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On Ruwet's semiotically oriented theory of music

ABSTRACT: The article deals with Nicolas Ruwet's semiotically oriented theory of music, which constitutes the canvas of his taxonomic analysis. Ruwet adopts from Jakobson's semiotic structuralism the binary model of the sign, together with its key concepts of equivalence and introversive semiosis. Structural understanding of art began with the poetic function of language distinguished by Jakobson, which is defined as the projection of the principle of equivalence from the axis of selection to the axis of combination. The principle of equivalence, regarded by Ruwet as the regulating principle of musical syntax was, in Jakobson's view, the answer to the question about what kind of semiosis was involved in music. The latter, described by Jakobson as introversive, deserves attention not only in view of its association with taxonomic analysis, but also because of its conceptual convergence with Leonard B. Meyer's theory of meaning and formal iconisms of David Osmond-Smith.

KEYWORDS: semiotics; Nicolas Ruwet, Roman Jakobson, paradigmatic analysis, sign, introversive semiosis, Jean-Jacques Nattiez

1. Introduction

A musical work is a symbolic form. Claiming otherwise means denying the possibility of its interpretation, since the latter is only possible in so far as the character of the work as a system of signs allows its content to opalise, whether under the eye of an alert analyst or a devoted music lover. This article discusses the problem of a composition as a sign system and the model of the sign adopted within the framework of the theory of a musical work. For this reason, it will talk of semiotically oriented theory of music, i.e., music signification, rather than simply music semiotics. This last concept implies a much wider field of discussion, whereas here the reader's attention is drawn to that which provides the point of departure for other areas of musicology, such as music analysis. Semiotically oriented theory of music allows one to see a work in a variety of perspectives and forms, from that regulated by the principle of equivalence of structure (Nicolas Ruwet), through an infinite chain of interpretants (Jean-Jacques Nattiez), up to the synoptic approach which takes into account the musical form and substance. The sign in Ruwet's theory of music is the same as the concept which appears in the structural semiotics of Roman Jakobson, and the same which Jakobson in

turn adopted from Ferdinand de Saussure. Ruwet's sign is inextricably linked to the principle of equivalence and introversive semiosis, which are here the subject of the discussion to equal extent.

2. The Jakobson-Ruwet principle of equivalence and introversive semiosis

For many structuralists, de Saussure's binary model of the sign has for a long time constituted the model paradigm. It appeared in musicology owing to the application of the ideas of Prague functionalism and the tools of structural linguistics, inspiring a variety of comparative research on the structure of language and music.¹ It should be noted that, while the Prague Linguistic Circle adopted de Saussure's ideas to a large extent, it imbued them with a different meaning and interpretation.² The main representative of the Prague Circle, Roman Jakobson, took from de Saussure the binary conception of the sign, introducing additionally the classification of the relationship *signifier* and *signified resp. signans* and *signatum*. This classification was based on two basic categories, similarity and contiguity, each of which could appear as a real (actual) or assigned variant.³

¹ An important part in the creation and development of the structural strand in music semiotics was played by the adaptation of phonological tools in the area of analysis of musical structures. One should mention here the research of Gustav Becking, referred to by Jakobson in his 1932 article (Roman Jakobson, "Musikwissenschaft und Linguistik", in *Selected Writings I. Phonological Studies* (The Hague: Mouton, 1962), 551–3; French translation, *Musique en jeu*, 5 (1971), 57–9.); also the works of A. Sychra, Ch. Boilès, B. Nettle, W. Bright.

