

Strategies of Instrumentation and Orchestration in Lutosławski's Cello Concerto

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Abstract: This paper considers various implications of Lutosławski's approach to instrumentation and orchestration in the Cello Concerto (1970). Despite the absence of extended techniques frequently associated with the music of the 1960s avant-garde, Lutosławski succeeds nonetheless in creating a distinctive sound world through normative performance idioms, and by carefully planning the temporal deployment of individual instruments or groups of instruments. The author's collection of chronometric measures for each instrument's prevalence throughout the work demonstrates striking deviations from historical norms in the composer's privileging of different instrumental groups. By extension, specific correlations between instrumentation, gesture and pitch content serve to elucidate the work's form at multiple levels.

Discussion of real or perceived extra-musical content in Witold Lutosławski's Cello Concerto has preoccupied composers, performers, music theorists and musicologists alike since the work's première in 1970.¹ While denying the existence of explicit extra-musical narrative, the composer nonetheless acknowledged abstract borrowings from other art forms, particularly the theatre, and freely spoke of the relationship between soloist and orchestra as "one of conflict."²

¹ Lutosławski, Witold. *Concerto for Cello and Orchestra*. London, J. & W. Chester, 1971. Premiered in 1970 by Mstislav Rostropovich (the dedicatee), with the Bournemouth Symphony Orchestra conducted by Edward Downes.

² Kaczyński, Tadeusz (trans. Yolanda May). *Conversations with Witold Lutosławski*, London, Chester Music, 1984, 60. Lutosławski discouraged far-reaching extra-musical interpretations of his music in general, and in this interview, reprimands his interlocutor for purportedly conceiving of the Cello Concerto as if it were "an illustration to some bizarre spectacle." (ibid. 63-64) Chief among those given to such interpretations, Mstislav Rostropovich, the work's dedicatee, inferred "significant allusions to the personal conflict [of the type] he [Rostropovich] had long experienced with Soviet institutions," and an "unequal struggle, of the individual against the collective" (see Bodman Rae, *The Music of Lutosławski*, Omnibus Press, Third Edition, 1999, 119 and 122). Recent scholarship, mindful of the composer's predilections, has pursued a more conciliatory strategy, as in Nicholas Reyland's discussion of *akcje* (action, or musical plot), linking extra-musical metaphors and signs to the listener's psychological understanding of musical form in *Notes on the Construction of Lutosławski's Conception of Musical Plot*, *Witold Lutosławski Studies*, vol. 2, 2008, 9-25).

In this, his first *concertante* work, Lutosławski maintains many aspects of his characteristic approach to instrumentation and orchestration already present in the purely orchestral works from the 1960s. To this end, one may speak, in non-programmatic terms, of a conflict borne out in the Cello Concerto by the soloist's and the orchestra's contrasting short- and long-term goals and types of activity. Paradoxically perhaps, I will argue that this conflict actually enhances the composer's legerdemain in marshaling the resources of his instrumentation, and in using orchestration to define musical form in ways that often escape the listener's notice.

For an avant-garde composer of the late-20th century, Lutosławski's treatment of performance idiom, as a factor of instrumentation, is notable for the absence of so-called "extended techniques." Indeed, the particular modes of instrumental performance called upon in the Cello Concerto — *flageolet*, *glissando* and *sul ponticello* in the strings, *fluttertongue* in the winds — were already well established in orchestral writing by the beginning of the 20th century. Unusual or atypical instruments are similarly absent: the required woodwind doublings, for example (piccolo, bass clarinet and contrabassoon) are modest even by late-19th century standards. Lutosławski's battery of pitched- and non-pitched percussion, though diverse, is likewise economical when compared with the requirements of composers from the 1960s and 1970s such as Krzysztof Penderecki (b. 1933), or earlier composers such as Edgard Varèse (1883-1965).

What then, are the defining characteristics of Lutosławski's approach to instrumentation and orchestration in the Cello Concerto? Historical treatises have sometimes referenced instrumentation and orchestration interchangeably. Here, I will differentiate in the following way: *instrumentation* may refer to the collection of instruments in a given work, or the manner in which they are used individually, i.e., their performance idiom; *orchestration* will refer to the

specific temporal deployment of instruments which, at the local level, affects timbre and texture, and, at the global level, affects form. Orchestral music from the late-Classical period onward propagates a stereotyped hierarchy of instrumental groups, exemplified by their prevalence and importance of function. A representative description of this hierarchy may be found in the following excerpt from Kent Kennan's *The Technique of Orchestration*, first published in 1950.³

The strings are sometimes spoken of as "the backbone of the orchestra." ...since the early days of the orchestra, [they] have been called on to carry the greatest burden of the playing. That is, if the number of measures played by the woodwind, brass, and string sections in a large number of scores were counted, in most works the strings would be found to play the greatest number of measures, with the woodwind section ranking second and the brass third."

