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TOWARDS A GRAMMATICAL ANALYSIS OF SCELSI'S LATE MUSIC

Introduction

The late works of the Italian composer Giacinto Scelsi (1905-1988) have often been treated as if they were incompatible with the concept of musical grammar. First of all, they seem to lack unambiguous morphological unities, even discrete notes. Their syntax is also mysterious, because they are based on improvisations, which Scelsi executed in a meditative trance, believing that he could thus avoid imposing any rational technique or system on his sound material. Almost any improvisation, however, presupposes a potentially inferable system of rules, a 'model'¹ or 'referent',² even if the improviser is only vaguely conscious of this model, or denies its existence. The syntax of Scelsi's music is thus determined by (although not identical to) the model on which he relied to create his most successful improvisations. In this article I suggest some ideas towards a description of this model. Although such a description can never be proven accurate, this seems to me to be a promising direction to illuminate this apparently inscrutable music.

Scelsi lived and worked mainly in Rome. His aristocratic origins have often been associated with the eccentricity of his attitudes and working methods, and thus with the originality of his late work.³ For most of his career he was known mainly on the Rome contemporary music scene, especially through his involvement with the Nuova Consonanza group. He became internationally renowned only in the 1980s, when his works were featured in major festivals, most significantly the 1987 Cologne ISCM World Music Days, and taken up by ensembles such as the Arditti Quartet.

In his early music, culminating in *La nascita del verbo* of 1948, Scelsi was torn between advanced techniques, including serial writing, and intuitive improvisation, which he later claimed had been a natural inclination since childhood.⁴ This period was brought to an end in the late 1940s when he suffered a psychological crisis, which led him unequivocally to reject the rational orientation of the Western art music tradition. Convinced that he had made himself ill by 'thinking too much', he

resolved to create his music (and poetry) ‘without thinking’.⁵ In his subsequent music, therefore, he proceeded through meditation and improvisation, cultivating ‘automaticity’, that is, the release of conscious control of decision-making.⁶ The most successful improvisations were then treated as *abbozzi*, or sketches, and transcribed by assistants.⁷

The main characteristic of these works is their focus on pivotal pitch centres. In the transitional works of the 1950s, which usually originated in piano improvisations and so were limited to the chromatic scale, the pivotal sounds are reiterated, blurred with clusters (especially in the piano suites), and embellished with oscillations and figuration reminiscent of Varèse (as in the wind monodies and *Yamaon* of 1954-58). In the mature works, beginning with *Elegia per Ty* and the String Trio of 1958, and the more famous *Quattro pezzi per orchestra (ciascuno su una nota sola)* of 1959, the oscillations and figuration disappear, leaving a musical discourse based almost entirely on sustained sounds, which are varied with subtle inflections of intonation, intensity, timbre and, intermittently, changes of register. This style was made possible by Scelsi’s adoption of the ondiola, or clavioline,⁸ an electronic keyboard instrument allowing precisely these inflections. Usually, several of these gestures overlap, in such a way as to create the impression of a more complex but still unitary sound object, which is either fixed to one pitch-class (as in the *Quattro pezzi*), or describes a gradual composed-out glissando (as in *Xnoybis*, analysed below).

Scelsi’s statements about his own music, which consist of various dictated texts and interviews, outline his general aesthetic stance. This was influenced by musical and philosophical traditions of India and Tibet, as filtered through Western mediators.⁹ His use of the drone was not merely a superficial imitation of these traditions, but was motivated by the idea of an inner energy of sound. The ‘true musician’ or adept was able to find this sound energy within single sounds, and specifically not by ‘com-posing’¹⁰ (that is, by putting sounds together, finding systematic connections between sounds). Sound had ‘depth’: it was like a sphere, and the enlightened musician was able to ‘penetrate to the centre’ of the sphere.¹¹ The Western canon, on the other hand, by relying on abstract systems of notes (points in relation to the ‘two dimensions’ of pitch and duration), tended to be ‘empty’ of sound energy.¹²

Given Scelsi's esoteric, anti-systematic stance, it is not surprising that his statements offer no rational explanation of his music. The only technique that he admitted using was that of meditation: through yoga, he believed, he was able to find what he called '*le son juste*', or 'the right sound' (not, he specifies, 'the right note'),¹³ which allowed him to perceive cosmic sound and, thus, his music. Indeed, like many improvising musicians,¹⁴ he seems to have interpreted the automaticity of his improvisations, and the resultant feeling that they were creating themselves, as evidence of his communication with higher powers rather than of practice and skill acquisition. He viewed his music as a fragment of an autonomous, cosmic sound¹⁵ and himself as a passive vessel, a 'postman'¹⁶ delivering the music. Such beliefs have distracted attention from one of his main innovations, the 'preservation' in scored works of an element of automaticity, comparable to that of the surrealists in the visual arts.¹⁷

The literature on Scelsi has focused more often on his anti-constructivist philosophy of sound than on his automatist working methods. There were several reasons for this: the influence of Scelsi's own statements, embarrassment at the controversy that arose when the composer Vieri Tosatti revealed his role in the creation of many of the scores,¹⁸ and, above all, the fact that scholars had no access to the tapes of the original improvisations until 2009, when the Fondazione Isabella Scelsi made them available in digitised form.¹⁹ Several authors have reflected Scelsi's own conviction that his music represented a fundamentally novel and exceptional relationship between sound and musical organisation, that is, that sound was no longer constrained by considerations of construction. Thus, for instance, Castanet and Cisternino wrote: 'an absolutely innovative aspect in the spectral dimension of sound in Scelsi is the absolutely *a-constructive* modality with which such thinking takes form, substance [...]; sound here is not thought of as a *material* to be treated with more or less numerical-artisanal techniques and exercises, but rather as a sound-*Klang*; a sort of primordial sound [...].'²⁰ In a similar vein, Martin Zenck argued that 'tone is understood not as a material with determined historical sediments and compositional implications [...] but rather as a matter whose own dynamism the composer emphasises.'²¹ Some writers have seized on Scelsi's remark that he did not 'com-pose', and have suggested that his musical process was instead one of 'dissolution' or 'de-composition'.²²

The notion of the irreducible, non-composite character of Scelsi's music has long been exaggerated. For some works he used overdubbing, and it seems that he was able to play two keyboards simultaneously.²³ His works are thus undeniably composite even when they are not polyphonic in the traditional sense. Moreover, listening to the tapes one can clearly identify 'boundaries' at which Scelsi performs specific mechanical operations at the ondiola (glissandi, changes of timbre, etc.). Such boundaries are also inferable from the scores and (less clearly) from performances.

