

## Jakobson's zero and the pleasure and pitfalls of structural beauty

Peter Juul Nielsen, Roskilde University

### *Abstract*

*In 'Signe zéro' (1939) Jakobson suggests a radical application of the zero notion in analysis of linguistic structure, arguing that 'nothing' is a relevant structural component not only on the expression plane, but also on the content plane, i.e. zero content as the signifié of a sign. The paper examines how this idea is rooted in the structuralist tradition of analysing difference and significant distinctions and how it is motivated by the pleasure of structural beauty. Focusing on one of Jakobson's examples of zero signs, the analysis of gender in the Russian declension system, the paper criticises the simplification of empirical facts in Jakobson's analysis and the reasoning behind accepting 'nothing' as a kind of content coding. This critical assessment draws on the description of sign distinctions in the structural-functional paradigm model of Nørgård-Sørensen et al. (2011) and Andersen's (2001) critique of Jakobson's conception of markedness.*

**Keywords:** Roman Jakobson, zero sign, structuralism, morphology, Russian, gender.

### **1 Introduction**

The 60<sup>th</sup> birthday of a linguistic scholar is a good occasion to consider one of the pleasures of doing linguistics: the uncovering of structural beauty and the formulation of elegant theories, and at the same time consider some pitfalls associated with the search for beauty. Writing about this topic for a Festschrift to celebrate Professor Pavol Štekauer, it seems appropriate to focus on a significant work from the history of linguistics, which itself was presented as a Festschrift contribution, namely Roman Jakobson's famous article *Signe zéro* published in 1939 in *Mélanges de linguistique offerts à Charles Bally*. In my paper I shall take a sympathetic but critical look at Jakobson's conception of the zero sign – in particular his idea of zero content – and

argue that in his analysis, Jakobson is seduced by the pleasure of structural beauty to the extent that his description of the linguistic facts becomes problematic. The paper thus attempts to acknowledge the merits of the structuralist pursuit of analytical elegance while pointing out the risks associated with this basically sound pursuit with special reference to the question of zeros.<sup>123</sup>

The concept of zero as a tool in linguistic analysis is not uncontroversial (cf. Haas 1957, Mel'čuk 2006: 469-470), and it is more than reasonable to follow certain principles that will restrain the linguist from positing unreasonable zeros. "If you *can* do without zero, you *should* do without a zero" (Plungjan 1994: 149),<sup>124</sup> and a sound basis for the use of zeros, which will inform the present discussion, is Mel'čuk's 'Zero Sign Introduction Principle' and its three criteria (2006: 470-471):

1. Expressiveness: The zero sign must convey a clearly defined content X.
2. Exclusiveness: The content X cannot be ascribed in a natural and systematic way to a sign with non-zero expression.
3. Contrastiveness: The zero sign must stand in opposition to a non-zero sign with the content Y so that the content X of the zero sign contrasts with Y (zero as significant absence of an alternative).

A further criterion, a corollary of the three presented above, is that a zero sign must be associated with obligatory selection. The only way to know if the absence of a non-zero sign constitutes the expression of a contrasting content, is if the context calls for a specification that is bound up with a choice between zero and overt expression (cf. Nielsen 2012: 148-151).

The underlying, essential concern of Jakobson's article – and of classical European structuralism – is the nature of *distinction* in language between signs in opposition. The notion of zero plays a central role as an illustration of the relational, oppositional nature of language (cf. Meier 1961, García & Putte 1989). In *Cours de*

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<sup>123</sup> I wish to thank Professor Jens Nørgård-Sørensen for advice on the Russian data and for discussing Jakobson's analyses with me.

<sup>124</sup> Quoted from Mel'čuk (2006: 470), emphasis according to this source.

*linguistique générale*, Saussure examines the declension of the Czech nouns *slovo* ‘word’ and *žena* ‘woman’, and pointing out the absence of an overt desinence in the genitive plural: *slov* and *žen*, he famously states: “On voit donc qu’un signe matériel n’est pas nécessaire pour exprimer une idée; la langue peut se contenter de l’opposition de quelque chose avec rien” (Saussure 1964: 123-124).<sup>125</sup>

The same observation informs Bally’s definition of the zero sign as “un signe revêtu d’une valeur déterminée, mais sans aucun support matériel dans les sons” (1922: 3),<sup>126</sup> which is the point of departure for Jakobson’s discussion of the zero sign (Jakobson 1939: 212). Jakobson radically extends the idea of “l’opposition de quelque chose avec rien”, and argues that zero is not only an expression phenomenon associated with a (positive) content; in Jakobson’s view, ‘nothing’ vs. ‘something’ exists “non seulement sur le plan des signifiants, mais aussi sur le plan des signifiés” (1939: 212).<sup>127</sup> In *Signe zéro* he presents a selection of analyses to exemplify this extension of the zero notion. I shall examine one of these, the analysis of Russian gender, and discuss some of the problems associated with Jakobson’s description – problems that may be considered a result of the temptations of structural beauty.