To verify whether Lutosławski's orchestration in the Cello Concerto adheres to this model, I first set out to rank the prevalence of the orchestra's different instrumental groups. Bar counting was rendered impracticable by the predominance of unmetred sections for which the composer does not always prescribe absolute duration. As an alternative methodology, by consulting a recent recording,⁴ I drew chronometric measures of section lengths, and subsequently determined the quantitative prevalence of each instrument or groups of instruments therein. Table 1, *Prevalence of Instruments in Lutosławski's Cello Concerto*, shows the resultant data.

The first part of the list treats woodwinds, brass, percussion, and strings each as a composite group, while the second part of the list provides information for all instruments within each group. Each chronometric number corresponds to the duration of a given section as

³ Kennan, Kent Wheeler. *The Technique of Orchestration*, Second Edition, Englewood Cliffs, New Jersey, Prentice-Hall, Inc., 1970, pp. 32-33.

⁴ Warsaw Philharmonic Symphony Orchestra, Rafał Kwiatkowski; cello, Antoni Wit; conductor, DUX 0499, 2005.

determined by the score's rehearsal numbers and represents the absolute time that an instrument or group of instruments is active. Values of only one second typically reflect a short punctuation or brief ornamental figure at the outset of, or within a section.

Table 1: Prevalence of Instruments in Lutosławski's Cello Concerto

Total duration: 25:20

Recording: Warsaw Philharmonic Symphony Orchestra, Rafał Kwiatkowski; cello, Antoni Wit; conductor, DUX 0499, 2005.

Winds: 0:06, 0:06, 0:05, 0:06, 0:03, 0:02, 0:05, 0:01, 0:01, 0:03, 0:01, 0:01, 0:02, 0:22, 0:08, 0:01, 0:01, 0:01, 0:01, 0:01, 0:01, 0:08, 0:01, 0:14, 0:03, 0:04, 0:20, 0:02, 0:18, 0:17, 0:03, 0:02, 0:08, 0:09, 0:08, 0:02, 0:04, 0:01, 0:06, 0:01, 0:02, 0:10, 0:16, 0:06. **(Total: 4:03)**

Brass: 0:30, 0:17, 0:06, 0:07, 0:19, 0:03, 0:21, 0:10, 0:04, 0:22, 0:02, 0:18, 0:05, 0:05, 0:17, 0:03, 0:02, 0:08, 0:09, 0:08, 0:04, 0:05, 0:03, 0:02, 0:01, 0:01, 0:05, 0:02, 0:03, 0:10, 0:16, 0:04. **(Total: 4:42)**

Percussion: 0:07, 0:04, 0:28, 0:08, 0:11, 0:01, 0:10, 0:01, 0:04, 0:04, 0:05, 0:11, 0:02, 0:02, 0:05, 0:11, 0:16, 0:06, 0:04, 0:03, 0:03, 0:02, 0:01, 0:07, 0:17, 0:03, 0:02, 0:08, 0:09, 0:08, 0:03, 0:03, 0:09, 0:08, 0:02, 0:04, 0:01, 0:02, 0:08, 0:01, 0:01, 0:04, 0:02, 0:03, 0:03, 0:01, 0:03, 0:02, 0:01, 0:01, 0:01, 0:01, 0:09, 0:03, 0:01, 0:03, 0:01, 0:10, 0:16, 0:03, 0:02, 0:04. **(Total: 5:19)**

Celesta: 1:25. **(Total)**

Harp: 3:10. **(Total)**

Piano: 2:36. **(Total)**

Solo Cello: 20:21. **(Total)**

Orchestral Strings: 0:01, 0:01, 0:01, 0:01, 0:01, 0:07, 0:13, 0:02, 0:01, 0:02, 0:01, 0:02, 0:01, 0:02, 0:01, 0:01, 0:01, 0:01, 0:03, 0:04, arco begins, 0:32, 0:11, 0:31, 0:13, 0:08, 0:15, 0:25, 0:22, 0:18, 0:08, 0:09, 1:16, 0:18, 0:06, 0:21, 0:05, 0:04, 0:05, 0:17, 0:03, 0:08, 0:09, 0:08, 0:03, 0:02, 0:01, 0:02, 0:03, 0:01, 0:01, 0:02, 0:03, 0:10, 0:16, 0:17, 0:01, 0:07, 0:05, 0:06. **(Total: 8:20)**