Scelsi's mature style is generally thought to require a new analytical approach, again because of its supposed seamless quality. Tristan Murail has said that '[i]t is almost impossible to analyse most of Scelsi's works in formal terms. Time unfolds in continuous motion without a break.'²⁴ He has also suggested a statistical approach to Scelsi analysis:

Music always has a model, whether formal or natural. Even the most abstract art proceeds from models. What is Scelsi's model – how can one analyse his music without resorting to a simple and useless description? The traditional tools of analysis are inappropriate, since there is neither material, nor combination, nor a clearly articulated form. There remains the study (perhaps with statistical methods) of shapes, densities, changes of register and thickenings, of their evolutions and relationships.²⁵

The most thorough recent analyses of Scelsi have adopted the kind of approach suggested by Murail. Christine Anderson's work on *Anahit* attempts to pin down Scelsi's notion of 'sound as energy' by studying the distribution of loudness, density, ambit, and various types of rhythmical activity across the piece.²⁶ Johannes Menke adopts a similar approach to the *Tre canti sacri* and *Konx-Om-Pax*, discussing first the whole work, then each movement according to various criteria (form, dramaturgy, proportions, and so on), and also giving a thorough classification of types of gesture.²⁷

The underlying problem with Scelsi analyses is that they usually provide a 'neutral' analysis of the large-scale proportions, pitch structure, and other features of the finished works, often focusing on the more polyphonic works, such as *Anahit*, i.e., those with a relatively traditional pitch structure. Given Scelsi's use of improvisation, this is an unduly architectonic, teleological approach that neglects the style's most unorthodox and perplexing aspect, that is, the redundancy and apparent irrationality of

the musical surface. It leaves us little closer to understanding how these works were generated, precisely why a particular inflection of intonation might be followed by a particular change in vibrato, and so on. It seems to me that an analysis of a work by Scelsi ought to attempt what Jean-Jacques Nattiez calls ‘the inductive move from analysis of the neutral level to the poietic’,²⁸ that is, it ought to try to characterise the logic of the improvisations. The answer to Murail’s question (‘what is Scelsi’s model?’) is ‘the model of improvisation’.

In the following discussion, therefore, I make some preliminary suggestions regarding this model, in the knowledge, of course, that the improviser is no longer available to confirm these (not that it would be in character for him to do so). I do not attempt to reconstruct the precise mechanics of the improvisations (his uses of keyboards and recording equipment), but rather to scrutinise his most typical strategies and configurations of gestures. My suggestions are based mainly on the scores, and assume the ‘accuracy’ of the transcriptions (in fact, the mediation of the person transcribing the improvisation is another essential poietic element of the music, although it is not always acknowledged as such).

I focus on Scelsi’s most characteristic style, the ‘one-note’ heterophony of the *Quattro pezzi* and the late string chamber music (strings are particularly suited to this style). My examples are from *Xnoybis* (1964) for solo violin and the Duo (1965) for violin and cello. I then relate these to other, less severely constrained works, using *Dharana* (1975) for cello and double bass as an example of the way in which Scelsi’s model interacts with traditional voice-leading patterns.

The theoretical stimulus for my analysis comes partly mainly from writings on musical grammar and style by Mario Baroni, Rossana Dalmonte, and Carlo Jacoboni, and Fred Lerdahl. I have also been influenced by the idea of the improvisational model described, with reference to music of oral traditions, by the ethnomusicologist Bernard Lortat-Jacob and his colleagues, and by their approach to representing such models with diagrams. Lortat-Jacob regards the model as ‘a stable reference’, which can be of various kinds, but which is ‘at least implicitly known by the musician and perceived by the hearer in proportion to his/her familiarity with the genre, form, or style of music’;²⁹ each improvisation constitutes a ‘realisation’ of the model, although the realisations can also influence the model.³⁰ Needless to say, an individual improvisation model is different in status from communal, traditional ones; on the

other hand, Scelsi's attitude throughout his writings encourages a quasi-ethnomusicological interpretation of his work.³¹

The concept of musical grammar and Scelsi's morphology

I do not attempt here to formalise a comprehensive 'Scelsi grammar' in the way, for example, that Baroni, Dalmonte, and Jacoboni formalised that used by the Italian Baroque composer Giovanni Legrenzi in his chamber arias, i.e. testing the rules by programming a computer to compose in the given style.³² Such a formal grammar could never be as authoritative in the case of the relatively small, highly individual, and varied output of a deceased improviser. However, I think the idea of musical grammar throws light on Scelsi's work in several ways. Indeed, Scelsi's own notion of the intuitive rightness of the *son juste* seems to invite the comparison.

The concept of musical grammar implies that it is possible to describe exhaustively the systems of rules by which pieces are generated and because of which they are recognised as belonging to collectively legitimated styles. This way of thinking is derived from Saussure and Chomsky, and presupposes a shared historical *langue*, preceding the individual *parole*, and an innate competence on the part of listeners for learning the *langue* explicitly or implicitly (as in the case of untrained listeners who are nonetheless able to detect a mistake in an unfamiliar example of a familiar style). In general, it is doubly problematic to apply the concept of musical grammar to avant-garde, scored music, not only because the avant-garde composer aspires to invent the *langue* as well as the *parole*, but also because, in practice (as a consequence of the ever greater reliance on writing rejected by Scelsi), the new *langues* often challenge perceptual processing to such an extent as to make this kind of 'learning' extremely difficult: the avoidance of pitch hierarchy in serial music is the most obvious example. Fred Lerdahl has argued that music can be 'cognitively opaque'; when its 'compositional grammar' is not constrained by a 'listening grammar', it becomes divorced from the subsequent listening grammars. Lerdahl suggested that it was possible for the composer, by imposing certain 'cognitive constraints', to achieve cognitive 'clarity' without resorting to existing norms and techniques of composition.³³ Incongruous as it may at first sound, it seems to me that this is what Scelsi achieved with his austere pitch constraints, although he would never have expressed the matter in such terms. These constraints, as well as favouring the perception of smaller variations of pitch than would be perceptible in music with a

richer pitch structure (indeed, Scelsi's idiom resembles the ideal experimental conditions for investigating this area), also allow the listener to intuit the music's *langue*, its 'rules', and to experience satisfaction at their fulfilment, or suspense at their delayed fulfilment. For example, one soon learns to expect quartertone dyads to converge into unisons. This element of expectation and fulfilment might also be regarded as a 'traditional' trait.

While Lerdahl's attempt to recover a sense of 'grammatical' communication is that of a composer-theorist, Scelsi's 'compositional grammar' was determined by his way of improvising, and was thus constrained in minute detail by a 'listening grammar', a feedback system consisting of a real-time assessment of his own musical decisions. Indeed, the gestures used by Scelsi also are also conventions of common-practice 'musicianship', at least for instruments with flexible intonation: strings, voice (the main media for Scelsi's late work). Dissonances are often louder than their resolutions, leading-notes are a little sharp, vibrato is used to shape musical 'breaths', and so on.³⁴ In the Western canon, because these conventions are only occasionally explicit in the score, they are assumed to be extraneous to the 'core' syntax of the work, that is, to a system of 'notes' (although they are understood to be necessary for a valid realisation of the work). In Scelsi, on the other hand, in the absence of such systems, these conventions (arguably because they are 'all that is left') seem to constitute, that is, are experienced *as* the core syntax. Significantly, the fact that these performance conventions are already familiar to Scelsi's listeners reinforces the collectively legitimated sense of expectation and fulfilment that I mentioned above. Perhaps the brilliance of Scelsi's overall artistic strategy is that the reduction of his music discourages both the conservative and the avant-garde listener from perceiving this underlying familiarity. Only when these performance conventions are prescribed on paper is one invited to hear them as avant-garde compositional gestures.

At this point, I should confront two possible objections to my use of the term 'grammar' with reference to Scelsi. First, one might be sceptical because of the eccentricity of Scelsi's working methods, combining automatist improvisation, tape editing and collaborative transcription, and because of the difficulty of reconstructing them. However, as Baroni, Dalmonte and Jacoboni point out, it is not only legitimate but necessary to distinguish 'structural rules' from 'application procedures':³⁵ the importance of the distinction is demonstrated by the fact that a human composer and a

computer can adhere to the same (or very similar) structural rules, using completely different application procedures.