## 2 Jakobson’s gender analysis and the “chiasm net”

Jakobson analyses the relationship between Russian declension classes and gender specification in order to show how morphological signs belonging to the inflectional system may have zero content. I shall briefly outline Jakobson’s description of this zero content scenario (1939: 212-213) before turning to a discussion of the foundations of the analysis and the problems associated with it.

Jakobson notices how the class of nouns that belong to the first declension (Decl1, cf. Nørgård-Sørensen 2011) are all either masculine (e.g. *bog* ‘god’) or neuter (e.g. *okno* ‘window’). As we only find noun stems in this class (or ‘paradigm’ in

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<sup>125</sup> “it is not even necessary to have any material sign in order to give expression to an idea: the language may be content simply to contrast something with nothing.” (Engl. transl. in Saussure 1983: 86).

<sup>126</sup> “a sign with a specific value, but without any material acoustic support” (my translation).

<sup>127</sup> “not only on the plane of signifiants, but also on the plane of signifiés” (my translation).

Jakobson's terminology) that are lexically specified as having the grammatical gender masculine or neuter, Decl1 is a *non-feminine* class. Another class of nouns, those belonging to the second declension (Decl2), may be lexically specified as having the grammatical gender feminine (e.g. *noga* 'foot') or masculine (e.g. *sluga* 'servant'). In addition, Decl2 contains descriptive nouns such as *nedotroga* 'sensitive, touchy person' and *neposeda* 'fidgety person', which are underspecified for gender and may be used with masculine or feminine agreement depending on their reference to a man or a woman (cf. Timberlake 2004: 131).<sup>128</sup> Focusing on the gender values feminine and masculine, thus leaving aside the question of the value neuter (cf. section 5), Jakobson's presentation shows that while membership of Decl1 signals 'not feminine', membership of Decl2 provides no such gender specification, positive or negative. A pair of noun stems of particular interest is the Decl2 feminine *supruga* 'wife' and the Decl1 masculine *suprug* 'spouse/husband'. *Supruga* may only be used to refer to the female part of a married couple (i.e. a wife), while *suprug* – although having the grammatical gender masculine – may be used to refer to either the male part (a husband) or to a spouse regardless of extra-linguistic sexus.

For masculine nouns, Decl1 is characterised by a zero desinence in nominative singular (*bog-Ø*, *suprug-Ø*), while the neuters of Decl1 have the nominative singular desinence *-o* (*okn-o*). Decl2 is characterised by the nominative singular desinence *-a*, regardless of gender (*suprug-a*, *slug-a*). Noting, but leaving aside the Decl1 stems with the *-o* desinence (which arguably constitute a more peripheral group than the masculines as they represent a phonologically unproductive inflectional pattern, cf. Nørgård-Sørensen 2011: 59, 68), Jakobson concludes that the zero-marked Decl1 is associated with the grammatical gender value non-feminine, while the overtly marked Decl2 is associated with a zero content as regards grammatical gender. The analysis is illustrated in (1)-(3) with examples glossed in accordance with Jakobson's analysis.<sup>129</sup>

<sup>128</sup> Jakobson describes the gender of these nouns as 'ambiguous'; Timberlake (2004: 131) describes them as 'common gender' nouns, which is perhaps an unfortunate use of that term since the gender of NP's with such nouns can be disambiguated by agreement.

<sup>129</sup> The gender specification inherent in the stem is specified in brackets.

- (1)      bog-Ø<sup>130</sup>                          suprug-Ø  
           god-NONFEM                    spouse-NONFEM  
           ‘god (MASC)’                 ‘spouse/husband (MASC)’
- (2)      nog-a                    suprug-a                    slug-a  
           foot-0                   spouse-0                    servant-0  
           ‘foot (FEM)’      ‘wife (FEM)’      ‘servant (MASC)’
- (3)      nedotrog-a  
           touchy.person-0  
           ‘touchy person (MASC or FEM/ambiguous)’

The point made by Jakobson is that an expression opposition is observed: -Ø vs. -a, which is associated with the content ‘non-feminine’ (i.e. *not* feminine) vs. zero (i.e. unspecified for gender). Echoing Bally’s definition of the zero sign, Jakobson states:

Ainsi, pour l’opposition des genres, le paradigme *noga*, *supruga* est dépourvu de faculté différentielle. Ce sont donc, du point de vue du genre, des signes revêtu d’une forme déterminée, mais sans aucune valeur fonctionnelle, bref des formes à fonction morphologique zéro (Jakobson 1939: 212-213).<sup>9131</sup>

In his discussion of the gender distinctions described above, Jakobson uses the term *fonction morphologique* when talking of *grammatical gender*, i.e. the system of lexical coding of noun stems that governs agreement (Nørgård-Sørensen 2011: 45, 101). This morphological function differs from *signification* (‘signification’ or ‘meaning’), which is associated with designation and thus reference potential (cf. Jakobson 1939: 213). Signification is the focus of Jakobson’s discussion of the meaning associated with

<sup>130</sup> The empty set symbol ‘Ø’ is used for zero on the expression plane (zero signifiant), while the numeral symbol ‘0’ is used for zero on the content plane (zero signifié).