Piccolo: 0:04, 0:01, 0:17, 0:02. **(Total: 0:24)**

Flute: 0:01, 0:03, 0:01, 0:01, 0:02, 0:22, 0:06, 0:04, 0:07, 0:03, 0:04, 0:20, 0:02, 0:18, 0:02, 0:09, 0:08, 0:10, 0:16, 0:02. **(Total: 2:21)**

Oboe: 0:22, 0:18, 0:17, 0:03, 0:08, 0:09, 0:08, 0:04, 0:01, 0:02, 0:10, 0:16, 0:02. **(Total: 2:00)**

Clarinet: 0:06, 0:06, 0:05, 0:06, 0:03, 0:02, 0:01, 0:01, 0:01, 0:03, 0:01, 0:01, 0:01, 0:01, 0:22, 0:05, 0:01, 0:01, 0:01, 0:01, 0:03, 0:01, 0:12, 0:03, 0:04, 0:20, 0:02, 0:18, 0:17, 0:03, 0:02, 0:08, 0:09, 0:08, 0:04, 0:01, 0:01, 0:02, 0:10, 0:16, 0:02. **(Total: 3:35)**

Bass Clarinet: 0:01, 0:02, 0:01, 0:03, 0:01, 0:01, 0:01, 0:01, 0:22, 0:01, 0:01, 0:01, 0:04, 0:03, 0:04, 0:18. **(Total: 1:05)**

Bassoon: 0:22, 0:17, 0:09, 0:08, 0:01, 0:02, 0:10, 0:16, 0:02. **(Total: 1:27)**

Contrabassoon: 0:02. **(Total: 0:03)**

Trumpet: 0:30, 0:07, 0:19, 0:10, 0:04, 0:22, 0:02, 0:18, 0:05, 0:05, 0:17, 0:03, 0:02, 0:08, 0:09, 0:08, 0:04, 0:03, 0:01, 0:05, 0:02, 0:10, 0:16, 0:02. **(Total: 3:27)**

Horn: 0:02, 0:18, 0:05, 0:05, 0:17, 0:03, 0:02, 0:08, 0:09, 0:08, 0:04, 0:03, 0:01, 0:01, 0:05, 0:02, 0:03, 0:10, 0:16, 0:04. **(Total: 2:06)**

Trombone: 0:19, 0:03, 0:21, 0:22, 0:02, 0:18, 0:05, 0:05, 0:17, 0:03, 0:08, 0:09, 0:08, 0:04, 0:05, 0:03, 0:02, 0:01, 0:05, 0:02, 0:10, 0:16, 0:04. **(Total: 3:12)**

Tuba: 0:18, 0:17, 0:08, 0:09, 0:08, 0:01, 0:02, 0:02, 0:10, 0:16, 0:02. **(Total: 1:15)**

Muted timpani: 0:07, 0:04, 0:28, 0:11. **(Total: 0:50)**

Timpani: 0:01, 0:03, 0:08, 0:09, 0:08, 0:09, 0:02, 0:02, 0:02, 0:03, 0:01, 0:02, 0:02, 0:09, 0:03, 0:01, 0:16, 0:02. **(Total: 1:21)**

Xylophone: 0:01, 0:10, 0:04, 0:05, 0:07, 0:01, 0:01, 0:03. **(Total: 0:32)**

Whip: 0:01. **(Total)**

Tom-toms: 0:07, 0:04, 0:28, 0:11, 0:02, 0:05, 0:06, 0:16, 0:04, 0:02, 0:03, 0:17, 0:09, 0:08, 0:03, 0:02, 0:01, 0:02, 0:01, 0:01, 0:02, 0:02, 0:01, 0:01, 0:10. **(Total: 2:33)**

Vibraphone: 0:08, 0:01, 0:04, 0:11, 0:04. **(Total: 0:28)**

Small cymbal: 0:06, 0:08. **(Total: 0:14)**

Tam-Tam: 0:08, 0:04, 0:16. **(Total: 0:28)**

Wood Blocks: 0:02. **(Total)**

Bass drum: 0:11, 0:02, 0:02, 0:03, 0:07, 0:16, 0:06, 0:03, 0:17, 0:08, 0:03, 0:01, 0:02, 0:02, 0:03, 0:02. **(Total: 1:26)**

