



Applying Education in a Complex World

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Applying Education in a Complex World: Teaching and Learning

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INTRODUCTION

Applying Education in a Complex World: Teaching and Learning

Complexity theory, complex systems, complex strategies and a complex world. The range of concepts, practices, scenarios and metaphors through which we consider intricate, interconnected and changing phenomena is vast. The impact of this world view on how we operate is equally large. The education sector, like all those that make up the tapestry of contemporary societies and economies is not – and cannot be – immune.

The argument that the world in which today's students will eventually work, will be different and more complicated than the one they currently know, has become a truism. It guides our thinking in multiple ways. In this scenario, education is becoming equally fluid. We not only prepare students to face the changes we see occurring today, but shifts and developments no one expects, or predicts. We are obliged to think outside disciplinary boundaries. We adapt constantly to changing methods of teaching. We address new and emerging professions. We negotiate the demands of learners, parents, industries and business.

While this scenario may be contested by some, it is also welcomed by others. These proceedings, and the conference from which they come, reflect on its implications from various disciplinary standpoints.

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LEONARD BERNSTEIN AND 'COMPLEX' MUSIC EDUCATION

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INTRODUCTION

The 53 episodes of *Young People's Concerts* were broadcast by CBS between 1958 and 1972. Each episode corresponded to the filming of a live performance by the New York Philharmonic, with Leonard Bernstein introducing, illustrating, and conducting the musical pieces, first at Carnegie Hall (until 1962), then in the Concert Hall at Lincoln Center.

The audience in the Hall consisted mainly of children and teenagers.

This paper intends to focus on some particular didactic strategies employed by Bernstein in his Concerts for Young People: selection of topics; segmentation of the chosen pieces of music; verbalisation of the content; and his manner of interacting with the students.

Bernstein's didactic strategies will be analysed under the lens of some modern music education methodologies and reference paradigms of general pedagogy: the recent Didactics of Listening developed by the scholar Giuseppina La Face, the conceptions of music teaching of the pedagogues Émile Jaques-Dalcroze and Edgar Willems, prevalent especially in the period after the Second World War and in the 1980s, and finally Edgar Morin's Theory of Complexity, evoked in the title of this paper.

The aim is to offer a lucid and objective analysis of Bernstein's concert-lessons, highlighting their strengths and potential weaknesses, and above all to emphasise the effectiveness of using audio-visual transmissions such as these in today's classrooms for a more comprehensive music education.

Bernstein and his *Young People's Concerts*

As previously mentioned, the Young People's Concerts of the New York Philharmonic were first broadcast on television when Leonard Bernstein became conductor of the Philharmonic in 1958. From then until 1972, CBS (at the time still officially known as the Columbia Broadcasting System) broadcast fifteen seasons, with a varying number of episodes per year, for a total of 53, each lasting about one hour.¹

Of great importance for the success of these broadcasts was the work of Roger Englander, who in 1958, when he started working with Bernstein, was director of personnel at CBS. Producer from the first season, Englander also became director from the second.

Bernstein controlled every aspect of the concerts: he set the topics, selected the compositions, chose potential guests and carefully drafted the scripts. In this regard, after Bernstein had written the first draft of the script, the production team, set up by Englander, met several times, generating several

drafts until the final product was approved. Once the script was finalised, Bernstein would, however, continue to make changes up to and even during the broadcast.²

The communicative strategy consisted in formulating a direct and captivating verbal text and in carefully calibrating the rhythm and pauses between the portions of spoken discourse and the pieces of music played.

I would like to focus in particular on two of Bernstein's teaching strategies: the “segmentation-selection” of the proposed pieces of music, and the “verbalisation” of the music.