² One can point to a number of modifications to de Saussure's ideas in Prague structuralism. Among the main ones are: dialectic instead of oppositional understanding of *langue* and *parole*; the conception of dynamic synchrony in place of static synchrony and dynamic diachrony; combination/selection, similarity/contiguity, metaphor/metonymy in place of syntagmatic and paradigmatic relationships. The Prague Circle enriched structural linguistics and structural thinking by new achievements: phonology (the concept of phonological opposition, phonemic features, the functions of the phoneme), the model of linguistic communication with a classification of linguistic functions, structural aesthetics and many others. The origins of the changes and innovations introduced by the Prague Circle are sought mainly in the heritage of Russian Formalism. However, at least in so far as the special kind of dialectic entered the Circle's theoretical project, of at least equal importance was the fact that the Czech members who were influenced by the Circle, led by Jan Mukařovský, were the pupils of pupils of Wilhelm Dilthey, i.e., Otakar Hostinský and Otakar Zych. In brief, it was not only Russian linguistics but also German philosophy which influenced the direction of the changes introduced by the Prague scholars into de Saussure's original ideas (on this matter, see: Andrzej Józef Nowak, *Świat człowieka [The World of Mankind]*, ch. III "Trzy kręgi estetyki semiotycznej" § 8. "Krań strukturalnej lingwistyki", (Kraków: Collegium Columbinum 2002)).

³ It is worth noting that the categories of similarity and contiguity concerning the relationship between *signans* and *signatum* were distinguished by Jakobson on the basis of Peirce's trichoto-

From Jakobson's semiotic structuralism,⁴ Ruwet carried across not only the binary model of the sign, but also — and perhaps above all — the concept of introversive semiosis associated with it, together with the principle of equivalence, which he established as the boundary conditions of his taxonomic approach to a work of music.⁵ However, before describing the semiotically oriented theory of music, referred to here as the Jakobson-Ruwet theory,⁶ it is necessary to discuss the poetic function of language distinguished by Jakobson, since it is that function which opened the way to the semiotic-structural interpretation of art as such. Jakobson explained the functioning of language on the basis of two mechanisms.: combination and selection of linguistic units. Combination, responsible for the creation of the linguistic chain, was based on the principle of contiguity, while selection was governed by what is known as the equivalence principle. In order to explain the principle of equivalence, Jakobson used the following example: "If «child» is the topic of the message, the speaker selects one among the extant, more or less similar, nouns like child, kid, youngster, tot, all of them equivalent in a certain respect, and then, to comment on this topic, he may select one of the semantically cognate verbs — sleeps, dozes, nods, naps. Both chosen words combine in the speech chain".⁷ Thus, for Jakobson equivalent means "one which could potentially appear in a given chain". This brings to mind de Saussure's paradigmatic relationships, but Jakobson decidedly goes beyond the definition given in his *Course*:⁸ "The selection is produced on the base of equivalence, similarity and

my which classifies signs as indices, icons and symbols. Jakobson showed that the relationship between *signans* and *signatum* was reduced to actual contiguity in the case of indexical signs, actual similarity in the case of iconic signs and assigned contiguity in the case of symbols. For the sake of completion we should add that Peirce's trichotomy was used by Jakobson not only to indicate the basic types of sign relationships, but also to divide phonemic features into symbolic, indexical and iconic.

⁴ The term semiotic structuralism includes the views of the Geneva School, the Copenhagen School, the Tartu-Moscow School and the Prague Circle. However, we should remember that the abstract definition of structure does not impose the character of a sign system on it, and thus structuralism does not necessarily have to be semiotic. Endre Bojtár includes Roman Ingarden's phenomenology of art within ontological structuralism: Endre Bojtár, *Slavic Structuralism*, trans. Helen Thomas (Budapest – Amsterdam: John Benjamins Publishing Company, 1985).

⁵ Nicolas Ruwet, "Methods of Analysis in Musicology", trans. Mark Everist, *Music Analysis* 6 (1987), no 1/2, 11–36.

⁶ Since Jakobson's ideas make a significant contribution to Ruwet's semiotic theory of music, it seems fully justified to describe the latter as the Jakobson-Ruwet theory.

⁷ Roman Jakobson, "Closing statements: Linguistics and Poetics", in *Style in Language*, ed. Thomas Sebeok, (Cambridge, Massachusetts: MIT Press, 1960), 358.