The other objection would be to do with Scelsi's apparent avoidance of discrete units. Musical grammar ought to include morphology, defined by Baroni as 'the identification of different categories of musical structures', and syntax, 'rules connecting morphological unities'.³⁶ As I discussed above, Scelsi is normally regarded as the composer to whom these terms are least appropriate, because in his music it is difficult to segment morphological 'unities' or distinguish them from their syntactical relations. For example, would a tremolo in Scelsi count as a morphological unit or as a syntactical relation between adjacent pitches? When does vibrato end and tremolo begin? How can one establish rigorous criteria of segmentation in music that avoids even discrete 'notes'?

In fact, however, this sort of ambiguity is not unique to Scelsi's music. Discussing tonal music, Baroni points out that a familiar phenomenon (for instance, a triad) may be experienced either as a syntactical relation (between three notes), or, on a higher level, as a 'morphological phenomenon'. The same can be said of Scelsi's tremoli and glissandi. It would also be a mistake to assume that Scelsi's avoidance of discrete units implies the absence of morphological *categories*. As to the 'note', Baroni continues:

The central morphological concept, common to many musical cultures, is that of "note". It can be defined as central because many musical concepts can be conceived as micro-categories that are necessary in order to define a note (as traits of a note), while other concepts can be conceived as macro-units formed by a number of notes. For example the absolute and relative pitch of a note, its being a particular degree of a scale, its duration, its metrical accent, are morphological characteristics, or micro categories, or traits, necessary to define a particular note, while an appoggiatura is a morphological unit composed by two notes.³⁷

All of this applies to Scelsi. The peculiarities of his music are that its discourse focuses on the traits rather than on notes or configurations of notes, and, indeed, that he makes 'note abstraction' as difficult as possible. Even so, the concept of 'note'

retains its traditional centrality. After all, most listeners confronted with Scelsi's music will immediately remark that 'it's all one note', although this is not strictly the case.

Scelsi's monotone-based heterophonic style

In this style, Scelsi fuses parts together to create the illusion of a single, complex sound object; strong individuation of parts occurs but is exceptional. He achieves this effect of fusion partly by imposing global pitch constraints – 'harmony' is based on unisons, octaves, and quartertones,³⁸ 'melodic motion' is mainly by quartertone (or, less often, semitone) step or glissando – but also by using local disguise strategies. Pitch, dynamics, vibrato, and register consistently interact in ways that allow Scelsi to control and often frustrate the listener's perception of independent parts and of pitch motion. Without such strategies, it would be difficult not to hear the late pieces simply as studies in oblique quartertone motion; this would be precisely the kind of interpretation, privileging pitch relations, of which he disapproved, and which he sought to discourage.

These strategies involve the manipulation of various categories of perception, especially salience (generally defined as 'probability of being noticed'), grouping of simultaneous sounds, and pitch centrality. Scelsi usually maintains a high degree of ambiguity and tension with regard to at least one of these categories. I shall discuss each in turn, beginning with salience.

The music is segmented as follows: a new cell beginning each time a sound gesture begins or ends, and each time there is any notated fluctuation of pitch, or any change in the relative loudness, relative extent of vibrato, or timbral relationship of parts. I assume that the durations of cells are partly contingent on Scelsi's psychological process of finding the next 'right sound', and partly manipulated for dramatic purposes, usually with an increase of 'harmonic rhythm' in the middle of each movement.

Salience

In the following analyses, salience is associated with the following: asynchrony (a single, distinct inflection is more salient than one disguised with another, simultaneous inflection), increment of texture (a newly introduced part will tend to be more salient than a continuing part), increment of pitch (the onset of a new gesture at

a distinct pitch, or oblique motion from unison to a distinct pitch – the two types of event are difficult to tell apart) or pitch motion (from one distinct pitch to another), loudness, extent of vibrato, and brightness of timbre.³⁹ In other words, almost any fluctuation in any of the traits characterising Scelsi's music affects the relative salience of parts.

With regard to pitch, it is likely that salience will tend to be greater when the interval between the distinct pitch and the nearest continuing pitch is wider (with the exception of octaves and fifths), not least because wider intervals are less frequent than quartertones and semitones; however, I do not attempt to 'rank' these intervals here. We should also note that an increase in extent of vibrato, as well as being a salient trait in its own right, also constitutes a marginal kind of pitch 'increment', but, at the same time, limits the distinctness of the pitch.

One of Scelsi's main strategies is to 'distribute' salient traits between parts, so that they compete for attention. For instance, one part may be salient in pitch, another in loudness, and so on. The balance is, of course, affected by the degree of emphasis in each trait (a fortissimo may intuitively be felt to 'outweigh' a subtle change of pitch, for instance). However, it would be difficult to quantify these traits or justify any hierarchy.

Ex. 1 shows the opening of the third movement of *Xnoybis*. In this work, the violin is tuned f–g¹–b¹–d<sharp>², to allow unisons and quartertones to be played more easily among the upper strings, and is distorted with a special mute. The score, characteristically, uses a separate stave for each string. *Xnoybis* allows us temporarily to disregard the perception of grouping, as it is rarely in more than two parts. This particular movement is also without octave doubling.

Fig. 1 highlights distribution of salient traits in the same passage. Each row corresponds to a cell; each unbroken vertical block is a gesture. Each new gesture begins a new column, moving from left to right; this is to allow us to compare Scelsi's treatment of onsets. The number of the gesture (in square brackets) and the bar and beat numbers are shown in the left margin, timbre indications in the right margin. Vibrato is indicated with bold italics, the relative loudness between parts with arrows (the arrow points towards the louder component; double-headed arrows indicate equal loudness), pizzicato with +, and glissando with \curvearrowright . All the pitches are in the d² register.

This schematic form allows various observations. First of all, we can see how Scelsi approaches increments of pitch. More often than not these coincide with onsets of gestures. However, he usually limits the salience of new pitches and of onsets by making them quieter than the continuous sound. In the sixteen bars, only the onsets of gestures [9], [11], [14], and [16] are louder than the continuous sound, and, in each case, the new pitch is the lower pitch; this might be defined as another disguising factor, a factor limiting salience. He also blurs increments of pitch by following a general ‘rule’ that either the continuous pitch or the new pitch should be vibrato. In the central part of the movement he breaks this rule, introducing more salient onsets. The result is a form common in his music: polyphonic perception is blocked, then temporarily encouraged (especially when the interval between parts stretches to a tone and a quarter), then blocked again.

Scelsi’s concern with onsets perhaps explains the occurrence of ‘false starts’: entries [3] and [4] are false starts in relation to [5], likewise [6] and [7] in relation to [8]. It is impossible to say whether these false starts were ‘genuine’ or rhetorical, or somewhere in between.