To do so, I borrow the definitions of “segmentation-selection” and “verbalisation” developed by the scholar Giuseppina La Face, author of a modern theorisation of the Didactics of Listening.³

Segmentation-Selection

In her various essays on the subject, La Face has developed a teaching methodology aimed at leading students to understand a piece of music by listening. Knowing how to understand a piece of music by listening means grasping its unfolding, the connections and relationships between the elements, and being able to construct a map by means of mental processes such as knowing how to analyse, relate, and grasp analogies and differences. To do this, the teacher must be able to segment the piece of music in a way that conforms to both the constructive principles followed by the composer and the laws of perception. Furthermore, in order to assist students, the teacher must be able to select parts of a particularly long piece of music that lend themselves to partial listening, but which are significant, i.e. capable by their poignancy of representing the whole.

Verbalisation

La Face worked on another aspect of listening didactics, which is extremely useful for students not only with regard to learning music, but also for the reinforcement of linguistic and cultural-historical skills. This is the development of adequate verbalisation of the music heard. For the scholar, it is extremely important that pupils learn to describe the piece of music with critical distance, in an objective manner. There is the obstacle of specific technical vocabulary, but this can be circumvented. Technical terms can be converted into concepts, adjectives, referring to areas other than music, such as rhetorical-literary, psychological, scientific, etc. The vocabulary to be used, technical and connotative at the same time, can refer to musical terms, to qualities of sensory and affective experience; it can condense broad cultural-historical meanings (think of the adjectives ‘epic’, ‘lyrical’, ‘heroic’). In order to learn how to employ a language that is able to ‘narrate’ music, La Face also recommends taking examples from great role models. I think Bernstein can be considered one of them.⁴

SIMPLEX TO COMPLEX

In his concert-lessons, Bernstein paid great attention to the development of a discourse that proceeded from the simple to the complex by means of musical examples.

In this process, Bernstein employed stratagems that can be described in the terms 'segmentation-selection' and 'verbalisation', summarised above and extensively theorised over the last two decades by La Face. In the episode entitled *What is Sonata Form?* (broadcast on 6 November 1964), in order to illustrate the ABA tripartite form, typical of the first movement of a Sonata or Symphony, constructed precisely in “Sonata Form”, Bernstein began with the nursery rhyme *Twinkle, Twinkle Little Star*; moved on to the song *And I Love Her* by the Beatles; and finally to the more sophisticated Aria di Micaela from Georges Bizet’s *Carmen*.⁵ The transition from the simple to the complex often manifests itself in his lessons, moving from a more accessible example, such as a nursery rhyme or

popular song, to a piece of classical or, as he preferred to call it, 'exact' music (as every aspect was meticulously prescribed in the score by the composer).⁶ Bernstein almost always began his lectures with a question. He then had the audience listen to the entire musical composition, before segmenting and selecting the parts that serve to clarify the discourse, finally playing the entire composition again in the hope that listeners would hear it with new and more knowledgeable ears.⁷

Segmentation-Selection

As an example of the 'segmentation-selection' procedure, I offer here an excerpt from the episode *What is Melody?* (21 December 1962). Bernstein set out to explain counterpoint: the art of superimposing and interweaving two or more melodies. In particular, the goal was to get young listeners to grasp the individual melodies that make up a given counterpoint passage, and thus make them able to grasp its richness and valuable articulation. This is not an easy task - Bernstein was aware of this - because to an audience unaccustomed to a certain kind of music, counterpoint can give the impression of confusion and "absence of melody". However, for those who learn to listen, counterpoint is a "wealth of melody". To this end, Bernstein chose a central passage from the Prelude to Richard Wagner's *Tristan und Isolde*, characterised by a strong build-up of tension; he broke up the orchestra into its individual instrumental parts, first having the strings play their melody in an ever-increasing *crescendo*, then the horns and cellos "shouting" the first four notes of the motif (played on the piano by Bernstein earlier), then the trumpets singing the second four-note motif (again illustrated earlier by the conductor on the piano). After having played the instrumental parts separately with their different melodies, Bernstein allowed the audience to listen to the piece again in its entirety, with all the instruments together. The young people now listened with "different ears", better able to distinguish the different melodies and instrumental timbres.