⁸ As markers of paradigmatic (associative) relationship of units de Saussure adopts the common root, prefix, analogy of *signifié* or shared acoustic images, or both together. Ferdinand de Saussure, *Course in General Linguistics*, transl. Wade Baskin (New York: The Philosophical Library, 1959), 126.

dissimilarity, synonymy and antonymy (...).⁹ Going beyond the categories of similarity and analogy, Jakobson's analogy includes any associative relationships, including those based on the opposition of meanings.¹⁰

The poetic function of language was defined by Jakobson as the projection of the principle of equivalence from the axis of selection to the axis of combination,¹¹ which should be understood as meaning that, in the case of poetry, equivalence is the constitutive element of the chain.¹² The poetic principle of equivalence is accessibly explained by Jean-Jacques Nattiez¹³ using a fragment of a poem by Paul Eluard.¹⁴ In the sentence "The Earth is blue like an orange" (*La terre est bleue comme une orange*) the *in absentia* associations between Earth and an orange (a sphere), Earth and blue colour (sky) and blue and orange (opposition of colours) are linked into a chain on the axis of combination. What is suggested primarily in Nattiez's example is the semantic equivalence, but Jakobson himself, when writing about the principle of equivalence, has in mind also the kind of equivalence which we will describe here as morphological. "In poetry one syllable is equalized with any other syllable of the same sequence; word stress is assumed to equal word stress, as unstress equals unstress; prosodic long is matched with long, and short with short; word boundary equals word boundary, no boundary equals no boundary; syntactic pause equals syntactic pause, no pause equals no pause. Syllables are converted into units of measure, and so are morae or stresses" — says the author of *Closing statements*.¹⁵

The principle of equivalence associated with the poetic function is a significant phenomenon in relation to the problematic of musicology. "Only in poetry with its regular reiteration of equivalent units is the time of the speech flow experienced, as it is — to cite another semiotic pattern — with musical time".¹⁶ Jakobson's assertion is not surprising, bearing in mind that for him language and music constituted two basic auditory-temporal systems which shared a structural kinship.¹⁷ The princi-

⁹ Jakobson, "Closing statements", 358.

¹⁰ It needs to be said that Saussure in his *Course* left a «gateway» to a wider interpretation of paradigmatic (associative) relationships, saying: "A word can always evoke everything than can be associated with it in one way or another": de Saussure, *Course*, 126.

¹¹ Jakobson, "Closing statements", 358.

¹² *Ibid.*

¹³ Jean-Jacques Nattiez, *Fondements d'une sémiologie de la musique* (Paris: Union Générale d'Éditions, 1975), 242.

¹⁴ Paul Eluard, "La terre est bleue", in *L'amour la poésie* (Paris: Gallimard, 1929).

¹⁵ Jakobson, "Closing statements", 358. The principle of poetic equivalence becomes comprehensible if we turn to the familiar linguistic situation in which we choose a particular word order in place of another. We are more likely to say: "Joan and Margery" than "Margery and Joan". The use of the first word order is explained by measuring the chains using divisions between words. Two chains are interpreted as equivalent when they are felt to be isochronic (time equivalent) or graded. In the case of "Joan and Margery" we are dealing with syllabically graded chains.

¹⁶ *Ibid.*

¹⁷ What is meant here is the participation of the so-called discrete components and their combinations, common to the structure of language and music.

ple of equivalence is the first of the two conceptual points to be distinguished in Nicolas Ruwet's semiotically oriented theory of music, which serves as the canvas of taxonomic analysis. The second such point is the idea of introversive semiosis. Following Jakobson one might say that the syntax of equivalence which appears in music is a response to the question about the kind of musical semiosis.