Another tactic is the ‘exchange of traits’ that occurs between parts in bar 2. Here the traits of relative loudness and vibrato are swapped between parts:

$$\begin{aligned} d &\leftarrow c<1 \frac{1}{2} \text{ sharp}> \\ d &\rightarrow c<1 \frac{1}{2} \text{ sharp}> \end{aligned}$$

The aural result is almost indistinguishable from this:

$$\begin{aligned} d &\leftarrow c<1 \frac{1}{2} \text{ sharp}> \\ c<1 \frac{1}{2} \text{ sharp}> &\leftarrow d \end{aligned}$$

So far I have disregarded the influence of the colour of the strings, which undoubtedly affects the listening experience significantly. For instance, the opening d^2 is assigned to the softer third string, so that the lower auxiliary appears on a higher, brighter string (the first movement also begins in this way). This may have been Scelsi’s intention from the outset, or merely a practical solution to the problem that the alternative distribution would force the performer to sustain the same relatively

uncomfortable hand position for longer (between bars 6 and 12). In either case, I am supposing that the underlying model, which is my target here, preceded such fine points of instrumentation and timbre, even if they were conceived before the particular improvisation that was arranged into this piece. Indeed, many of the improvisations are significantly different in timbre from the transcriptions, and also less ‘fine-grained’ in their variety of timbre. Some pieces, such as *Maknongan* (1976), exist in versions for more than one instrument or voice. In view of this, is it so narrow-minded to wonder whether timbre might be a ‘secondary parameter’ in Scelsi’s late style?⁴⁰ He undoubtedly subverts the standard relationship between ‘nuance perception’ and ‘categorical perception’, but it is not in his power to abolish the distinction altogether.⁴¹

Grouping

Textures with more than two parts are exponentially more complex and difficult to represent, since each part interacts with all the others in the ways described above. Indeed, it may be that these more complex works were generated in a more haphazard way, that Scelsi could not have processed (‘automatically’ or otherwise) all of these interactions in such a honed way as he does in *Xnoybis*. Some dynamic detail may also have been lost in the transcription process. The analyst therefore needs to be even more careful not to introduce arbitrary or misguided interpretations.

The works with several parts introduce a new perceptual element, that of the grouping together of simultaneous sounds. Again, this can be associated with several competing criteria: synchrony (grouping simultaneous inflections together), register (grouping clusters together), pitch-class (grouping unisons and octaves together), uniformity of loudness, or timbral uniformity. In other words, there are several kinds of similarity or proximity that the ear may privilege from one moment to the next. In live performance, the spatial separation of instruments will influence perception, but this does not necessarily reflect the original model.

The complexity of grouping in Scelsi’s textures is illustrated in Ex. 2, from the first movement of the Duo for violin and cello of 1965.⁴² The opening two bars can be represented in the same way as above (Fig. 2). However, in bar 3 the question of grouping arises with the introduction of a third part, the bass pedal. Two groupings are plausible: either the two Gs form a unit distinct from the $f < 1 \frac{1}{2}$ sharp¹, or the cluster material in the violin forms a unit distinct from the cello pedal. Which is more

likely to have been Scelsi's intention? Of course, there can be no clear answer to this (the ambiguity is intentional), but there are several reasons to favour the latter: first, the pedal G is the unprecedented element; second, the vibrato of the g^1 distinguishes it from the bass G (it is not a 'clean' octave) and fuses it with the auxiliary; third, the bass is quieter; fourth, the fact that the bass is quieter makes it likely that the perceiver will notice it fractionally *later* than the quartertone motion. This interpretation is reinforced by the fact that the cluster material and the bass pedal are subsequently inflected independently: the cluster is 'inverted' to the quartertone above the pitch centre (bar 6), and the pedal is doubled at g^1 (bar 4), then g (bar 8).

A similarly detailed consideration of these categories is required each time a new gesture begins. Fig. 3 describes bars 1-13, using brackets to suggest possible groupings. One can see how Scelsi's attention and the focus of his decision-making process shift from one part of the texture to another, usually allowing one group to continue unchanged, while he inflects another. Changes in overall grouping are less frequent than adjustments to the relative salience of parts within groups. Most of the activity between bars 3 and 9 is 'nested' within what we might call a 'middle-ground' level. From a structural point of view, the passage could be reduced further (Fig. 4); there is an interesting self-similarity between this and Fig. 2.

Sometimes grouping is influenced directly by salience, in the sense that a particular gesture is so salient as to seem extraneous. Such events create a sense of expansion, a sudden move to a higher level of grouping (the previous groups are suddenly reinterpreted as subgroups); this multiplicity of implied levels may also correspond to Scelsi's concept of 'depth'. In this passage, the most extraneous element is the vibrato $d<1\frac{1}{2}\text{ sharp}>^2$, especially because of its pitch-class (which suddenly reveals that this is not a 'one-note' piece), but also because of its register and timing (it occurs after a relative relaxation of activity); in performance, the bright timbre of the open E pizzicato also marks it out. The $f<\text{sharp}>^3$ in bar 9, similarly, is considered extraneous in register, pitch-class (it is not a quartertone sharp and thus not in octaves with the cello auxiliary), loudness, and timing (it seems to 'cut off' the vibrato); the only other possible grouping would be with the harmonic g^1 in the cello, but the latter is masked. Sometimes, on the other hand, new gestures seem to emerge not from the 'outside' but from within a particular group, e.g. the cello $f<1\frac{1}{2}\text{ sharp}>^1$ in bar 9, which grows out of the cluster group.

Grouping is even more elusive in the second movement of the Duo (Ex. 3). The opening is again representative of the general rhetoric. In the third beat of bar 1 there are two possibilities: to group together the violin $g<1\frac{1}{2}\text{ sharp}>^1$ and the harmonic a^1 in the cello on grounds of simultaneity and register, or to group together the two $G<1\frac{1}{2}\text{ sharp}>s$ on grounds of pitch-class and vibrato. This is a more ambiguous and difficult case (and therefore particularly successful, from Scelsi's point of view) and it is only clarified when the a^1 ends, inviting the listener *retrospectively* to group together the vibrato octave. Indeed, part of the ambiguity of this case is that the criterion of simultaneity holds only momentarily, so that one may group the simultaneous onsets on the third beat together and then reinterpret the same texture, hearing the vibrato octave as a unit.

This passage continues in a similar vein (Fig. 5). The cello a in bar 2, beat 3 can be grouped with the quartertone auxiliary, which now describes a tremolo with the same a and is thus no longer so closely tied to the sound an octave above. However, the sudden doubling of the pitch A in bar 3 again shifts the grouping so that the cello's $g<1\frac{1}{2}\text{ sharp}>$ is suddenly extraneous.

A comparison of Figs. 3 and 5 highlights the contrast between the two movements. In the first movement, grouping was influenced above all by register (so that clusters tended to be grouped together); in the second, it is influenced alternately by register and by pitch-class (so that octaves are grouped together), with the result that the same component of the texture can be grouped differently from one moment to the next. It is a virtue of Scelsi's improvisation model that it allows this kind of effective contrast in spite of the uniformity of the material. The contrast is nothing to do with 'sound itself', however.

Pitch centrality

In a cluster, the pitch likely to be interpreted as 'central' will usually be the one that is continuous (not newly introduced) and thus stable; if several are continuous, the ear can be expected to orient itself to a pitch that is doubled at the unison or (more so) at the octave; possibly, absence of vibrato may also encourage this orientation; other things being equal, the ear will probably orient itself towards the loudest pitch. The opening of the third movement of *Xnoybis*, discussed above, presents an apparently simple example (Fig. 6). Overall, the $c<1\frac{1}{2}\text{ sharp}>^2$ is predominant: is it not only

‘more continuous’ (that is, less frequently interrupted) than the d^2 , but also louder (except at the very beginning).

Although pitch centrality is the first notion that springs to mind where Scelsi is concerned, it seems on reflection even more difficult to assess rigorously than salience and grouping, not only because there are numerous situations of conflict (for instance, when one continuous pitch is octave-doubled and another is relatively loud) but also because it is inherently retrospective. There is no fixed point at which a pitch ‘becomes’ continuous or established. Moreover, frequently recurring pitches are likely to be retained in the listener’s memory, and will thus be ‘virtually’ if not literally continuous. Scelsi can therefore only control a sense of pitch centrality directly when one pitch-class is evidently more stable than any other; as soon as there is any doubt, matters of salience and grouping will interfere.

