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Reframing Music Theorizing and Analytical Acts on Twentieth-Century Multi-Layered Harmony

ABSTRACT

Background

For about a century, *polytonality* has been an illusive and contested term that fuelled a fascinating and at times intense music-theoretical debate, which has re-emerged in recent years. The reception of its analytical, historical, and perceptual implications led to the sense of a contradictory and deeply paradoxical concept, attributed to significant passages or movements in music of Milhaud, Casella, Bartók, Stravinsky, Falla, Britten, and others, and described both as the consolidation and destruction of tonality, the expression of conservatism and the avant-garde, the act of mere imagination and actual perceivable musical phenomena (Delaere 2012).

A recognized central "problem" of the debate on polytonality is the enduring inconsistent use of the term since the 1920s up to the present, attested by remarks by Jean Deroux (1921, 251) and recently by Peter Kaminsky (2004, 238), regarding the lack of a proper definition, terminological discrepancies, and insufficient understanding of the conditions for polytonality. Accordingly, the analysis of the "effects and results" of polytonal procedure has been "something rarely investigated," and by the end of the last century was still assessed as "under-theorized" (Harrison 1997, 394).

Aims and repertoire studied

Why is early twentieth-century polytonal practice still poorly understood despite a century-long held debate about its significance? And, what is the basis for divergent assessments on the nature of the constituent layers and the operative principles regulating polytonal configurations? Given the interdependent relationship between the experience of (polytonal) phenomena and the models we use to both describe and conceptualize pitch relations, the paper surveys representative assessments along two sets of theoretical tensions: (1) *constructionist* vs. *interpretative* claims about what the term represents, i.e., between compositional procedure versus analytical (or perceptual) significance of the combined result; and (2) *strict* vs. *loose* views about the principles regulating polytonal phenomena, i.e., between a view of polytonality which requires exclusively the combination of full-fledged keys (and associated tonal centres) versus a more inclusive defined notion comprising the combination of tonally resonant (but not necessarily tonally complete) layers, triggered by a multitude of procedures and listening strategies.

I argue that detractors of polytonality (in the critical reception of the first half of the century and in formalized accounts of post-Schenkerian and set-theoretical models in the second half) rejected the perceived potential for summoning multiples simultaneous keys or scale identities into a composition by holding mostly exclusive views. This reception relied on aes-

thetic ideas of unity of tonal or contextuality of atonal space, musical system, and ultimately seen as threatening the notion of organic "work." (The debate also assumed nationalistic, political and racial aspects [de Médicis 2005, Wheeldon 2012]).

I also propose that theoretical explanations (invoked historical traces and multiple compositional impulses) in inclusive early-century accounts (Milhaud 1923, Casella 1924, and Koechlin 1925), not only captured the richness of the phenomena triggered by the layering of chordal and scalar materials, but also opened up new perspectives of listening and explored principles of layering (harmonic and contrapuntal polytonality). Accordingly, I propose an analytical model of scalar interaction (*scalar dissonance*) that measures the degree of friction or mismatch between layers (distinct from other measurements such as parsimonious voice leading or perfect-fifth harmonic distance), grounds a listening strategy for reorientation across layers, and forms the basis for understanding aspects of syntax in "contrapuntal polytonality" (in the music of Milhaud and Bartók), and finally, extends to aspects of "harmonic polytonality" that are probed in the music of Lutoslawski, thus suggesting that polytonal principles cast a wider net on compositional practices than traditionally granted.

Methods

A brief inventory of representative constructionist approaches to polytonality in the 1920s and 30s coalesces into procedures for effective polytonal writing, a sort of "collective pursuit of a theory of polytonality" (Delaere 2012, 163): the emphasis on scalar or triadic diatonic integrity of superimposed melodies or harmonies; the relative registral differentiation of combined layers, with preference for chromatic relations in distinct octaves; preference for bitonality and the successive entrance of distinct layers; and contrasting parameters (texture, rhythm, instrumentation, register) as enhancers of layer differentiation. Constructionist approaches to polytonality later in the century (Persichetti 1961 and Ulehla 1966) became a mere optional tool in the box of compositional precepts.

Early-century interpretations of polytonality (Koechlin, Casella, and Milhaud) engaged a multitude of processes and operating principles, such as transpositional imitative relations, the combination of distinct scales or segments, the free handling of dissonances (especially non-resolved appoggiaturas), extended tertian and quartal/quintal harmonies, and the descriptions as "modulation in simultaneity" (Casella 1924) or "interior modulation of the elements" (Koecklin 1925, 749).

While polytonal traces attributed by Koechlin and others to certain pre-twentieth-century chromatic practices (such as transpositional imitations and contrapuntal cross relations)

have been seen as anachronistic (Malhaire 2013, 215–23), they also in turn intensify our listening engagement in response to, or as the sustaining of, modern polytonal impulses. Heuristically, we can distinguish three listening sensations for layer emancipation: (1) tonal *resolution*, where the centrifugal sense of “foreign” chromatic dissonances is counteracted by the tendency to “resolve” onto a diatonic/chordal framework; (2) harmonic polytonal *coexistence*, where dissonances tend to be in “repose” as non-resolving layers; and (3) contrapuntal polytonal *autonomy*, where dissonances tend to associate linearly, coalescing into coherent and independent (scalar) layers or tonal regions.

The sceptical and detracting reception of polytonality throughout the century ranged from rejections based on perceptual grounds by such composers as Hindemith (1937) and Bartók (1943), who considered only strict formulations as full-fledged keys; to aesthetic attitudes about organicism, unity, and comprehensibility of the musical space raised by Second Viennese School (Stein 1975, 167 [Schoenberg 1923]), or the positivist notion of “contextuality” (Babbitt 1949, 380); or on logical grounds in the 70s and 80s, in the height of musical structuralism, as the “independent functionalities” of polytonal layers could not “integrate with another,” failing to assert “tonality’s true, unitary nature.” (Dunsby and Whittall 1988, 112–3); and more recently, the debate emphasized the strict or loose conceptions of polytonal space negotiating unitary readings or polyscalar interactions in the music of Stravinsky (van den Toorn 2003, and Tymoczko 2002).

Implications

Casella’s description of polytonality as “modulation in simultaneity” (or Koechlin’s “interior modulation”) has intriguing analytical and perceptual implications, which suggest that the dissonant interactions of superimposed layers convey or embody a harmonic distance. Accordingly, I propose a model of *scalar dissonance* that measures the tension, mismatch, or friction between contrapuntal polytonal layers, and that characterizes the resulting multi-layered harmony. The paper develops a graphic representation for scalar dissonance in which superimposed scales maximally align their (enharmonically equivalent) common-tones, resulting in two measurement types: the degree of *porosity*, which measures the number of common-tones between layers, and the degree of *mismatch* which measures the number of notes intersecting conflicting scale steps (in a different layer), divided by the total number of layers. Given certain layered configurations, the analytical model of scalar dissonance is distinct from other measurements of distance, such as voice leading and common-tone preservation. The paper analyses a number of pieces of Milhaud (*Saudades do Brazil* and *Une Journée*) and Bartók (*Bagatelle* op. 6/1 and *First String Quartet*). In addition, it expands the model to capture aspects of harmonic polytonality in the music of Lutoslawski (*Five Songs*). The listening possibilities opened up by the multitude of polytonal practices allow for a view of the twentieth-century repertoire in which layered interactions are crucial for the understanding of post-tonal pitch space.

Keywords

Polytonality; listening to post-tonal music; scale theory; modelling of musical systems; chromaticism.

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