But to take things in turn. Jakobson's poetic function, associated with the attitude (*Einstellung*) to the message itself,¹⁸ prepared the ground for Ruwet's «internal to music» conception of meaning. The principle of equivalence reduced to the area of music talks about the existence of a particular kind of equivalence or correspondence of units of musical structure such as those equivalences discussed earlier in relation to poetry.¹⁹ Ruwet described this as follows: "(...) [M]usical syntax is a syntax of equivalences: the various units have between them all sorts of relationships of equivalence — relationships which can unite, for example, segments of unequal length — one segment will seem to be an expansion, or a contraction, of another — and also segments encroaching on one another".²⁰ This musical syntax of equivalence explained the nature of musical semiosis. Of key significance here is the question: what constituted musical *signans*, and what was *signatum* in the Jakobson-Ruwet conception? Jakobson wrote: "Diversely built and ranked parallelisms of structure enable the interpreter of any immediately perceived musical *signans* to infer and anticipate a further corresponding constituent (e.g., series) and the coherent ensemble of these constituents. Precisely this interconnection of parts as well as their integration into a compositional whole acts as the proper musical *signatum*."²¹ Interpreting Jakobson's words we might thus say that he regards as *signans* a sound unit (which he does not define precisely), while *signatum* refers to a musical relationship, or a particular network of such relationships into which that unit enters with other units and with the structure as a whole. *Breviter, signans* would thus be a kind of sound figure, and *signatum* its musical sense. Since a musical sign does not refer to any object outside the musical structure, and all its references are enclosed within the higher structure to which the sign belongs

¹⁸ We should remember that in Jakobson's schema of linguistic communication each of the six components participating in the act of communication (sender, receiver, context, message, contact and code) determines the given language function. On the subject of the poetic function of language Jakobson says: "The set (*Einstellung*) toward the message as such, focus on the message for its own sake, is the poetic function of language (...). This function, by promoting the palpability of signs, deepens the fundamental dichotomy of signs and objects". Jakobson, "Closing statements", 356.

¹⁹ It should be noted that poetry is only one of the areas (perhaps the most typical one) where poetic function and the principle of equivalence associated with it operate. Alongside poetry, as examples of the poetic function manifesting itself, Jakobson lists mnemotechnical verses, rhyming advertising slogans, medieval codices in verse, Sanskrit scientific treatises etc. *Ibid.*, 359.

²⁰ Ruwet, "Methods of Analysis", 32.

²¹ Roman Jakobson, "Language in Relation to other Communication Systems", in: *Selected Writings II. Word and Language* (The Hague: Mouton, 1962), 704.

as its component, we are dealing here with introversive semiosis.²² In other words: music is its own repository of musical meanings.

A number of comments come to mind when examining Jakobson's statement quoted above. Firstly, the anticipation, or the leading out of consecutive components takes place on the basis of parallelisms of structure. As one may guess, the parallelisms indicate certain constructional regularities, which result from the structural equivalences referred to earlier. The code of equivalence which allows us to discern musical associations (*signata*) between consecutive *signans* is regarded by Jakobson as the constructional norms of a given epoch, culture or style. Secondly, one has the irresistible impression that, when talking about the musical sign, Jakobson introduces into it a third component in the shape of the addressee, who links the other two (*signans* and *signatum*) using the signifying relationship. If that is the case, and everything points to it being so, then musical semiosis is not fully introversive.²³ However, it is possible to defend Jakobson's position building on the very conception of the communicative act. The latter envisages a hierarchical participation of all the linguistic functions with one being dominant.²⁴ In the case of music, the primary function would be poetic, and the activity of the addressee, consisting in perceiving the relationship *signans* — *signatum*, would be a manifestation of the cognitive or metalinguistic function.²⁵

Ruwet's semiotic-structural theory of music, alongside the principle of equivalence and introversive semiosis, is based on one other significant concept. That concept is repetition. Regular repetition of equivalent units was a constitutive factor

²² Jakobson ascribes introversive semiosis to music, poetry and glossolalia, as well as non-representational painting and sculpture. In cases of works of visual art which are representational, we are dealing with the coexistence and coeffect of introversive and extraversive semiosis. Jakobson emphasises that music on the whole avoids any reference, or at least limits it to a significant extent, as in the case of programme music. *Ibid.*

²³ The above footnote (no. 22) clearly leads to the conclusion that in Jakobson's view the theoretical model of introversive semiosis should not involve the category of referential semantics. It would be logical to demand that such a model should also not involve concepts from pragmatics, yet the concept of the interpreter is clearly a pragmatic one. One should also note that the very fact of bringing in an interpreter into a description of semiosis opens up a perspective in which meaning may at least be regarded as co-defined by components external to sign structures, i.e., by variable, often random contexts in which a sign is used — in this case the musical sign. This pitfall may be avoided by following Charles S. Peirce and using the term semiosis interpretant, instead of the terms "interpreter" or even "interpretation", yet Jakobson himself did not follow that route.