This can be seen by again comparing the two movements of the Duo. In the first movement the pitch centre is never in doubt: it is the almost unbroken g^1 , often doubled two octaves below by the cello, and sometimes two or three octaves above as a harmonic (neither doubling is ever marked *vibrato*). The pitch-class G is only interrupted once, at bar 22, revealing an upper auxiliary in the treble register of the cello, but after two beats it is loudly reasserted. As a result there is a mutually reinforcing opposition between the centrality of the pitch-class G and the salience of the incremental pitches, which appear in increasingly complex and dramatic configurations. This creates the centrifugal rhetoric on the musical surface.

In the *calmissimo* second movement, on the other hand, the pitch centre is much less certain. This is because the pitch-class A and its quartertone lower auxiliary are both used, alternately, as pedals (often doubled, but with no bass ‘anchor’), but are also both frequently interrupted. Since there is not such a clear opposition between continuous and incremental pitches, the listener’s perception of pitch centre is likely to be influenced positively by *other* salience criteria, especially loudness. The uncertainty of the pitch centre seems to be the rhetorical focus of the movement, its source of tension.

To put it another way, the relationship between salience and pitch centrality is one of negative correlation *at* moments of pitch increment (since the centrality of the continuous pitch is defined against the salient element, i.e., the new pitch) and positive *between* moments of pitch increment (when no element is continuous and thus centrality starts to be influenced by intensity).

Tonal and post-tonal allusions in the non-monotone-based works

Not all of Scelsi's late work is in the idiom that I have analysed above. Some pieces are in its 'polyphonic' equivalent; that is, the overall harmonic constraint is relaxed to include other sustained intervals (not only unisons and octaves) and chords (often triads), even though the constraint on melodic motion is usually sustained. This is the case in the *Tre canti sacri* (1958) for choir, the violin concerto *Anahit* (1965), and the music for large string ensemble. These works consist of simultaneous drones, each of which is elaborated using the peculiarly Scelsian strategies described above, but which, when combined, allude to (Western) harmony and counterpoint.

For example, *Dharana* (1975) (Ex. 4), for cello and double bass, is based on the major third F–A. Associations of F major are reinforced by the fact that the pitch-class F is dragged down to its lower auxiliary E (sometimes E<quartertone-sharp>, which can be heard, at least by the Western listener, as an expressively raised leading-note), while the A is dragged upwards to A <quartertone-sharp> (heard as a downward-leaning B<flat>), and that these 'auxiliaries' resolve inwards again, like the E and B<flat> in the dominant seventh in F. It is hard not to suspect that Scelsi specifically tries to soften this allusion at various points: for example, in bars 9-10, when the upper auxiliary relaxes onto a, the f in the cello also falls by a quartertone and increases into loudness.

A different association is prompted when the double bass doubles the E: this encourages one to reinterpret the tonality as A minor, with a dominant pedal, especially when the A is then pulled up almost to B<natural> (Ex. 5). Here it is hard not to interpret the indication '*quasi* <natural>' (that is, Scelsi's avoidance of the compound perfect fifth E–b) as another attempt to attenuate a tonal reference.

Another well-known tonal allusion in Scelsi's work is the progression from a G<flat> triad to a 6/4 chord on F that occurs in the first and fourth movements of the Third String Quartet. Similar progressions abound in *Anahit*. In *Anagamin* (1965), he plays on the tonal implications of the seventh between C and B<flat>. *Ohoi* (1966) uses quartal harmony.

These works manifest a delicate interaction between Scelsi's individual procedures (regarding nuance) and received syntactical structures (regarding voice-leading and so on). He thus sets himself an interesting problem, that of preventing the

(Western) listener from relegating all the detail of nuance *back* to the status of ‘accessory’, back to the realm of performance practice.

The stylistic echoes in Scelsi are not always tonal. There are works that share traits with other post-war avant-garde composers, such as Xenakis. These include the pieces for choir and orchestra *Uaxactum* (1966), *Konx-Om-Pax* (1969), and *Pfhat* (1974), in which drones are opposed with clusters and untuned percussion. Julian Anderson has noted Scelsi’s debt to Nono in some of his vocal writing.⁴³ The overtly melodic, modal, archaic style of *Antifona* and *Three Latin Prayers* of 1970 constitutes a third type of stylistic allusion (an eccentric one even by Scelsi’s standards). Many of the late works, such as *Ko-Lho* (1966) for flute and clarinet, recall the oscillatory style of the transitional works of the 1950s.

Other late pieces are exceptional in that the original improvisations were made on non-keyboard instruments, or were collaborative. Certain performers had such a significant input in some improvisations that they can be viewed as co-authors of the resulting works. The outstanding example is the cycle *Canti del Capricorno* (1962-1972), for which the soprano Michiko Hirayama effectively turned herself into the instrument of Scelsi’s improvisation. In such cases, Scelsi’s improvisational model is fused with that of another individual (even if the latter is attempting to improvise in the style of Scelsi).

Conclusions

The thrust of my argument is that, in Scelsi’s music, the impression of a magical emancipation of sound from any syntactical system is achieved by a manipulation of morphological traits that is so systematic as to constitute a kind of syntax. This is not to say that his music does not also, on another level, transcend the syntactical; but this is true of any music.

My observations are based on study of the scores and are intended as preliminary suggestions, which could be refined by a more detailed comparison with the tapes of the original improvisations. Such a comparison might also allow a more rigorous assessment of the mediation and contribution of the transcribing assistants. Indeed, although the analysis of the tapes is a long overdue step in Scelsi research, it is not certain that the tapes alone will allow scholars to reconstruct his working process in as much detail as they might wish, and such a reconstruction would still not necessarily reveal his music’s structural rules. It could also be fruitful to measure

redundancy in various aspects of the music, using the scores as well as the tapes, and to conduct listening experiments; perhaps a ‘listening grammar’ could be described.

One of the most interesting and original aspects of Scelsi’s music is that he was able to realise his model or grammar automatically in the act of improvisation, as a result of extensive practice. Another is its relation to the grammar or grammars of musicianship: those semi-explicit rules determining when to widen vibrato, when to sharpen the leading-note, when to slow down, and so on. In Western concert music, these nuances, which constitute such an important – if ‘ineffable’ – part of musical communication, are normally applied *to* an existing, written-down musical structure; in Scelsi, the manipulation of this type of nuance is what *generates* the structure.

Notes

An early version of this article was delivered during the Cardiff Music Analysis Conference in 2008. I would like to thank the staff of the Fondazione Isabella Scelsi for their generous assistance.