Verbalisation

With regard to "verbalisation", Bernstein argued that music should not be given meanings that do not belong to it. According to the conductor, there were widespread but erroneous ways of talking about music: the typical lecturer's way, which only uses anecdotes without saying anything about music; and the typical analyst's way, which vivisects pieces of music in a dry and self-serving manner. Alongside these was an even more dangerous way: that of explaining the musical journey through fictitious, invented stories that have nothing to do with the piece of music. To overcome these dangerous (because they are misleading) expedients, Bernstein aimed to develop an adequate narrative of the musical journey through similes and metaphors.⁸ For example, the conductor emphasised how the tripartite and symmetrical structure of the sonata form can be found in nature - the tree consists of a central trunk and lateral branches - or in the human body - our face has a central axis, nose and mouth, and two identical lateral elements, eyes and ears, or in man-made architecture - the bridge with its horizontal axis and vertical pylons at the sides. Or the musical notes that aggregate to form intervals and then melodies are like atoms that aggregate to form molecules and then living beings (*Musical Atoms: A Study of Intervals*, 29 November 1965). Bernstein therefore attempted to explain complex musical concepts with the refined use of similes and metaphors. Added to this was a great and surprising communicative power. Bernstein was an enthusiast; he loved what he did, and this can be heard and "seen" in his broadcasts.

ACTIVE LISTENING

Bernstein showed that he had the utmost confidence in the power of words and especially music, as well as in the ability of his young audience to understand. The evolution from the simple to the complex is also evident in the language used, which moves from the descriptive-disclosive to the

technical-specialist, with tones presenting the most varied emotional nuances: emphasis, ostentatious enthusiasm, austere seriousness, ironic lightness. It is also evident that listening is not meant here in a passive way. Listening education, understood as creative 'doing', and not as mere passive acquisition, is also central to modern music teaching practices that descend from the pedagogical activism of John Dewey and Ovide Decroly.⁹ The current of pedagogical activism places the conscious participation of the learner at the centre of the learning process, stimulated from a sensory and motor, as well as a cognitive, point of view. Its translation into the field of music teaching is due to the work of a number of composer-theorists who developed autonomous teaching methodologies, but based on common assumptions, which spread especially between the post-World War II period and the 1980s, but which are still practised today and have become reference models in many music schools: Èmile Jaques-Dalcroze, Zoltán Kodály, Carl Orff and Edgar Willems, to name the best known. Active listening is particularly central to the practices of Jaques-Dalcroze and Willems, which have many points of contact with Bernstein's ways of disseminating music.

Jaques-Dalcroze and Willems

The Swiss composer and pedagogue Jaques-Dalcroze devised “eurythmic gymnastics”, a method for teaching how to hear and understand music through bodily movement. He was particularly critical of the widespread practice of teaching children only to play or sing, and not to listen to music. Instead, through listening, children and young people, whether they wanted to become professional musicians or simply mature and grow through music, could be sensitised to beauty. Precisely because listening, according to Jaques-Dalcroze, far from being a passive activity, brought into play the creative instinct and the critical-analytical spirit, both of which are present in children and young people.¹⁰

Edgar Willems also cultivated a conception of integral music education, dedicated to the training of music-sensitive people, not just professional musicians. The development of the musical ear, a much more central aspect in Willems than in other exponents of the so-called “active methods”, is realised through three phases: auditory sensoriality, affective listening and mental listening. Auditory sensoriality can be stimulated through the manipulation of sound objects. Affective listening triggers the involvement of emotions, imagination and fantasy. If sensory listening is a passive and objective action, affective listening involves an active and subjective action. Mental listening, i.e. true musical intelligence, corresponds to the ability to bring memory and creative imagination together. It is the last step, from which one can begin to study music theory, and thus to read and play an instrument.¹¹

The centrality of listening in the integral formation of the person is evident in all of Bernstein's work as a populariser. Far from considering it a passive enjoyment, the conductor felt that listening would help his students work on the hierarchy of elements and their continuity, on those aspects that make each piece a “whole”. Through listening to music and its interpretation, flexible, intuitive and creative thinking can be developed.