Side drum and/or tenor drum: 0:07, 0:04, 0:28, 0:11, 0:02, 0:17, 0:02, 0:03, 0:08, 0:08, 0:01, 0:01, 0:03, 0:03, 0:01, 0:02, 0:02, 0:01, 0:10. **(Total: 1:51)**

Tubular Bells: 0:11, 0:07, 0:08, 0:02, 0:02. **(Total: 0:30)**

Tambourine: 0:01, 0:01. **(Total: 0:02)**

Celesta: 0:01, 0:01, 0:01, 0:01, 0:02, 0:22, 0:12, 0:01, 0:01, 0:01, 0:04, 0:07, 0:03, 0:04, 0:20, 0:04. **(Total: 1:25)**

Harp: 0:07, 0:06, 0:06, 0:05, 0:06, 0:03, 0:03, 0:02, 0:05, 0:05, 0:01, 0:01, 0:02, 0:01, 0:01, 0:02, 0:22, 0:03, 0:12, 0:06, 0:01, 0:01, 0:01, 0:04, 0:01, 0:14, 0:03, 0:04, 0:20, 0:04, 0:03, 0:06, 0:03, 0:01, 0:03, 0:06, 0:16. **(Total: 3:10)**

Piano: 0:01, 0:01, 0:03, 0:01, 0:02, 0:01, 0:02, 0:22, 0:04, 0:12, 0:06, 0:12, 0:03, 0:04, 0:20, 0:03, 0:05, 0:05, 0:07, 0:02, 0:05, 0:01, 0:09, 0:03, 0:01, 0:03, 0:02, 0:16. **(Total: 2:36)**

Cello Solo: 4:44, 0:30, 0:17, 0:07, 0:06, 0:06, 0:05, 0:06, 0:03, 0:03, 0:03, 0:04, 0:11, 0:04, 0:02, 0:28, 0:07, 0:05, 0:05, 0:08, 0:11, 0:03, 0:10, 0:01, 0:04, 0:04, 0:07, 0:05, 0:22, 0:11, 0:09, 0:09, 0:01, 0:08, 0:16, 0:06, 0:16, 0:06, 0:06, 0:03, 0:03, 0:02, 0:01, 0:02, 0:01, 0:04, 0:04, 0:14, 0:08, 0:04, 0:04, 0:01, 0:23, 0:32, 0:11, 0:31, 0:13, 0:08, 0:15, 0:25, 0:22, 0:18, 0:08, 0:13, 0:23, 1:16, 0:04, 0:18, 0:05, 0:04, 0:05, 0:08, 0:09, 0:08, 0:02, 0:02, 0:05, 0:05, 0:04, 0:08, 0:03, 0:04, 0:04, 0:03, 0:02, 0:03, 0:05, 0:02, 0:05, 0:04, 0:04, 0:02, 0:05, 0:04, 0:06, 0:09, 0:03, 0:06, 0:05, 0:03, 0:04, 0:09, 0:08, 0:03, 0:17, 0:06, 0:10, 0:07, 0:05, 0:06, 0:08, 0:16. **(Total: 20:21)**

Violin I: 0:07, 0:13, 0:01, 0:02, 0:01, 0:02, 0:01, 0:02, 0:01, 0:02, 0:01, (*arco* begins) 0:08, 0:15, soli, 0:25, 0:22, 0:18, 0:08, 0:09, 1:16, 0:21, 0:05, 0:04, 0:05, 0:03, 0:17, 0:03, 0:08, 0:09, 0:08, 0:02, 0:01, 0:02, 0:01, 0:01, 0:02, 0:03, 0:10, 0:16, 0:05, 0:02, 0:04. **(Total: 5:43)**

Violin II: 0:07, 0:13, 0:01, 0:02, 0:01, 0:02, 0:01, 0:02, 0:01, 0:01, 0:01, (*arco* begins) 0:13, 0:08, 0:15, soli, 0:25, 0:22, 0:18, 0:08, 0:09, 1:16, 0:06, 0:21, 0:05, 0:04, 0:05, 0:03, 0:17, 0:03, 0:08, 0:09, 0:08, 0:03, 0:02, 0:01, 0:02, 0:06, 0:03, 0:01, 0:01, 0:02, 0:03, 0:10, 0:16, 0:08, 0:05, 0:02, 0:04. **(Total: 6:19)**