1. See Bernard Lortat-Jacob, 'Improvisation: le modèle et ses réalisations', in Lortat-Jacob (ed.), *L'improvisation dans les musiques de tradition orale* (Paris: SELAF, 1987), pp. 45–59. The concept is referred to in several other chapters in this volume.
2. Jeff Pressing, 'Cognitive processes in improvisation', in W. R. Crozier and A. J. Chapman (eds.), *Cognitive Processes in the Perception of Art* (Amsterdam: North Holland, 1984), pp. 346–51.
3. See Eric Drott, 'Class, Ideology, and *il caso Scelsi*', *Musical Quarterly*, 89/i (2006), pp. 80–120.
4. Franck Mallet (ed.), 'Conversations avec Giacinto Scelsi', in Giacinto Scelsi, *Les anges sont ailleurs...*, collected writings and interviews, Sharon Kanach (ed.), trans. Sharon Kanach, Irène Assayag and Fiorella Edel (Arles: Actes Sud, 2006), p. 64. This interview was originally broadcast on Radio France: France Musique in 1987.
5. *Ibid.*, p. 66. Scelsi also claimed that, while recovering in a Swiss clinic, he had developed the habit of playing single notes on the piano and meditating on their acoustic depth. With this story he encouraged the interpretation of his later work as an extension of this 'therapeutic' practice.
6. Pressing 1984, pp. 357–9.
7. This is the most controversial element of his methods. It has often been justified on the ground that it was consistent with his overall attitude, undermining the centrality of the written text. In his view the musical 'work' was established during the moment of inspiration, and transcription was a mechanical task that did not – indeed *must* not – contribute to the work. Indeed, it is hard to imagine how Scelsi could have transcribed the music himself without succumbing to the temptation to start editing it rationally. On the other hand, there is no escaping the fact that he did not credit his assistants.
8. It appears that Scelsi used two claviolines, confusingly inscribed with the word 'ondiola'. Elisabetta Piras, Mario Baroni, Gianni Zanarini, 'Improvvisazioni di Giacinto Scelsi: il caso problematico dell'ondiola', *i suoni, le onde... Rivista della*

Fondazione Isabella Scelsi 19/20 (Roma: Fondazione Isabella Scelsi, 2007-2008), pp. 6-7.

9. Gregory N. Reish, 'Una nota sola: Giacinto Scelsi and the Genesis of Music on a Single Note', *Journal of Musicological Research*, 25 (2006), pp. 150-60. Reish aptly describes Scelsi's late aesthetics as 'sonorist'.

10. Mallet 2006, p. 83.

11. Ibid., p. 64. Also Giacinto Scelsi, 'Son et musique', in Scelsi, *Les Anges sont ailleurs...*, p. 126 (originally Rome and Venice: Le Parole Gelate, 1981).

12. Scelsi, 'Son et musique', pp. 131-2. Scelsi observed that post-Webernian and even chance music were, like tonal music, conditioned by numerical systems that preceded the sound 'itself', even when the artistic intention was to give particular attention to sound quality (this also applies to spectral music).

13. Scelsi, 'Son et musique', pp. 128-9.

14. Jeff Pressing, 'Improvisation: Methods and Models', in John Sloboda (ed.), *Generative Processes in Music: the Psychology of Performance, Composition and Improvisation* (Oxford: OUP, 1988), pp. 139-40, 142.

15. Scelsi, 'Force cosmique', in Scelsi, *Les Anges sont ailleurs...*, p. 151.

16. Letter to Sharon Kanach, in Scelsi, *Les Anges sont ailleurs...*, p. 57.

17. Scelsi was well informed in this respect. He was a friend of Michaux and Dalí, and co-founded an art gallery specialising in abstract expressionism and *art informel*. See Alessandro Mastropietro, 'Action music (1955)... action painting: Su un nodo della produzione pianistica di Scelsi e su alcune ipotesi definitorie della sua tecnica compositiva', in Daniela M. Tortora (ed.), *Giacinto Scelsi nel centenario della nascita* (Rome: Aracne, 2008), pp. 119-44.

18. Vieri Tosatti, 'Scelsi, c'est moi', *Il giornale della musica* 5/35 (1989), pp. 1, 10.

19. This development has demystified Scelsi somewhat. Some progress has been made in identifying and analysing the tapes, above all by the composer and scholar Friedrich Jaecker. The first results of this research were presented at the conference 'Scelsi Ritrovato: nuovi percorsi alla luce delle fonti d'archivio', Rome, November 11-12, 2010. See also Friedrich Jaecker, '“Funziona? O non funziona?” Ein Streifzug durch das Scelsi-Archiv', *MusikTexte: Zeitschrift für neue Musik* 128, 2011, pp. 5-11.

20. Pierre Albert Castanet, Nicola Cisternino, 'Giacinto Scelsi, quasi una premessa', in Castanet and Cisternino (eds.), *Giacinto Scelsi: viaggio al centro del suono* (La Spezia: Luna, 1993), p. 11.

21. Martin Zenck, 'Das Irreduktible als Kriterium der Avantgarde', in Heinz-Klaus Metzger and Rainer Riehn (eds.), *Giacinto Scelsi. Musik-Konzepte 31* (Munich: text + kritik, 1983), p. 70.
22. Heinz-Klaus Metzger, 'Das Unbekannte in der Musik. Versuch über die Kompositionen von Giacinto Scelsi', in Metzger and Rainer Riehn (eds.), *Giacinto Scelsi. Musik-Konzepte 31* (Munich: text + kritik, 1983), p. 14. See also Giulio Castagnoli, 'Suono e processo nei "Quattro pezzi per orchestra (su una nota sola) (1959)" di Giacinto Scelsi', in Castanet and Cisternino (eds.) 1993, pp. 246–7, and Tristan Murail, 'Scelsi De-composer', *Contemporary Music Review* 24/i-ii (2005), p. 173.
23. Piras, Baroni, and Zanarini, 'Improvvisazioni di Giacinto Scelsi', pp. 8–9. Scelsi would also exploit the possibilities offered by his recording equipment, for example, reversing the direction of the tapes.
24. Tristan Murail, 'Scelsi and L'Itinéraire: The Exploration of Sound', trans. Robert Hasegawa, *Contemporary Music Review* 24/ii-iii (2005), pp. 183–4. Murail describes this kind of time as '*temps lisse*', smooth or polished time.
25. Murail, 'Scelsi, De-composer', p. 179.
26. Christine Anderson, 'Klang als Energie. Anahit von Giacinto Scelsi', *MusikTexte: Zeitschrift für neue Musik* 81/82 (1999), pp. 72–82.
27. Johannes Menke, *Pax. Analyse bei Giacinto Scelsi: Tre canti sacri und Konx-Om-Pax* (Hofheim: Wolke Verlag, 2004).
28. Jean-Jacques Nattiez, *Music and Discourse*, trans. Carolyn Abbate (Princeton, NJ: Princeton University Press, 1991), p. 88, n. 15.
29. Lortat-Jacob 1987, p. 46.
30. *Ibid*, p. 52.
31. See Giovanni Giuriati, 'Suono, improvvisazione, trascrizione, autorialità, Oriente, ... e Scelsi. Alcune riflessioni di un etnomusicologo', in Tortora 2008, pp. 263–79.
32. See Mario Baroni, Rossana Dalmonte, and Carlo Jacoboni, *A computer-aided inquiry on music communications: the rules of music* (Lewiston, Queenston, Lampeter: The Edwin Meller Press, 2003). Other important contributions to this field include Terry Winograd, 'Linguistics and the computer analysis of tonal harmony', *Journal of Music Theory* 12/i (1968), pp. 2–49, Baroni and Jacoboni, 'Proposal for a grammar of melody: the Bach chorales' (Montréal: Presses de l'Université de

Montréal, 1978), and Kemal Ebcioglu, 'An expert system for harmonizing four-part chorales', *Computer Music Journal* 12/iii (1988), pp. 43–51.

33. Fred Lerdahl, 'Cognitive constraints on compositional systems', in Sloboda (ed.), *Generative Processes in Music: the Psychology of Performance, Composition and Improvisation* (Oxford: Oxford University Press, 1988), pp. 231–59. Lerdahl's argument has been attacked as conservative. For example, see James Boros, 'A "New Totality"?', *Perspectives of New Music* 33/i–ii (1995), pp. 538–53. Perhaps I should specify that I do not consider 'cognitively opaque' music inferior. See also Mario Baroni, 'GTTM and post-tonal music', *Musicae scientiae. Discussion Forum* 5, 2010, pp. 69–93.