YOUNG PEOPLE'S CONCERTS: WHAT USE ARE THEY IN SCHOOLS TODAY?

To a contemporary glance, some aspects of the Youth Concerts today are questionable or unsuitable for the concrete educational context. I will just point out two of them.

The centrality of the method to Western art music of the classical-romantic period: Bernstein is eclectic, moving from the hit song to the complex piece of symphonic music, but, although he does not emphasise it, his belief that Western art music is the greatest achievement of human civilisation is very clear.

In his lecture-concerts, Bernstein tried to engage the audience, but certainly not enough. They are one-sided lectures, also due to the television format. There is a lack of concrete feedback from the students. It is not possible to verify the skills acquired. However, I believe that the videos of his

lectures could still be usefully employed in the classroom by teachers today, appropriately commented, updated and accompanied by timely verification. The episodes of the Young People's Concerts could, in other words, become a valuable tool for teachers, just as the instrumentalists of the New York orchestra were necessary for Bernstein to conduct his own broadcasts.

On the other hand, one should not forget that before the advent of playback devices, in order to listen to music one had to go to the theatre or a concert hall, and the musicians were heard and watched. It was in the 20th century that the importance of the musical 'gesture', of the movement of the body generating music through the relationship with the instrument, was emphasised by many composers of the post-World War II musical avant-garde. One need only think of Luciano Berio and his fourteen *Sequenzas* for solo instruments, which not only represent a kind of catalogue of the multiple sonic possibilities of each instrument, and the virtuoso abilities of the performers, but also possess an ostentatious theatrical vocation.

With the widespread availability of videos of musical performances, as well as popular music television broadcasts that exist today (*Young People's Concerts* are certainly not the only ones), the teacher can restore a fruitful combination of listening and viewing to the classroom.¹²

Video-Music Didactic

Various researchers have demonstrated the usefulness of music videos in the classroom. I will limit myself here, for reasons of space, to pointing out an important study conducted in the 1990s by Geringer, Cassidy and Byo.

In 1997, the three scholars led research aimed at analysing the responses of university students, not specialised in music, to listening to a music recording or listening to and viewing an audiovisual recording. The experiment was based on the first and fourth movements of Beethoven's Sixth Symphony; the students were divided into four groups:

- The first group listened to excerpts of a performance by Leopold Stowkowski
- The second listened to and watched excerpts from the film *Fantasia*
- The third group listened to excerpts of a Bernstein performance
- The last group listened to and watched excerpts from a video of Bernstein's performance

Finally, the four groups were tested. The cognitive measure in this study analysed the students' perception of music. The study asked questions about tempo, metre, structure, instrumentation, melody, harmony and dynamics. The test also included a part dedicated to measuring the students' emotional involvement while listening.

The second group that had seen the film *Fantasia* scored lowest on the cognitive test, but scored highest on the affective test. That is, these students, although emotionally engaged by the music, were not able to describe it effectively. The third group that had seen Bernstein's concert lectures scored the highest. Not only were they able to describe the music effectively and relevantly, they were also more emotionally involved than the other two groups who had only heard the music. Geringer, Cassidy and Byo believe that the video allowed the students to focus on the musical elements. Audiovisuals could therefore prove to be an important tool for teaching students the basic elements of music. As mentioned above, they could be a valuable tool for the teacher to conduct guided classrooms, preceded, accompanied and followed by questions to verify the results.¹³

CONCLUSION

What does Edgar Morin's complexity theory have to do with this?

In his various essays, which deal with issues related to schooling and the education of human beings across disciplines, Morin argues that man originates from living and physical nature and, at the same time, distinguishes himself from it and emerges through culture, thought and consciousness.