<sup>131</sup> “Thus, as regards the gender opposition, the paradigm [declension, PJN] *noga*, *supruga* lacks differential capacity. It is therefore, in terms of gender, a matter of signs with a specific form, but without any functional value, in short: morphological forms with zero function.” (my translation).

the Decl1 vs. Decl2 distinction in grammatical gender. For the subset of nouns denoting a person (or something personified), he describes the semantics of the Russian grammatical gender opposition as a determinate, positive specification: feminine vs. absence of this specification: masculine. Feminine gender insists on the female sex of the referent, while masculine gender is indifferent: the masculine noun *tovarišč* ‘comrade’ may refer to a man or a woman (Jakobson 1939: 213). This is similar to the above mentioned case of the masculine *suprug* that may be used in the sense ‘husband’ to refer to a man or in the sense ‘spouse’ to refer either to a man or a woman. On the basis of this analysis of signification, Jakobson concludes that masculine is the gender with *signification zero*, and he states in a tone, one senses, of great pleasure:

[N]ous nous trouvons en face d’un chiasme net : les formes à fonction morphologique zéro (type *supruga*) dénotent le genre à signification positive (féminin) et au contraire les formes à fonction morphologique positive (type *suprug*) marquent le genre à signification zéro (masculin) (Jakobson 1939: 213).<sup>132</sup>

Recalling the relationship between content and expression in Jakobson’s analysis of declension and grammatical gender (*fonction morphologique*; Decl1 characterised by zero expression, Decl2 by the positive expression *-a*), we see that the consequence of the analysis is a scenario in which the positive expression has positive content (*suprug-a* specifies female sex), while the zero expression has zero content (*suprug-Ø* makes no specification of the sex of the referent).

Jakobson’s chiasmus is undeniably elegant, and the beauty of a clear and simple structural description is in many respects worth striving for in scientific analysis.<sup>133</sup> Nothing seems to be quite as beautifully simple as ‘something’ vs. ‘nothing’. In the next section, the theoretical foundation of Jakobson’s zero notion will be outlined.

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<sup>132</sup> “We find ourselves faced with a clear chiasmus: the forms with zero morphological function (the type *supruga*) denote the gender with positive meaning (feminine) and on the contrary the forms with a positive morphological function (the type *suprug*) mark the gender with zero meaning (masculine).” (my translation).

<sup>133</sup> Cf. Occam’s razor, the simplicity principle of Hjelmslev (1969: 18) and the quote usually attributed to Einstein: “If you can’t explain it simply, you don’t understand it well enough.”

### 3 Difference, commutation and zero

Before addressing the problems in Jakobson's analysis, it is necessary to clarify the theoretical foundation of his conception of the zero sign, in order to appreciate how he thinks about the issue, and to have a precise conceptual basis for the critique.

The discussion of zero signs must be understood on the basis of the conception of signs as relationally defined entities, cf. Saussure's statement that "dans la langue il n'y a que des différences" (1964: 166, cf. Hjelmslev 1969: 23).<sup>134</sup> As demonstrated by Saussure's analysis of the zero desinence of Czech genitive plural mentioned above, the fundamental point about the units in a sign system is that they need not be something substantial as long as they are *different* from other units, and language is the system of differences *par excellence* (cf. García & Putte 1989: 365). Thus the essential notion in linguistic sign analysis is *difference relation*. Among all the various kinds of differences, the analysis must uncover the significant ones, in order to establish the signs of the specific system; using a well-known phrase from Bateson, a sign is the product of *a difference that makes a difference* (Bateson 1972: 460). One may establish the semiotically relevant differences by applying Hjelmslev's *commutation test* (Hjelmslev 1969: 73-75; cf. Harder 1996: 200-201). The principle of commutation is a link between an expression difference (a distinction on the plane of *signifiants*) and a content difference (a distinction on the plane of *signifiés*). Approached from the expression side, we find that there is commutation in English between *hut* and *hot* since the difference in vowel quality is bound up with a difference in content; approached from the content side, there is commutation between the young of a cow considered as an animal and considered as an ingredient in cooking since this conceptual difference calls for two distinct expressions, *calf* and *veal* respectively.

In a systematic and principled way, commutation can be described as follows. Two comparable (putative) signs X and Y (e.g. *calf* and *veal*) qualify as two distinct signs by contrasting with one another (cf. figure 1 (a)), and as they each consist of an expression element and a content element, X and Y must contrast on the expression

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<sup>134</sup> "In the language itself, there are only differences" (Engl. transl. in Saussure 1983: 118).

plane as well as the content plane. The opposition between X and Y is therefore an opposition between the expression of X ( $E^X$ ) and the expression of Y ( $E^Y$ ) linked to an opposition between the content of X ( $C^X$ ) and the content of Y ( $C^Y$ ) (cf. figure 1 (b)).