²⁴ Jakobson distinguishes six functions of language, which correspond to the six components in the schema of communication. These are: cognitive function (context), emotive function (sender), conative function (receiver), phatic function (contact), metalinguistic function (code) and poetic function (message).

²⁵ At this point we return to the question of the "point of view", one that is standard in semiotics. Although it is difficult to give an unequivocal answer here, intuitively the cognitive function would correspond to the addressee, while the metalinguistic function would correspond to an analyst, an author, a performer. However, the issue is highly controversial.

in the case of poems, which Jakobson emphasised quite strongly, quoting Gerald Manley Hopkins's description of a poem as "speech wolly or partially repeating the same figure of sound".²⁶ The concept of repetition, as well as the concept of duplication²⁷ applied to the works of Debussy, were crucial for the taxonomic analytical procedures undertaken by Ruwet. Repetition constituted the fundamental criterion of segmentation. In emphasising just how crucial was the significance of repetition in music Ruwet quoted Gilbert Rouget: "(...) When one sequence of notes appears two or more times, with or without variation, it is considered a unit. As a corollary, a sequence of notes which appears only once is also considered a unit, whatever its length and the apparent number of its articulations (especially silences) (...)".²⁸ While for Rouget the repetition of a unit or lack of repetition is a constitutive factor in the segmentation of a work, Ruwet provides a definition of repetition more from the position of an advocate of structuralism than that of a musicologist: "Repetition signifies identity between segments spaced at different places in the syntagmatic chain".²⁹ The identity that Ruwet is talking about is presumably the relationship of equivalence which links the paradigm (the model unit) and its variants.

Finally, some remarks of a general character. The idea of music's meaning being itself or the self-referential musical sign has taken on a variety of forms in musicology. It has ranged from the formal conception (Edward Hanslick); through the concept of semantic opacity (Susanne Langer, Jerzy Faryno), internal *resp.* intramusical meaning (Michał Piotrowski), exclusively musical meanings of music (Zofia Helman); the concept of syntagmatic meanings during internal recoding (Yuri Lotman); to the concept of meaning as structural relationships (Claude Lévi-Strauss), included meanings (Leonard B. Meyer) and the idea of

²⁶ Gerard Manley Hopkins, *Journals and Papers*, ed. Humphry House (London: Oxford University Press 1959). Quoted after Jakobson, "Closing statements", 358–9.

²⁷ Nicolas Ruwet, "Note sur les duplications dans l'oeuvre de Claude Debussy", in *Langage, musique, poésie* (Paris: Seuil 1972), 70–99. Ruwet started from the assumption that, if the essence of art was a projection of equivalence relationships on the temporal axis, then duplication in the form $a + a$ is the simplest way of realising it. Moreover, duplication has been a characteristic device in folk music and poetry, as well as fulfilling a fundamental role in culture; Jakobson wrote about it in the context of research into early child speech (Roman Jakobson, "Why 'mama' and 'papa'?", in *Selected Writings I. Phonological Studies* (The Hague: Mouton, 1962), 542. I quote after Ruwet, "Note sur les duplications", 70).

²⁸ Gilbert Rouget, "Un chromatisme africain", *L'homme: revue française d'anthropologie* 1 (1961) no. 3, 41; quoted after: Ruwet, "Methods of Analysis", 17. In order to make Rouget's claim more precise it should be added that a sequence which appears once would be treated as a unit only when it appears in a structured whole and is distinct by contrast in relation to the neighbouring units.