Viola: 0:01, 0:01, 0:01, 0:01, 0:07, 0:13, 0:02, 0:01, 0:02, 0:01, 0:02, 0:01, 0:02, 0:01, 0:01, (*arco* begins) 0:31, 0:13, 0:08, 0:15, soli, 0:25, 0:22, 0:18, 0:08, 0:09, 1:16, 0:18, 0:06, 0:10, 0:01, 0:03, 0:17, 0:03, 0:08, 0:09, 0:08, 0:02, 0:01, 0:02, 0:03, 0:01, 0:01, 0:02, 0:02, 0:10, 0:16, 0:11, 0:01, 0:05, 0:02, 0:04. **(Total: 6:48)**

Cello: 0:01, 0:01, 0:01, 0:01, 0:01, 0:07, 0:13, 0:02, 0:01, 0:02, 0:01, 0:02, 0:01, 0:02, 0:01, 0:01, 0:01, 0:14, 0:03, 0:04, (*arco* begins) 0:11, 0:31, 0:13, 0:08, 0:15, soli, 0:25, 0:22, 0:18, 0:08, 1:16, 0:18, 0:06, 0:10, 0:01, 0:03, 0:17, 0:03, 0:08, 0:09, 0:08, 0:05, 0:02, 0:01, 0:01, 0:01, 0:02, 0:01, 0:10, 0:16, 0:14, 0:01, 0:02, 0:02, 0:04. **(Total: 7:12)**

Bass: 0:01, 0:13, 0:01, 0:02, 0:01, 0:01, 0:02, 0:01, 0:01, 0:01, 0:14, 0:03, 0:04 (*arco* begins) 0:32, 0:11, 0:31, 0:13, 0:08, 0:15, soli, 0:08, 1:16, 0:01, 0:03, 0:17, 0:03, 0:08, 0:09, 0:08, 0:06, 0:03, 0:01, 0:02, 0:10, 0:16, 0:17, 0:07, 0:02, 0:04. **(Total: 5:56)**

These data, at first glance, would seem to both confirm and contradict Kennan's hierarchy. Not surprisingly, the solo cello occupies a place of prominence throughout. Among the orchestral groups, strings are clearly shown to be the most active, in terms of number of sections, and in terms of total chronometric time. Percussion instruments, not mentioned in Kennan's description, rank second based on chronometric time, but are almost commensurate with the strings in the number of sections in which they appear. Brass instruments contribute to a relatively modest number of sections, but rank third by their chronometric prevalence, whereas woodwinds, ranking fourth, receive a smaller measure of total chronometric time, but participate in a larger number of sections.

Despite differences in total chronometric measure for each instrumental group, it is remarkable to note how infrequently the various members of the orchestra actually play. For

example, strings, the most prevalent group with 8:20 of activity, are present for less than one-third of the work's total duration (25:20). Much of the strings' writing is played pizzicato, thereby reducing their local and cumulative "weight" within the orchestral texture. Woodwinds, the least prominent group overall with 4:03 of activity, are present for less than one-sixth of the work's total duration. Several individual instruments are especially scarce: piccolo (0:24), contrabassoon (0:03), whip (0:01), woodblocks (0:02) and tambourine (0:02).

Such a finding helps to account for the relative transparency of Lutosławski's scoring throughout much of the work. Additionally, the preponderance of small chronometric measures - those of a few seconds or less - illustrate the composer's privileging of aphoristic musical comments from the orchestra, reserving much of the continuous musical activity for the soloist. In longer sections, Lutosławski frequently uses layers of rapidly moving instrumental lines to create an illusion of sustain, postponing any type of true *sostenuto* playing until the work's second half. In this way, the listener does not likely tire of individual instrumental sonorities, as each new entry carries with it a renewed freshness and focus of sound.

In conjunction with a strategic rethinking of instrumentation hierarchy, one significant aspect of Lutosławski's orchestration in the Cello Concerto involves the specific temporal deployment of its instrumentation, particularly by forestalling the first appearance of each instrument or instrument group, and by confining certain instruments or instrument groups to specific sections or movements. As regards form, the concerto divides into four major parts, akin to movements played without break: an introduction, a cycle of four episodes, a cantilena, and a finale with coda. The work's introduction, for unaccompanied solo cello, lasts more than four minutes. From the purview of orchestration, this introduction establishes what might be considered a baseline timbre with which the listener may compare or contrast the timbres of

subsequent instrument entries. Such a connection for the listener must undoubtedly occur with the trumpets' first entry at Rehearsal #1, which not only interrupts the musical flow, but also presents an opposition of timbre, marking the beginning of a lengthy process by which the composer slowly reveals his gamut of instrumental sonorities.