34. See Mieko Kanno, 'Thoughts on how to play in tune: pitch and intonation', *Contemporary Music Review*, 22/i–ii (2003), pp. 49–51. As Kanno explains, in works such as those of Scelsi, the performer still has ample responsibility in this regard.

35. Baroni, Dalmonte, and Jacoboni 2003, p. 14, note 18 on pp. 15–16.

36. Mario Baroni, 'Musical grammar and the study of cognitive processes of composition', *Musicae scientiae*, 3/i (1999), pp. 3–5.

37. Ibid. p. 5.

38. The intervals that most encourage tonal fusion (i.e. are most likely to be interpreted as 'comprising partials of a single complex tone') are the unison, octave, and fifth – hence their avoidance in polyphonic idioms. See David Huron, 'Tonal consonance versus tonal fusion in polyphonic sonorities', *Music Perception*, 9/ii (1991), p. 135.

39. Similar criteria are used in Fred Lerdahl, 'Atonal prolongational structure', *Contemporary Music Review*, 4/i (1989), pp. 73–4.

40. The familiar term used in Leonard B. Meyer, *Style and Music: theory, history and ideology* (Philadelphia: University of Pennsylvania Press, 1989), pp. 14–16. *Xnoybis* requires special metallic mutes, but the score comes with an erratum explaining that one should 'find a suitable solution by personal experimentation'. Is it, then, the fact that the sound is altered that counts rather than the particular character of the new sound?

41. See Diana Raffman, *Language, Music and Mind* (Cambridge, MA, and London: MIT Press, 1993), pp. 83–97.

42. This work is also discussed in Ian Dickson, 'Orality and rhetoric in Scelsi's music', *Twentieth-century Music*, 6/i (2009), pp. 34–8.

43. Julian Anderson, 'La note juste', *Musical Times* 136/1823 (1995), p. 23.

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Abstract

Giacinto Scelsi (1905-1988) is a problematic figure for musical analysis, on account of his extreme anti-rationalism and devaluing of the score. By the 1950s, he was creating music through improvisation, and delegating the transcription to assistants. The idiom he evolved was novel not only in its extreme economy of means, usually consisting of subtle inflections of continuous sounds, but also in its apparent rejection of any rational organisation.

Analysts of Scelsi's work have tended to concentrate on large-scale musical architecture, neglecting the apparently redundant, non-developmental gestures from which, nonetheless, this architecture must be built up. Many of Scelsi's advocates have encouraged this by insisting on the music's irreducibility and exceptional rapport with sound – an argument that stems from the composer's own mysticism: he attributed the automaticity of his improvisations to the cosmic power of sound, rather than to the long hours that he spent creating them.

This article explores the idea that Scelsi's music is conditioned, if not by an explicit grammar (traditional or avant-garde), then by the 'model' of the original improvisations, and that his manipulation of nuance can be considered as a kind of syntax. It argues that a grammatical analysis accounts for the persuasiveness and variety of the improvisations more plausibly than statistical analysis or metaphysical formulations involving sound 'itself'.

Biographical note

Ian Dickson studied Music at King's College London, and received his PhD in Composition from the University of York, where he was supervised by Professor Roger Marsh and supported by the Arts and Humanities Research Board.

Captions for music examples and figures

Ex. 1. Giacinto Scelsi, *Xnoybis*, for solo violin (1964), movement III, bars 1–16.
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Ex. 2. Giacinto Scelsi, Duo, for violin and cello (1965), movement I, bars 1–22.
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Ex. 3. Giacinto Scelsi, Duo, for violin and cello (1965), movement II, bars 1–4.
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Ex. 4. Giacinto Scelsi, *Dharana*, for cello and double bass (1975), bars 1–14.
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Ex. 5. Giacinto Scelsi, *Dharana*, for cello and double bass (1975), bars 57–62.
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Fig. 1. *Xnoybis*, movement 3, bars 1–16, salience relations.

Fig. 2. Duo, movement 1, bars 1–2, grouping.

Fig. 3. Duo, movement 1, bars 1–13, grouping.

Fig. 4. Duo, movement 1, bars 1–13, grouping (reduction).

Fig. 5. Duo, movement 2, bars 1–3, grouping.

Fig. 6. *Xnoybis*, movement 3, bars 1–11, pitch centrality.

Ex. 1. Scelsi, *Xnoybis* (1964), movement 3, bars 1–13. Paris: Salabert, 1985.

III

$\text{♩} = 72$

I Corda (Ré#)

II Corda (Si)

III Corda (Sol)

TAST.

ppp *p* *mf* *Alz. NAT. (non vibr.)*

ppp *pp* *mf* (quasi impetuosi.) *p* *mf*

5

(Pizz.MS.)

ppp *p* *mf* *non vibr.*

PONT.

10

ALLA... TAST.

molto p *mf* *NAT.*

15

(lento vibr.)

FLAUT.

mf *p* *f* *mf* *p*

F.A.S. 18 100

Ex. 2.

Intenso, vibrante
♩ = 72

I

3/4 AL. NAT.

VL 1^a c.
VL 2^a c.
VL 3^a c.

TAST.
pp
p
mp

4/4
3/4

ppp
TAST.
poco cresc.

5

2/4 4/4

mf
mf

2/4 4/4

p
AL. NAT.
mp
mp

10

3/4 4/4

1^a c.
pp TAST.
p
mp

2^a c.
p

3^a c.
p

Ex. 3

Ex. 3. Scelsi, Duo (1965), movement 2, bars 1-4. Paris: Salabert, 1985.

II

Calmissimo, non espressivo
♩ = 60

The musical score is for Scelsi's Duo, movement 2, bars 1-4. It is written for Violin (VI) and Viola (Vc.) in 4/4 time. The tempo is Calmissimo, non espressivo, with a metronome marking of 60. The key signature has one sharp (F#). The score shows four measures. The Violin part (VI) has staves for 2nd, 3rd, and 4th positions. The Viola part (Vc.) has staves for 1st, 2nd, and 3rd positions. Dynamics include pp, mp, mf, and p. Performance markings include TAST., NAI., AL., and PONT. There are also markings for 'V' and 'AL' with dashed lines indicating a transition to 'PONT.'

Ex. 4.

Ex. 4. Scelsi, *Dharana* (1975), bars 1-12. Paris: Salabert, 1986.

$\left[\frac{4}{4} \right] = 124$

Violoncello

Double Bass

Vc.

Db.

III c. *pppp*
non vibrato

pp

poco

p

pp

II c. *pppp*

ppp

p

IV c. [sic.]

pppp

ppp

più chiaro

pp

poco cresc.

mf

f

portamento lentissimo

crescendo ----- *(p)* ----- *mf*

quasi f

p

mp

poco

(p)

mor.

vib. veloce

f sempre

ff

f

ff

Ex. 5.

Ex. 5. Scelsi, Dharana (1975), bars 57-62. Paris: Salabert, 1986.

Ex. 5. Scelsi, Dharana (1975), bars 57-62. Paris: Salabert, 1986.

The score is for Violoncello (Vc.) and Double Bass (Db.). It consists of two systems of staves. The first system shows bars 57-60, and the second system shows bars 61-62. The Vc. part features various dynamics (*ff*, *mf*, *p*, *mor.*, *pp*, *mf*, *f*, *p*) and articulations (*stretto*, *quasi*, *più f e aspro*, *meno f = f e pieno*). The Db. part features dynamics (*f*, *poco cresc.*, *p*, *mp*, *mf*, *f*, *mf*) and articulations (*portamento lentissimo*). The score includes fingerings, breath marks, and performance instructions like "non vibr." and "quasi:". The key signature is one flat (B-flat) and the time signature is common time (C).