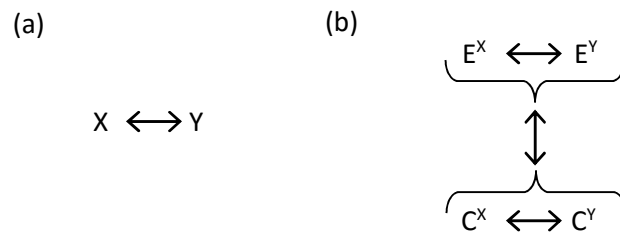


Figure 1 Sign relation (a) and commutation (b)

The principle of commutation thus states that if a difference on either of the two planes of language is to count as a sign difference, it must be matched by a difference on the other plane. An expression difference without content difference is a case of expression variance (in the domain of morphology: allomorphy), and a content difference without expression difference is a case of content variance (polysemy).<sup>135</sup> The necessary difference can come about in two ways: a positive element can contrast with another positive element *or* with its own absence (and it follows that an absence can only contrast with a positive element).

In order to examine the logics of signs as products of difference relations in a principled manner – to get to the pure conceptual backbone of structural differentiation – the possible modes of difference relations are presented here without any regard to functional or communicative (or psychological) considerations of validity (but see section 6). The two expression elements  $E^X$  and  $E^Y$  can have positive values, i.e. overt expression, A and B, or they may be empty,  $\emptyset$ . Likewise, the two content elements  $C^X$  and  $C^Y$  can have positive values,  $\alpha$  and  $\beta$ , or they may be empty, 0. With this set of

<sup>135</sup> Note how the content difference associated with English calf vs. veal is not associated with an expression difference in e.g. Danish where kalv covers both content variants.



logically possible positive or empty relata of the difference relations, the two contrasting element on each plane can of course not be identical, if difference is to be obtained, neither as positive elements nor as absences (e.g. no  $\emptyset$  vs.  $\emptyset$  or 0 vs. 0). The analysis of elements in expression and content yields five logical commutation scenarios, cf. figure 2, one with two positive values one both planes (scenario 1), two with a zero value on one of the planes (scenarios 2 and 3) and two with a zero value on both planes (scenarios 4 and 5).

1.	X	Y
Expression	A	B
Content	$\alpha$	$\beta$

2.	X	Y
Expression	$\emptyset$	B
Content	$\alpha$	$\beta$

3.	X	Y
Expression	A	B
Content	0	$\beta$

4.	X	Y
Expression	$\emptyset$	B
Content	$\alpha$	0

5.	X	Y
Expression	$\emptyset$	B
Content	0	$\beta$

Figure 2 Matrixes for logically possible commutation scenarios

From the point of view of a purely logical systematic account of signs as the product of commutation, which in turn is defined by difference in content and expression, these five scenarios all qualify as the basis for establishing the signs X and Y. Notice how only the scenarios 1 and 2 involve a contrast between two positive content values. The remaining three scenarios rely on a contrast between no semantic

specification (i.e. neutrality) and a positive semantic specification. This idea will be questioned in the sections below, in particular the most striking commutation setup, scenario 5 that yields a sign which – based on the logics of difference between presence and absence – is constituted by no overt expression component in association with a lack of content specification.

If one strives for structural beauty, one would naturally find satisfaction in an analysis of opposition-based signs that runs elegantly through illustrative examples of all possible scenarios. Jakobson's fascination with such a set of logical possibilities is expressed in his comment on the nature of the Russian case system as demonstrating "le caractère purement arbitraire du rapport entre "l'opposition de quelque chose avec rien", sur le plan des signifiés, et l'opposition du même ordre sur le plan des signifiants." (1939: 214).<sup>136</sup> Analysing the opposition nominative vs. accusative as a content distinction between zero (nominative) and positive specification (accusative), he gives examples of all the three scenarios in figure 2 with a zero in the content opposition (scenarios 3-5). Notably, the two scenarios in which two positive content specifications contrast with one another (scenarios 1-2) are absent in Jakobson's assessment. This is directly linked to Jakobson's understanding of markedness in semantic distinction, which will be discussed in section 6.

Having now outlined the conceptual basis for the logical analysis of commutation, the analysis of Russian declension and gender may be reassessed and summarised in the following way. In Jakobson's chiasmus the relationship between morphological function and signification is a case of scenario 4: positive expression with zero content and vice versa. Likewise, the relationship between the characteristics of declension class and morphological function is a case of scenario 4. The consequence of integrating, as Jakobson does, the analyses of inflectional expression (declension class), morphological function (grammatical gender) and signification (reference potential) is a case of scenario 5: positive expression with positive content and zero expression with zero content. The latter of the two, zero together with zero, begs the question: what is the function of such a sign? To address this question, it is necessary to

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<sup>136</sup> "the purely arbitrary nature of the relation between "the opposition between something and nothing" on the plane of signifiés, and a similar opposition on the plane of signifiants" (my translation).

have a model for the description of sign opposition which is compatible with semiotic analysis in the structural tradition and also addresses the question of function.

