "Digital: The Critical Compromise," *Ear Magazine* 13, no. 1 (March 1988): 22.

<sup>68</sup>See discussion in the section about "The Composer, the Conscious, and the Unconscious."

<sup>69</sup>See sections entitled "The Beginning of the Compositional Process" and "Moving the Compositional Process Forward?"

<sup>70</sup>See discussion in the section on "The Composer between Tradition and Innovation."

<sup>71</sup>Boulez, *Orientations*, 125, 126.

<sup>72</sup>See, for example, Harvey, *Music and Inspiration*; Ligeti, "Fragen und Antworten von mir selbst" ["Questions and Answers about Myself"], *Melos* 12 (1971): 509–517; Schoenberg, *Style and Idea*; and Stockhausen, *Texte zur Musik*, among others.

<sup>73</sup>I addressed the issue of the relation of unconscious processes in music creativity and the teaching of composition in my response to Mary Reichling's paper on "Dewey, Imagination, and Music: A Fugue on Three Subjects," presented at "The Philosopher/Teacher in Music Conference" (Indiana University, Bloomington, IN, 8–13 July 1990). See also Lapidaki, "L'imagination au Pouvoir!: Some Philosophical Riddles Providing Practical Suggestions for Music Teaching and Learning."

<sup>74</sup>Harvey, 40.

<sup>75</sup>Paulo Freire, *Pedagogy of the Oppressed* (New York: Herder and Herder, 1970); Gayle Turner, "Teacher as Sadist, and the Duality of Self and Other," in *Philosophy of Education Society Yearbook*, ed., Lynda Stone (Urbana, IL: Philosophy of Education Society, 2000), 118–127; and Lori A. Custodero, "Being With": The Resonant Legacy of Childhood's Creative Aesthetic, "*The Journal of Aesthetic Education* 39, No. 2 (2005): 36–57.

<sup>76</sup>Paul Woodford, "Developing Critical Thinkers," par. 23, *Music Educators Journal* 83, no. 1 (July 1996): 27–31. Available: Academic Search Premier Publications, <http://weblinks3.epnet.com/>. Accessed May 5, 2003.

<sup>77</sup>Harvey, *Music and Inspiration*, 81.

<sup>78</sup>Maxine Greene, *The Dialectic of Freedom* (New York: Teachers College Press, 1988).

<sup>79</sup>Jason Toynebee, "Music, Culture and Creativity," in *The Cultural Study of Music*, eds., Martin Clayton, Trevor Herbert, and Richard Middleton (Milton Keynes, UK: Open University Press, 2003), 102–112, 111.

<sup>80</sup>See, for example, Veronica Cohen, "Musical Creativity: A Teacher Training Perspective," in *Creativity and Music Education*, eds., Timothy Sullivan and Lee Willingham (Toronto: Canadian Music Educators' Association, 2002), 218–237.



<sup>81</sup>Kennedy, "Listening to Music: Compositional Processes of High School Composers," 103.

<sup>82</sup>See discussion in the section on "Musical and Non-musical Influences."

<sup>83</sup>Jackie Wiggins, "Fostering Revision and Extension in Student Composing," *Music Educators Journal* 91, no. 3 (January 2005): 35–42.

<sup>84</sup>Eugene Kamenka, ed., *The Portable Karl Marx* (New York: Penguin, 1983), 193, quoted in Hank S. Weddington, "Education as Aesthetic Experience. Interactions of Reciprocal Transformation," *Journal of Transformative Education* 2, no. 2 (April 2004): 120–137, 133.

<sup>85</sup>Estelle Jorgensen, "Western Classical Music and General Education," *Philosophy of Music Review* 11, no. 2 (Fall 2003): 130–140, 139 (italics are mine).

<sup>86</sup>Pierre Bourdieu, "Symbolic Power," in *Identity and Structure: Issues in the Sociology of Education*, ed., Denis Gleeson (Driffield, UK: Nafferton Books, 1977), 112–117.

<sup>87</sup>Toynbee, "Music, Culture and Creativity," 110.

<sup>88</sup>John Shepherd, *Music as Social Text* (Cambridge: Polity Press, 1991), 153, quoted in Jill Halstead, preface to *The Woman Composer* (Aldershot, UK: Ashgate Publishing Company, 1997), vii.