Morin devoted much of his work to a reformation of thought, to an integral education that overcomes the separation of disciplines. He argues that culture is split into two blocks. On the one hand, humanistic culture, on the other hand, scientific culture; on the one hand, the development of global and all-embracing thinking; on the other, analytical and sectoral thinking. This separation fails to grasp 'what is woven together', the complexus.¹⁴

I believe that an audio-based didactics of listening separates and isolates and risks not letting people understand and feel the complexity of music making, the joy that comes from physical movement and intellectual development.

I will conclude with one last example, not from the Young People's Concerts, but from a more recent performance: Beethoven's Piano Concerto Op. 37 No. 3 with Krystian Zimerman at the piano and Bernstein conducting the Vienna Philharmonic Orchestra in 1989. During the presentation at the conference, I showed an excerpt of this performance, available on YouTube.¹⁵ The musical genre of the concerto can be described in terms of the confrontation, at times conciliatory, at times more dramatic, between the parts where the solo prevails, i.e. the solo instrument, in this case the piano, and the parts assigned exclusively to the orchestra; I showed the transition between the last bars of the solo, very virtuoso as is traditional in the classical-romantic concerto, and the explosive return of the orchestra (from 6:19 – 7:25).¹⁶ Bernstein's physical and bodily expression at the moment when the orchestra resumes the reins of the musical discourse gives an account of that manifestation of the 'joy of music' around which the conductor built his entire activity as a musician and populariser.

NOTES

¹ For a very well-documented history of these concerts see Alicia Kopfstein-Penk, *Leonard Bernstein and His Young People's Concerts* (Lanham: Rowman & Littlefield, 2015). For other possible ways to analyze this television program from a textual perspective see Anna Scalfaro, "Music Popularization for Youth on Television from the 1960s to the 1990s between the United States and Europe," in *The Oxford Handbook of Music and Television*, ed. by James Deaville, Jessica Getman, and Ron Rodman (Oxford: Oxford University Press, scheduled 2023).

² Roger Englander, "No Balloons or Tap Dancers: A Look at the Young People's Concerts," in *Leonard Bernstein: The Television Work* (New York: Museum of Broadcasting, 1985), 29-36; Richard Sandomir, "Roger Englander, 94, Producer and a Force Behind the Classic of 'Young People's Concerts,'" *The New York Times*, March 4, 2021. <https://www.nytimes.com/2021/03/04/arts/music/roger-englander-dead.html?searchResultPosition=1>.

³ On the didactics of listening see the essays by Giuseppina La Face: "Le Pedate di Pierrot. Comprensione musicale e didattica dell'ascolto," in *Musikerziehung. Erfahrungen und Reflexionen*, ed. by Franz Comploi (Bressanone/Brixen: Weger, 2005), 40-60; "La didattica dell'ascolto," *Musica e Storia* 14(3) (2006), 489-544; "La linea e la rete. La costruzione della conoscenza in un Quartetto di Haydn," in "*Finché non splende in ciel notturna face*". *Studi in memoria di Francesco Degrada*, ed. by Cesare Fertonani, Emilio Sala and Claudio Toscani (Milano: LED, 2009), 225-250; "Testo e musica: leggere, ascoltare, guardare," *Musica Docta. Rivista digitale di Pedagogia e Didattica della Musica* 2 (2012), 31-54, doi: 10.6092/issn.2039-9715/3239; "Essenzielles Wissen und grundlegende Kompetenzen: das Largo concertato aus Giuseppe Verdis Macbeth," *Musica Docta. Rivista digitale di Pedagogia e Didattica della musica* 8 (2018), 1-25, doi: 10.6092/issn.2039-9715/8836.

⁴ On the concepts of 'segmentation-selection' and 'verbalisation' see La Face, "La didattica dell'ascolto," *Musica e Storia*, 14(3) (2006), 511-544.