#### **4 The structural-functional paradigm model**

A modern framework for describing the organisation of linguistic distinctions which is in line with the basic structuralist tenets of Jakobson's approach, but has a more explicit focus on functionality in the use of language as a communicative resource, is offered by the structural-functional paradigm model presented in Nørgård-Sørensen et al. (2011). It is a model for describing systems of choice between signs in paradigmatic opposition that is firmly rooted in the tradition of structural sign analysis based on observation of the link between expression opposition and content opposition, i.e. commutation, while being first and foremost concerned with the *function* of the linguistic elements and the oppositions they enter into. The model describes structural differentiation from the point of view of a functionalist approach to 'the difference that makes a difference', and it is thus a good tool for assessing what difference the Jakobsonian signs – in particular the zero signs – actually make, in the linguistic system and to the language user.

The structural-functional model regards paradigmatic organisation as the essential property of grammar on all levels of structure, not only in morphological systems, but also in the organisation of syntactic constructions and word order patterns. In the present discussion of the model, however, we will be concerned only with morphological paradigmaticity. A grammatical paradigm consists of a limited number of signs in opposition to one another. These signs constitute the members of the paradigm, and a defining property of the grammatical paradigm is that under specific conditions a choice *must* be made between the members. It is thus mandatory for the language user to select one of the content specifications provided by the signs of the paradigm. For instance, whenever a particular language system calls for a selection of tense (typically whenever a verb is used in a finite clause), the language user is forced to pick one of the tenses of that particular tense system with no possibility for opting out, and that selection will have semantic consequences.

In the analysis of paradigms (Nørgård-Sørensen et al. 2011: 5-6 and *passim*), the selection between the members – the closed set of linguistic signs defined by the association of expression and content – is associated with a syntagmatic *domain*. The domain is the triggering context, the specific conditions under which a choice in the paradigm must be made; in morphology the domain is typically a particular type of stems (an entire part of speech, such as nouns, or a subclass, such as count nouns). All paradigms must also be defined in terms of a semantic *frame*, the common semantic denominator of the paradigm members. From the point of view of a functional interpretation of ‘the difference that makes a difference’, the semantic frame is crucial: a grammatical paradigm may only be established by the linguist on the basis of such a common denominator, as it defines the function of the paradigm, i.e. what the sign selection *does* for the language user (cf. Harder 1996: 101, 154). In line with the Hjelmslevian notion of commutation defined by the association of difference in expression and content, any selection in a grammatical paradigm must be understood as a content contribution, and the semantic frame represents the content parameter which *must* necessarily be specified by virtue of the obligatoriness of the selection.

The model can be illustrated with an example: nominal number inflection in Spanish as observed in *libro* ‘book’ vs. *libros* ‘books’. The domain is the category of count nouns, the frame is number (which may be further specified in a more elaborate language-specific analysis of the function of number selection in Spanish), and the closed set of members consists of two signs, established by the association of the expression distinction  $-\emptyset$  vs.  $-s$  and the content distinction singular vs. plural, see table 1.

Table 1 Paradigm for number in Spanish

<b>Domain:</b> Count nouns	
<b>Frame:</b> Number	
<b>Expression</b>	<b>Content</b>
$-\emptyset$	Singular
$-s$	Plural

Notice that the description in the model of the obligatoriness of the selection between signs that carry contrasting semantic specifications provides a very suitable framework for describing zeros in accordance with Mel'čuk's criteria outlined in section 1.

Having now examined the conceptual logics behind structuralist sign description, and thus also of Jakobson's zero analysis, and presented the structural-functional paradigm model as a tool for describing sign opposition, it is now time to look at some problems in Jakobson's gender analysis and the zeros of his chiasmus.

## 5 Elegance through simplification

In formulating the very pleasing chiasmic structure analysis, Jakobson implicitly makes certain presuppositions, which, when made explicit and critically examined, reveal that the gender features of the declensional system do not have the mirror image properties regarding absence and presence of "something" which form the basis of Jakobson's chiasmus. The chiasmus is essentially based on a supposition of isomorphic structure on different levels of linguistics organisation: the level of morphological expression, the level of structural function (the internal *fonction morphologique*) and the level of denotation and reference potential (*signification*). However, the isomorphism only comes about through a selection among the observable facts and a rather forceful alignment of the different domains. Thus the elegance of the comparison of levels, or domains, builds on simplification – a simplification of the empirical complexity of the individual levels as well as a simplification of the relationship between the levels.

Firstly, in his description of Decl1 and Decl2 Jakobson implicitly presupposes a preliminary exclusion of the neuter, leaving the masculine and feminine as the object of analysis. By disregarding the question of neuter in the gender system, Jakobson allows himself to refer to the zero desinence of Decl1, in singular nominative, as the characteristic representative of this declension since he does not need to consider the neuters with their *-o* desinence in singular nominative. Secondly, he presupposes that one may consider the singular nominative representative of the two declensions, to the extent that the expression side of the content distinction he describes concerning gender

specification can be characterised simply by the desinences of singular nominative. He does mention that the zero desinence of the first declension is only found in that particular combination of number and case value and that it contrasts with the desinences of the other number/case values (1939: 211-212), but he nevertheless makes a point of describing exactly the zero desinence as the expression of the content “not feminine” (1939: 213). Thirdly, in the comparison of grammatical gender and reference potential that leads to the chiasmus, Jakobson aligns these two levels by switching the perspective from all (non-neuter) nouns of Decl1 and Decl2 to the subset of person-designating nouns, thus disregarding the relationship between on the one hand nouns that do not designate persons, but nevertheless are Decl1 masculines (e.g. *zavod* ‘factory’) and Decl2 feminines (e.g. *voda* ‘water’), and on the other hand reference potential with regard to sexus (natural gender).