- [1] (1.1) d
 d
- [2] (2.1) $d \leftarrow c\langle\text{sharp}\rangle^+$
 $d \rightarrow c\langle\text{sharp}\rangle^+$
 $c\langle\text{sharp}\rangle^+$
- [3] (3.2) $c\langle\text{sharp}\rangle^+ \leftarrow d$
 $c\langle\text{sharp}\rangle^+$
- [4] (4.2) $c\langle\text{sharp}\rangle^+ \leftarrow d$
 $c\langle\text{sharp}\rangle^+$
- [5] (4.3) $c\langle\text{sharp}\rangle^+ \leftarrow c\langle\text{sharp}\rangle^+$
 $c\langle\text{sharp}\rangle^+$
- [6] (5.2) $c\langle\text{sharp}\rangle^+ \leftarrow c\langle\text{sharp}\rangle^+$
 $c\langle\text{sharp}\rangle^+$
- [7] (5.3) $c\langle\text{sharp}\rangle^+ \leftarrow c\langle\text{sharp}\rangle^+$
 $c\langle\text{sharp}\rangle^+$
- [8] (6.1) $c\langle\text{sharp}\rangle^+ \leftarrow d$
 d
- [9] (6.2) $d \leftarrow c\langle\text{sharp}\rangle^+$
 $c\langle\text{sharp}\rangle^+$
- [10] (6.4) $c\langle\text{sharp}\rangle^+ \leftarrow d$
 $c\langle\text{sharp}\rangle^+ \leftarrow d$
- [11] (7.3) $d \rightarrow c\langle\text{sharp}\rangle$
 $d \rightarrow c\langle\text{sharp}\rangle^+$
 $c\langle\text{sharp}\rangle^+$
- [12] (9.1) $c\langle\text{sharp}\rangle^+ \leftarrow c\langle\text{sharp}\rangle^+$
- [13] (10.1) $c\langle\text{sharp}\rangle^+ \leftarrow c\langle\text{sharp}\rangle^+$
 $c\langle\text{sharp}\rangle^+ \leftarrow d$
 $c\langle\text{sharp}\rangle^+ \leftarrow d$
 d^+
 d^+
- [14] (11.4) $d^+ \rightarrow c\langle\text{sharp}\rangle^+$
 $c\langle\text{sharp}\rangle^+$
- [15] (12.2) $c\langle\text{sharp}\rangle^+ \leftarrow c\langle\text{sharp}\rangle^+$
 $c\langle\text{sharp}\rangle^+$
 d^+
- [16] (12.4) $d^+ \rightarrow c\langle\text{sharp}\rangle^+$
- [17] (12.4) $\hookrightarrow d$
 d^+
- [18] (13.1) $d^+ \leftarrow d$
- [19] (14.3) $\hookrightarrow d$
 $d\langle\text{sharp}\rangle$
- [20] (14.4) $d\langle\text{sharp}\rangle \leftarrow d^+$
- [21] (15.1) $d\langle\text{sharp}\rangle \leftarrow d^+$
 $d\langle\text{sharp}\rangle \leftarrow d^+$
- [22] (16.2) $d\langle\text{sharp}\rangle \leftarrow d\langle\text{sharp}\rangle$
 $d\langle\text{sharp}\rangle$
- [23] (16.4) $\hookrightarrow d\langle\text{sharp}\rangle \leftarrow e^-$

Fig. 2.

$$\begin{array}{ll}
[1] \text{ 1.1} & g^1 \\
[2] \text{ 1.3} & g^1 \square f<sharp>^{+1} \\
2.1 & g^1 \square g^1 \\
[3] \text{ 2.2} & g^1 \square g^1 \\
2.3 & g^1 \square g^1
\end{array}$$

Fig. 3.

$$\begin{array}{ll}
[1] \text{ 1.1} & g^1 \\
[2] \text{ 1.3} & g^1 \square f<sharp>^{+\uparrow 1} \\
2.1 & g^1 \square g^1 \\
[3] \text{ 2.2} & g^1 \square g^1 \\
2.3 & g^1 \square g^1 \\
[3] \text{ 3.1} & (g^1 \square (f<sharp>^{+1}/g^1)) \leftarrow G \\
[4] \text{ 4.1} & (g^1 \square (f<sharp>^{+1}/g^1)) \leftarrow (G \square g^1) \\
4.3 & (f<sharp>^{+1} \square (f<sharp>^{+1}/g^1)) \leftarrow (G \square g^1) \\
5.4 & (g^1 \square g^1) \leftarrow (G \square g^1) \\
6.1 & (a\cancel{b}^1 \square g^1) \leftarrow (G \square g^1) \\
6.4 & (a\cancel{b}^1 \square g^1) \leftarrow G \\
7.1 & (a\cancel{b}^1 \square (g^1/g^1)) \leftarrow (G \square g) \\
7.4 & (a\cancel{b}^1 \square g^1) \leftarrow (G \square g) \\
[5] \text{ 8.1} & (g^1 \square g^1) \leftarrow (G \square g) \\
8.2 & (g^1 \square (f<sharp>^{+1}/g^1)) \leftarrow (G \square g) \\
8.4 & (g^1 \square (f<sharp>^{+1}/g^1)) \leftarrow G \\
9.2 & ((g^1 \leftarrow f<sharp>^{+1}) \square (f<sharp>^{+1}/g^1)) \square G \\
9.4 & ((g^1 \square f<sharp>^{+1}) \square g^1) \square G \\
[6] \text{ 9.4} & (((g^1 \square f<sharp>^{+1}) \square g^1) \square g^1) \rightarrow f<sharp>^3 \\
11.1 & ((f<sharp>^{+1}/g^1) \square g^1) \rightarrow f<sharp>^3 \\
[7] \text{ 12.1} & (((f<sharp>^{+1}/g^1) \square g^1) \rightarrow f<sharp>^3) \leftarrow \\
(d<sharp>^{+2} \square e+) & \\
12.2 & ((f<sharp>^{+1} \square g^1) \rightarrow f<sharp>^3) \leftarrow \\
d<sharp>^{+2} & \\
13.1 & (g^1 \square g^1) \square f<sharp>^3 \\
13.2 & (g^1 \square g^1) \square (f<sharp>^3 \leftarrow g^3) \\
13.4 & (g^1 \square g^3)
\end{array}$$

Fig. 4.

$$\begin{array}{ll}
[1] \text{ 1.1} & g^1 \\
[2] \text{ 1.3} & g^1 \square f<sharp>^{+1} \\
3.1-8.4 & (g^1 \square (f<sharp>^{+1}/g^1)) \leftarrow G \\
[6] \text{ 9.4} & (((g^1 \square f<sharp>^{+1}) \square g^1) \square g^1) \rightarrow f<sharp>^3 \\
11.1 & ((f<sharp>^{+1}/g^1) \square g^1) \rightarrow f<sharp>^3 \\
[7] \text{ 12.1} & (((f<sharp>^{+1}/g^1) \square g^1) \rightarrow f<sharp>^3) \leftarrow (d<sharp>^{\uparrow 2} \\
= e+) & \\
12.2 & ((f<sharp>^{+1} \square g^1) \rightarrow f<sharp>^3) \leftarrow d<sharp>^{\uparrow 2}
\end{array}$$

13.1
13.4

$(g^1$
 g^1

$\square g^1) \quad \square f^{\text{sharp}}^3$
 $\square g^3$