Throughout the ensuing four episodes (second movement), Lutosławski introduces, almost by accretion, the instruments of the woodwind choir, strings (*pizzicato*), mallet percussion and keyboards, as shown in Table 2, *First Entries of Orchestral Instruments or Characteristic Modes of Performance*. The first episode, beginning at #10, illustrates this process and demonstrates the composer's characteristic use of "false" or "tentative" starts as a means of building toward continuous motion or activity. Each episode is preceded and followed by an intrusive brass fanfare, first involving three trumpets, then expanding to include trombones. Moments of formal articulation within each episode occur with the sudden appearance of a large body of instruments, as in the string aleatory at #17, and with the subsequent aleatory of skin percussion, contrasting with the strings in the manner of a textural *Klangfarbenmelodie* at #18.

Table 2: First Entries of Orchestral Instruments or Characteristic Modes of Performance

Introduction (beginning until rehearsal number 1, 0:00-4:44)	Four Episodes (rehearsal numbers 1 through 63, 4:44-13:05)	Cantilena (rehearsal numbers 64 through 80, 13:05-18:05)	Finale (rehearsal number 81 until the end, 18:05-25:20)
Solo cello - <i>arco</i> (0:00)	1: trumpets 1-3 (4:44) 9: trumpets 1-3 <i>con sordino</i> (5:35) 9: solo cello; first <i>pizzicato</i> (5:41) 10: harp (5:43) 11: clarinet 1 (5:48) 11: orchestral celli - <i>pizzicato</i> (5:48) 12: clarinet 2 (5:54) 12: violas - <i>pizzicato</i> (5:54) 14: bass clarinet (6:05) 16: tutti strings - <i>pizzicato</i> (6:18) 17: skin percussion - three muted timpani, five tom-toms, side drum, tenor drum (with wooden sticks) (6:24) 28: piano (7:56) 28: vibraphone (7:56) 29: flute 1 (8:06) 29: tubular bells (8:06) 30: celesta (8:19) 30: xylophone (8:19) 32: flutes 2 and 3 (8:35) 35: bassoons 1-3 (8:54) 35: oboes 1-3 (8:55) 36: bass drum (9:15) 37: trombone 1 (9:26) 38: trombones 2-3 (9:35) 40: skin percussion (with fingers) (10:03) 47: small cymbals (11:05) 55: piccolo (11:36) 56: tambourine (11:43)	64: double bass 1 - <i>arco</i> (13:05) 64a: double bass 2 - <i>arco</i> (13:07) 64b: double bass 3 - <i>arco</i> (13:10) 64c: double bass 4 - <i>arco</i> (13:13) 64d: double bass (tutti) - <i>arco</i> (13:17) 65: cello (tutti) - <i>arco</i> (13:36) 66: viola (tutti) - <i>arco</i> (13:48) 67: violin II (tutti) - <i>arco</i> (14:20) 68: violin I (tutti) - <i>arco</i> (14:33)	81: horns 1-4 (18:05) 82: tuba, pitched timpani (18:07) 83a: orchestral string glissando (18:27) 84a: multi-octave piano cluster (19:09) 89: winds and brass (fluttertongue) (19:54) 97: piccolo 2-3 (20:53) 99: timpani glissando (21:03) 106: timpani tremolo with wire brushes (21:34) 108: orchestral string harmonics (21:44) 109: whip, wood blocks (21:49) 110: tam-tam (21:53) 116: tutti string glissando (22:13) 118: trombone glissandi (22:20) 134: pitched timpani roll (23:45) 135: orchestral strings, <i>sul ponticello</i> (24:02) 139: (second last page) contrabassoon (24: 53) 139 (immediately before last page): long, decaying sound complex (6-note harp chord, 21-note piano sonority, tam-tam) (25:03)

Recording: Warsaw Philharmonic Symphony Orchestra, Rafał Kwiatkowski; cello, Antoni Wit; conductor, DUX 0499, 2005.

The work's *cantilena* (third movement) presents orchestral strings in their first instance of *arco* playing, and first instance of continuous, lyrical activity. Initially, the texture accrues by instrument (four solo double basses) and then by instrumental section (the remaining double basses, cello, viola, violin II and violin I). The finale conspicuously introduces several previously unheard instruments: horns, tuba and pitched (unmuted) timpani. With most of the work's instrumentation now present, the composer turns the listener's attention toward first appearances of distinctive gestures or modes of playing. Notably, various types of glissando manifest in the orchestral strings, timpani and trombone, forceful cluster chords in the piano punctuate the beginnings of several sections, and in the woodwind and brass, *fluttertongue* technique embellishes a number of grotesque sustained chords. Meanwhile, several wind and percussion instruments continue to make their first appearance including piccolo II and III, whip, wood blocks, tam-tam, and finally, the contrabassoon less than 30 seconds before the work's close.