Simplification of the complexity of empirical data is reasonable – and, one may argue, necessary – when used for generalisations that will provide more accurate insight into the chaos of raw facts. However, a closer look at Jakobson’s presuppositions and simplifications leads to the conclusion that the elegant generalisations provide a less accurate understanding because the structural beauty of the description overshadows the observable facts. This can be shown by applying the structural-functional paradigm model to Jakobson’s observations of declension class, grammatical gender and reference potential. Two paradigms present themselves: Paradigm I, concerning the relationship between the inflection of the different declensions and specification of grammatical gender, and Paradigm II, concerning the relationship between grammatical gender and reference potential. In the following paragraphs they are presented in accordance with Jakobson’s content analysis, which will be commented on in section 6.

The domain of Paradigm I is nominal declension for non-neuter nouns. The frame of the paradigm is grammatical gender, excluding the neuter. Concerning the signs that constitute the members of the paradigm, one must observe the “difference that makes a difference”, i.e. the expression distinction that is *emic* by virtue of its association with the content distinction of the paradigm. The paradigm has two members constituted by the association of an expression opposition and a content opposition. The expression side of the opposition is Decl1 vs. Decl2. Jakobson

describes this expression distinction by reference to the nominative singular desinences only; however, on a systemic level it is the contrast between the full set of desinences of Decl1 (singular), excluding the declension of neuters with SG.NOM in *-o*, and the full set of desinences of Decl2 (singular) that constitutes the emic level of expression opposition, see table 2 (cf. Nørgård-Sørensen 2011: 54).<sup>137</sup>

Table 2 Case desinences for Russian nouns of Decl1 and Decl2 in singular

Case	Decl1 (excluding neuter)	Decl2
Nominative	-Ø	-a
Accusative	NOM/GEN	-u
Genitive	-a/-u	-i
Dative	-u	-e
Instrumental	-om	-oj(u)
Locative	-e/-ú	-e

The content side of Paradigm I is the opposition ‘not feminine’ vs. ‘neutral with regard to gender’, or again more specifically, taking the restricted domain and frame into account, ‘masculine’ vs. ‘neutral’. The paradigm based on this analysis is set out in table 3.

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<sup>137</sup> In Decl1, the accusative is either formally identical with the nominative or the genitive based on differences in animacy (Nørgård-Sørensen 2011: 54, 73-74).

Table 3 Paradigm for specification of grammatical gender by declension class in Russian (Paradigm I)

<b>Domain:</b> Nominal declension for non-neuter nouns	
<b>Frame:</b> Grammatical gender (excluding the neuter)	
<b>Expression</b>	<b>Content</b>
Decl1 (desinences)	Not feminine (=masculine)
Decl2 (desinences)	Neutral

The domain of Paradigm II is person-designating nouns, and the frame of the paradigm is extra-linguistic sexus (natural gender). Again we must examine the difference that makes a difference, which according to Jakobson's analysis is the association between on the one hand masculine vs. feminine and on the other hand neutrality with regard to sexus vs. specification of female sexus. Once again a paradigm with two members, set out in table 4.

Table 4 Paradigm for specification of extra-linguistic sexus by grammatical gender in Russian (Paradigm II)

<b>Domain:</b> Person-designating nouns	
<b>Frame:</b> Extra-linguistic sexus	
<b>Expression</b>	<b>Content</b>
Masculine (gramm. gender)	Neutral
Feminine (gramm. gender)	Female sexus

When comparing the two paradigms set out in table 3 and 4, in particular their domains, it becomes clear that the analysis with which Jakobson establishes the 'zero vs. something' opposition regarding *fonction morphologique* is not isomorphically parallel to the analysis underpinning the 'zero vs. something' opposition regarding



*signification*. In addition, the zero expression of the content ‘not feminine’ disappears from Paradigm I, not because the excluded Decl1 neuters are reintroduced – which would seem more than reasonable since Jakobson mostly talks of Decl1 as associated with non-feminine rather than simply masculine – but because the singular nominative zero is simply one possible articulation of what is structurally the expression device; this particular number/case selection is an allo-form of what makes the difference. At this point, then, we may conclude that the elegant chiasmus does not represent the facts; it is beautiful, but – at best – imprecise.

## 6 The content of selection and the purpose of the sign

The paradigm analysis above does not raise questions about the idea of zero content proposed by Jakobson; it is now time to raise such questions.