⁵ The episodes are available in Roger Englander, executive producer, *Young People's Concerts* (Oberhaching: Unitel GmbH & Co., 2019), 3 Vol., 14 DVD.

⁶ The expression "Exact Music" is explained by Bernstein in the episode *What is Classical Music?* (broadcast January 24, 1959).

⁷ Brian D. Rozen, "Leonard Bernstein's Educational Legacy," *Music Educators Journal* 78(1) (1991), 43-46, doi: 10.2307/3398312.

⁸ Leonard Bernstein, *The Joy of Music* (New York: Simon & Schuster, 1959), 11-15. For the best understanding of Bernstein's ideas on the popularization of music see Bernstein, *The unanswered question: six talks at Harvard* (Cambridge, Mass.: Harvard University Press, 1976).

⁹ I refer here to some capital studies by John Dewey, *Democracy and Education: An Introduction to the Philosophy of Education* (1916) (New York: Simon & Schuster, 1997); *Experience And Education* (1938) (New York: Simon & Schuster, 2008). By Ovide Decroly see *Le programme d'une école dans la vie* (1921) (Paris: Fabert, 2009).

¹⁰ Émile Jaques-Dalcroze, *Il ritmo, la musica e l'educazione*, ed. by Louisa Di Segni-Jaffé (Torino: EdT, 2008), XXI-XXVIII. See also Kathy M. Thomsen, "Hearing Is Believing: Dalcroze Solfège and Musical Understanding," *Music Educators Journal* 98(2) (2011), 69-76, doi: 10.1177/0027432111425614.

¹¹ Ana Lucía Frega, "A Comparison of the Teaching Strategies of Maurice Martenot and Edgar Willems: Conclusions and Implications for Future Research," *Bulletin of the Council for Research in Music Education* 127, 63-71. (The 15th International Society for Music Education: ISME Research Seminar, Winter, 1995/1996). Willems expounds his theory in the two volumes *La préparation auditive de l'enfant* (with a preface by Jaques-Dalcroze) and *La culture auditive, les intervalles et les accords* (Genève: Pro Musica, 1940 and 1946).

¹² Jason D. Smith, "Can Video Save the Radio Star? Using Music-Plus-Video in the Classroom," *Music Educators Journal* 90(1) (2003), 37-41, doi: 10.2307/3399975. See also Kevin P. Bartram, "Lessons from a Master: Using the 'Bernstein Formula' in Music Classrooms," *Music Educators Journal* 90(4) (2004), 19-24, doi: 10.2307/3399994.

¹³ John M. Geringer, Jane W. Cassidy and James L. Byo, "Nonmusic Cognitive and Affective Responses to Performance and Programmatic Music Videos," *Journal of Research in Music Education* 45(2) (1997), 221-233, doi: 10.2307/3345582. See also by the same authors, "Effects of Music with Video on Responses of Nonmusic Majors: An Exploratory Study," *Journal of Research in Music Education* 44(3) (1996), 240-251, doi: 10.2307/3345597.

¹⁴ For the theory of complexity and its implications for pedagogy, see Edgar Morin, *La tête bien faite: repenser la réforme, réformer la pensée* (Paris: Éditions du Seuil, 1999).

¹⁵ This performance of Beethoven's Third Piano Concerto is available at <https://www.youtube.com/watch?v=Cus8ofkW9Hc&t=489s> (accessed June 30, 2023).

¹⁶ For a guide to the evolution of the musical form of the Concerto see Stephan D. Lindeman, *The Concerto: a Research and Information Guide* (London: Routledge, 2007). For a didactic declination of Beethoven's Third Concerto see Anna Scalfaro, "L'Allegro con brio del Concerto op. 37 di Beethoven: un modello di conversazione," *Musica Docta. Rivista digitale di Pedagogia e Didattica della musica* 6 (2016), 211-237, doi: 10.6092/issn.2039-9715/6586.

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