In each of the first three movements, Lutosławski achieves formal intelligibility, in part, by assigning limited or circumscribed roles to the orchestral instruments, often associated with characteristic pitch material, as shown in Table 3, *Contributions of Individual Instruments or Instrumental Groups within each Movement*.

Table 3: Contributions of individual instruments or instrument groups within each movement

Introduction (beginning until rehearsal number 1)	Four Episodes (rehearsal numbers 1 through 63)	Cantilena (rehearsal numbers 64 through 80)	Finale (rehearsal number 81 until the end)
<p>Solo cello</p> <ul style="list-style-type: none"> • semitone and quarter-tone based pitch material • <i>arco</i> only <p>Woodwinds – TACET</p> <p>Brass –TACET</p> <p>Percussion – TACET</p> <p>Keyboards – TACET</p> <p>Harp – TACET</p> <p>Strings - TACET</p>	<p>Solo cello</p> <ul style="list-style-type: none"> • semitone-based pitch material • <i>pizzicato</i> and <i>arco</i> <p>Woodwinds</p> <ul style="list-style-type: none"> • slurred appoggios, thirds and semitone based harmony <p>Brass</p> <ul style="list-style-type: none"> • aggressive interruptions; non-thirds harmony <p>Percussion</p> <ul style="list-style-type: none"> • multiple non-pitched skin percussion (<i>Klangfarbenmelodie</i> effect with orchestral string <i>pizzicato</i> aleatory) • quiet pedal tones in vibraphone, tubular bells, and xylophone (tremolo) <p>Keyboards</p> <ul style="list-style-type: none"> • celesta and piano arpeggiate thirds and semitone based harmonies <p>Harp</p> <ul style="list-style-type: none"> • arpeggiation of thirds and semitone based harmonies <p>Strings</p> <ul style="list-style-type: none"> • <i>pizzicato</i> only • aleatoric arpeggiated textures; thirds and semitone based harmonies • punctuations at beginning of, or in the midst of selected section 	<p>Solo Cello</p> <ul style="list-style-type: none"> • semitone-based pitch material • <i>arco</i> only <p>Woodwinds</p> <ul style="list-style-type: none"> • flutes and clarinets play sustained tones for seven measures; only at rehearsal number 75 • oboes and bassoons; tacet <p>Brass – TACET</p> <p>Percussion - TACET</p> <p>Celesta, Harp, Piano (intervention at rehearsal number 75)</p> <ul style="list-style-type: none"> • slowly reiterate pitch classes of twelve-note chord • three layers of pulse • <i>sostenuto</i> (use of sustain pedal in celesta and piano) <p>Strings</p> <ul style="list-style-type: none"> • <i>legato</i> quarter-tone scale fragments • recitation tones in aleatoric texture, variable open and close voiced semitone based cluster harmonies • <i>arco</i> only 	<p>Solo Cello</p> <ul style="list-style-type: none"> • semitone- and quarter-tone-based pitch material • predominantly <i>arco</i> <p>Woodwinds</p> <ul style="list-style-type: none"> • fast, staccato figures in climactic sections; IC 1-5 • chromatic flourishes at beginning of selected sections (piccolo and clarinet) • fluttertongue chords (WT based clusters) • staccato chord punctuations (various IC constructions) • pentatonic chords swells towards end <p>Brass</p> <ul style="list-style-type: none"> • fast, staccato figures in climactic sections; IC 1-5 • fluttertongue chords (WT based clusters) • staccato chord punctuations (various IC constructions) • pentatonic chord swells towards end <p>Percussion</p> <ul style="list-style-type: none"> • reinforcement of climactic sections (timpani, tom-toms, side drum, tenor drum, bass drum) • punctuations or ornamentations at beginning of, or in the midst of selected sections (pitched and non-pitched percussion) • timpani glissandi • pentatonic chords in quarter-notes towards end (vibraphone and tubular bells) <p>Keyboards</p> <ul style="list-style-type: none"> • sharply articulated clusters (piano) • quiet, rippling chromatic figures (low register) • pentatonic chords in quarter-notes towards end (vibraphone and tubular bells) <p>Harp</p> <ul style="list-style-type: none"> • repeated clusters • quiet, rippling chromatic figures (high register) • pentatonic chords in quarter-notes towards end <p>Strings</p> <ul style="list-style-type: none"> • fast, staccato figures in climactic sections; IC 1-5 • single note and chordal glissandi • staccato chord punctuations (various IC constructions) • snaking chromatic lines, <i>pizzicello</i>, IC 1+2 • fast “diatonic” scales towards close • semitone based pitch material throughout <i>arco</i> and <i>pizzicato</i>