The analysis of zero content hinges on Jakobson’s conception of markedness. Inspired by the description of distinctive features in phonology, the relation between the marked and the unmarked term (or category) of an opposition is described in Jakobson (1932: 3) as follows: “[F]alls die Kategorie I das Vorhandensein von A ankündigt, so kündigt die Kategorie II das Vorhandensein von A nicht an, d.h. sie besagt nicht, ob A anwesend ist oder nicht”.<sup>138</sup> The same view is presented in *Signe zéro* where markedness relations are described as “oppositions binaires, dont l’un des termes désigne la présence d’une certaine qualité et, l’autre (terme non caractérisé ou non marqué, bref terme zéro) n’annonce ni sa présence ni son absence” (Jakobson 1939: 213).<sup>139</sup>

In this definition of markedness we once again observe the structural beauty of the simple ‘presence vs. absence’ relation. The description of markedness as A vs. 0 follows the logics of pure difference as outlined in section 3. However, Jakobson’s

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<sup>138</sup> “If category I indicates the presence of A, category II does not indicate the presence of A, that is, it does not signify whether A is present or not.” (translation in Andersen 2001: 39).

<sup>139</sup> “binary oppositions, in which one of the terms designates the presence of a certain quality, and the other (the uncharacterised or unmarked term, in short the zero term) indicates neither its presence nor its absence” (my translation).

definition can be criticised from two perspectives: a theoretical principled discussion of the nature of linguistic markedness and a crucial point about linguistic sign selection made by Jakobson himself.

A convincing theoretical critique of Jakobson's markedness definition is offered in Andersen (2001). The central question in markedness theory is how to account for the fact that in the case of two terms that are apparently in opposition to one another, it is often possible for one of the terms to act in the other term's stead, e.g. *duck* vs. *drake* with the former having this potential, or Jakobson's pair *suprug* 'spouse/husband' vs. *supruga* 'wife'. Andersen takes as his point of departure the problem of applying strict (normative) logics to linguistic oppositions as it leads to the assumption that the relation between linguistic items is based on exclusion (contradictory opposition), but with some odd role played by inclusion (superordinate term and subtype) in cases like *duck* vs. *drake*. Drawing on the Hjelmslevian concepts of prelogic and participation (Andersen 2001: 46-47) and a number of examples, linguistic as well as non-linguistic, Andersen describes linguistic oppositions as fundamentally founded on inclusion, rather than logically exclusive opposition, in a way which nevertheless enables an oppositional understanding of the relationship: "One of the terms of an opposition is construed both as superordinate and subsumed, inclusive and included [...]. But in this inclusive construal the contrary or contradictory opposition does not disappear. It remains easily accessible to analysis in terms of the concepts of normative logic." (Andersen 2001: 43).

According to Andersen, Jakobson is one of the theorists guilty of confusing linguistic markedness with normative logics (Andersen 2001: 38-40). Jakobson's point of departure is a description in terms of exclusive opposition (cf. Jakobson 1939: 213): the two opposed members – in Jakobson's terminology, the two categories – of a contrast must be expected each to have their own well-defined meaning. However, the fact that one of the categories, the unmarked member, may be used where one could have used the marked member, leads Jakobson to the conclusion that an inclusive organisation of content is imposed on the opposition – rather than the other way around as Andersen argues – and this inclusion must be described in terms of neutrality, i.e.

zero content; otherwise the fundamentally exclusive nature of the opposition would prevent the use of the unmarked member in the marked member's stead.

If one rejects Jakobson's zero value interpretation of the status as unmarked – which, based on Andersen's thorough analysis of the concept of markedness, seems judicious – markedness analysis cannot be used to support the description of zero content of signs in the way proposed by Jakobson. However, one need not look beyond Jakobson's own work to find good arguments against the zero content analysis.

As discussed in section 3, the structural analysis of sign opposition is essentially concerned with 'the difference that makes a difference'. Indeed, the concept of commutation is all about telling significant differences from insignificant ones (i.e. emic distinctions vs. etic ones). In order for a difference to make a difference, the individual selectional option provided by the differentiation must carry significance. The fact that this is of fundamental importance to the understanding and description of language is perhaps nowhere better formulated than in Jakobson's (1959) *On linguistic aspects of translation*. Pointing out how the meaning of one word can only be understood in relation to words with which it contrasts, and how the grammatical distinctions of a given language – which may differ from those of another language – force the language user to choose between different contrasting content specifications, Jakobson very eloquently states: "Languages differ essentially in what they *must* convey and not in what they *can* convey" (Jakobson 1959: 264).

This pithy formulation sums up the important insight from European structuralism that language on the structure level (*la langue*) establishes distinctions that cannot be ignored in usage (*la parole*); when activating the domain of the distinction (cf. the structural-functional paradigm model), the language user has no choice of opting out. What is gained from this restriction on user freedom is a linguistic system whose structures provide a (more or less) functionally adequate means of communication, and it does so by providing signs, each of which will do a certain job for the user – and that is why we select and use signs, thus causing sign systems and structures to persist (Harder 1996: 101, 154).