²⁹ Ruwet, "Methods of Analysis", 17.

formal iconism (David Osmond-Smith).³⁰ The conception of musical introversive semiosis used by Jakobson and adopted together with the principle of equivalence by Ruwet converges on a number of points with the last two theoretical approaches (*vide supra*). The point about the anticipation of the units of a musical structure, and then their structural links to each other and to the whole in which they function, which appear in Jakobson's definition of musical meaning, bring to mind associations with the theory of musical meaning of Leonard B. Meyer.³¹ Meyer's hypothetical meaning shows a convergence with the expectation of the successively appearing unit in Jakobson's introversial semiosis. On the other hand, evident and determinate meanings³² are nothing other than structural relationships between parts — Jakobson's *signatum*. It should be mentioned that Meyer's concept of «expectation», which is a condition of constituting the relationships of signs and meanings in music, finds its basis in musical competence acquired through acculturation. Similarly Jakobson holds: "The code of recognized equivalences between parts and their correlation with the whole is to a great degree a learned, imputed set of parallelisms which are accepted as such in the framework of a given epoch, culture, or musical school".³³

In the perspective of musicological correspondences, what deserves attention and further work is the relationship *signans* and *signatum* in musical semiosis, which Jakobson described as assigned similarity. When describing intramusical meanings, Osmond-Smith³⁴ used the concept of formal iconism, thus stressing the relationship of similarity (iconism) between formal units of a musical work. However, the understanding of similarity here is quite wide, and linked to the additional concept introduced by Osmond-Smith, that of transformation. Thus

³⁰ Ewa Kofin, *Semiologiczny aspekt muzyki* (Wrocław: Wydawnictwo Uniwersytetu Wrocławskiego, 1991), 12–20. With all the diversity of the approaches indicated here, one needs to be aware of the counter-argument to the idea of music meaning itself, articulated by Tibor Kneif. In his opinion the idea of the musical sign being self-referential stands in contradiction to the very definition of the term "sign". However, Kneif's objection loses its importance when confronted with Jakobson's introversive semiosis, since, formulated in this way, it indicates most clearly that the model of sign adopted *a priori* is triadic, which immediately diverges from Jakobson's post-Saussurian binary model of the sign.

³¹ Leonard B. Meyer, *Emotion and Meaning in Music* (Chicago: Chicago University Press, 1956).

³² We should remember that in L.B. Meyer's approach the hypothetical, evident and determinate meanings belong to the category of included meanings, i.e., those where the given stimulus points to an event of the same kind as itself. Hypothetical meanings arise during the act of expecting; evident meanings concern situations in which the consequent is already a fact and the relationship between the antecedent and consequence is discerned; determinate meanings arise from the relationship between the hypothetical, evident meaning and the later stage of musical development.

³³ Jakobson, "Language in Relation", 704.

³⁴ David Osmond-Smith, "L'icônisme formel: pour une typologie des transformations musicales", *Semiotica* 15 (1975), no. 1, 33–47.

iconisms are both two similar units — where similarity is defined by the sharing of certain properties (e.g. variation and theme) — and two contrasting units, where the contrast is expressed by the degree of difference, i.e., the measure of “transformational distance”.³⁵ The idea of transformation which binds iconisms together brings to mind Ruwet's taxonomic procedure. Model units and their variants are identified on the basis of the criterion of repetition, and treated as melodic or rhythmic transformations, or transformations involving reduction, expansion or permutation of elements.

Ruwet's semiotically oriented theory of music is in essence a semiotic-structural theory. The idea of a musical work as a structure was built on the foundation of the achievements of structuralism of the schools of de Saussure and Jakobson. On the one hand we have the binary model of the sign, on the other, the tools of poetics in the form of the principle of equivalence, the concept of introversive semiosis and the idea of structuralising repetition. Naturally, one might ask a number of questions: about the position of the addressee and the performer in relation to the work, about the presence of content other than intramusical, or about the validity of the idea of a musical structure that is “frozen” in terms of its meaning. All these questions, fully justified, only confirm the character of such a work as a system of signs which, when interpreted, will appear different each time, always leaving a margin of that which remains unsaid.

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³⁵ Kofin, *Semiologiczny aspekt*, 18.

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