The entire orchestra, as mentioned previously, remains silent during the introduction. Throughout the four episodes, *pizzicato* strings are relegated to the punctuation of single notes or chords; woodwinds play a more active role, contributing *legato* arpeggios and oscillating figures, outlining semitone and thirds-based harmonies. Trumpets and trombones impinge on the proceedings with their abrasive fanfares, emphasizing a dissonant harmony devoid of thirds. The cantilena once again dispenses with woodwinds, brass and percussion at its outset, serving to unify the soloist and strings through their timbre and shared *sostenuto* playing. Here, the soloist delivers a long lyrical line built from interval class pairings 2+3, 2+5 and 1+2, while the accompanying strings unfold a succession of semitone-based cluster harmonies, presented in variable open and close voicing in different registers. A brief interruption at # 75 finds the celesta, harp and piano slowly and gently intoning the pitch classes of a “consonant” twelve-note chord in three contrasting layers of pulse, against a backdrop of quiet pedal tones in the flutes and clarinets.

Throughout the work, the solo cello is afforded, by contrast, a diversified vocabulary of musical gestures and modes of playing, particularly in the introduction, the four episodes, and in the finale. Even in the absence of extended techniques, the soloist freely navigates plucked and bowed passages, contrasting *staccato* and *legato* articulations, reiterative articulations (*tremolo*, *ricochet*), artificial harmonics and glissando. Quartertones provide a means of intensifying the chromatic quality of selected scalar and melodic figures and ornamentations in the introduction and finale. Moments of restraint are the exception rather than the rule, as in the cantilena, when the solo cello is limited to *arco* playing as part of its lyrical recitative.

Clear precedents for Lutosławski’s strategies in the Cello Concerto may be found in his major orchestral works from the 1960s. Like the Cello Concerto, the Second Symphony (1965-

1967) suppresses the orchestral strings in the work's first half, and tentatively explores different fixed combinations of brass, woodwind and percussion instruments throughout seven episodes, each separated by double reed based refrains, analogous to the Cello Concerto's brass interruptions. Unlike the later concerto, the Second Symphony — undoubtedly one of the composer's landmark compositions — met with a mixed critical reception. Composer and Lutosławski scholar Steven Stucky acknowledged the work as “a brilliant achievement,” with the caveat that “it seems, in retrospect, too long, because the proportion of hesitant to direct expression seems miscalculated.”⁵ In the absence of an autonomous and active solo part, listeners likely become aware of the composer's structural apportioning of instrument groups, and prolonged absence of orchestral strings. On the other hand, the continuous presence of a solo string instrument in the Cello Concerto may serve to distract the listener, making him/her less aware of such organizational processes, and thereby reinforcing the element of surprise, much as a magician uses “smoke and mirrors” to conceal a “sleight of hand.”

Lutosławski revisited the idea of forestalling instrumental group entries on a large scale one further time with the orchestral work *Mi-Parti* (1976). In this instance, the composer privileges muted strings and woodwinds in the work's opening sections, delaying the first appearance of brass until the work's first main climax, approximately five minutes into its fifteen-minute structure. With the completion of *Novelette* (1979), Lutosławski adopted a much more liberal approach to the temporal deployment of his instrumentation, beginning as he would in many later works such as the Symphony No. 3 (1973-1983) — with an orchestral *tutti*, followed shortly thereafter with a free interplay of diverse instrumental timbres.

In summary, Lutosławski's approach to orchestration in the Cello Concerto may be seen as the apotheosis of an austere approach to the marshaling of instrumental resources in a large-

⁵ Stucky, Steven. *Lutosławski and his music*, Cambridge [Eng.]; New York, Cambridge University Press, 1981, 165.

scale form. The austerity of such an approach proves a natural complement to the composer's solutions for problems pertaining to other musical parameters, notably, the bipartite or end-accented treatment of form, the exclusive pairing of interval classes to generate linear or vertical pitch material, or the contrasting of *a battuta* and *ad libitum* sections for qualitative change in musical expressivity through rhythm. As finite as these technical solutions may appear to be, in Lutosławski's masterly hands, they are nonetheless shown to be capable of producing, in the minds of listeners, an infinite world of real and perceived extra-musical possibilities.