The criticism against Jakobson's zero content takes the insightful 'must convey' statement as its point of departure and calls for conceptual and analytical soberness in

the way the property of ‘obligatoriness’ is applied. Let us first discuss the case in which a selection of overt (positive, non-zero) expression is associated with zero content, i.e. scenario 3 and 4 in Figure 2. While the actual occurrence of such selection scenarios may be considered an empirical question, the idea of selecting a positive expression element – in opposition to another positive element or zero – to make a zero content specification in opposition to a positive specification is counterintuitive. In terms of iconicity, it is anti-isomorphic and very difficult to reconcile with a functional understanding of “signs doing a job”. But more importantly, with regard to Jakobson’s own writing on obligatoriness, it is a violation of the principle of ‘must convey’. This is even more obvious in the case of a zero expression associated with zero content (scenario 5 in Fig. 2).

According to the structural-functional paradigm model, and in agreement with the structuralist tradition, selection between members of a paradigm is a mandatory choice, and the zero sign – i.e. a sign with absence as its expression – is fundamentally dependent on obligatoriness (cf. section 1). Without something in the context – the domain – to inform the hearer that a selection must be (or, when interpreting an utterance: must have been) made, the absence cannot be realised and therefore cannot constitute the expression of a linguistic sign. Thus a sign with zero expression must be one of (at least) two options that the speaker must mandatorily choose between. However, in positing the existence of zero content associated with zero expression, there is a fundamental contradiction in relying on obligatory selection but letting one option be “neutrality”. The essential obligatoriness is reduced to a “no opting out from choosing between (a) a specification and (b) opting out”. The concept of zero content, and in particular zero content plus zero expression, undermines the sound structural insight that selection carries content, and it is at odds with any reasonable conception of the purpose of the linguistic sign.

The above argument rejects the notion of zero content on principled grounds. In addition the specific examples of zero content provided by Jakobson can be questioned. As mentioned in section 3, Jakobson describes the content opposition between Russian nominative and accusative as one between zero content and positive case value (1939: 214-215). While the nominative may be considered the semantically unmarked case in

contrast to the other cases, it is not reasonable to describe the value of nominative as zero, i.e. empty and unspecified (cf. Andersen's critique of the zero-interpretation of 'unmarked' presented above). The selection of nominative has consequences and signals to the addressee that the noun, or other case-inflected nominal word, has (the potential for) certain syntactic functions, while others are excluded, i.e. those functions marked by a different case. Jakobson's description of the zero content in the gender specification of the Russian Decl2 is even more questionable as the expression element – the nominative singular desinence – certainly has a positive semantic load. The primary content of the desinences of the different declensions is specification of number and case; absence of gender specification in the inflectional pattern of Decl2 as such is a correct observation, but it does not mean that there is no content associated with the expression elements. The primary content of the desinence *-a*, which Jakobson lets represent Decl2, is specification of singular and nominative (which, although they may be considered unmarked values, are not "nothing"). Jakobson does note that the zero content concerns an analysis "du point de vue du genre" (1939: 212), but the fact that *-a* does not, in addition to case and number, specify gender does not mean that it has the *function* of not expressing gender. That would be a conclusion reached by assuming the existence of a structurally defined content and then accepting "no value" as that content – clearly a result of the pitfall of structural beauty.

## 7 Conclusion

Jakobson's structuralist agenda is in many respects fundamentally reasonable and sound, but the "pure" structure analysis must be checked by respect for the observable facts as well as considerations of function and purpose. Language is indeed a system of distinctions and thus based on differences, and each specific language must be subjected to careful analysis of the differences that make a difference in accordance with the commutation principle. However, Jakobson's zero analysis demonstrates how one may lose sight of the whole point of describing and theorising about linguistic difference. My critique of Jakobson's analysis has been directed at the selection of data and handling of the empirical findings, at the content analysis and application of a theoretically

problematic conception of markedness and zero value, and at the reasoning behind the descriptive and theoretical claim that the choice between on the one hand some expression associated with some content and on the other hand no expression associated with no content may constitute an opposition between two signs.

The concept of zero in linguistics is not only legitimate but necessary; however, in any responsible approach to structural description one must rein in the elegant zeros. If considerations of function and purpose are neglected in the search for structural beauty, the risk is that the linguist ends up establishing signs – i.e. entities of the language model – that are constituted by no expression and no content, entities that will hardly survive Occam's razor. Jakobson's zero analysis seems to illustrate a line of thinking that puts the cart before the horse: a structural vision has come before the empirical material that needs description. This vision calls for a sign, and such a sign has a slot for an expression component and a slot for a content component. Finding nothing, the linguist places nothing in the expression slot and nothing in the content slot and concludes that this is the envisioned sign – a procedure that should cause all methodological alarm bells to ring.

The critique of Jakobson does not in any way invalidate the structural analysis of difference relations in accordance with the commutation principle as a useful, and arguably necessary, method in describing languages as semiotic systems. However, pure logical difference is not enough, and despite the pleasure of its structural beauty, nothing as the content of nothing is not enough.

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*Peter Juul Nielsen*  
*Department of Culture and Identity*  
*Roskilde University*  
*P.O. Box 260*  
*DK-4000 Roskilde*  
*[pjn@ruc.ruc](mailto:pjn@ruc.ruc)*