TYPOLOGY AND LINGUISTIC THEORY
FROM DESCRIPTION TO EXPLANATION

FOR THE 60TH BIRTHDAY OF ALEKSANDR E. KIBRIK

EDITED BY EKATERINA V. RAKHILINA AND YAKOV G. TESTELETS

"LANGUAGES OF RUSSIAN CULTURE"
Moscow 1999

ТИПОЛОГИЯ И ТЕОРИЯ ЯЗЫКА
ОТ ОПИСАНИЯ К ОБЪЯСНЕНИЮ

К 60-ЛЕТИЮ АЛЕКСАНДРА ЕВГЕНЬЕВИЧА КИБРИКА

"ЯЗЫКИ РУССКОЙ КУЛЬТУРЫ"
Москва 1999
RESOLUTION RULES FOR GENDER AGREEMENT IN TSAKHUR

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1. Introduction

It is a pleasure to write this article for Aleksandr Evgen’evič, from whom I have learned so much over the years. The article draws on his work on Daghestanian languages (and indeed the data were gathered on one of the many expeditions to the Caucasus which he has organized) and it confirms typological conclusions based in part on his important work on Archi. First we consider the typology of gender resolution and show how it is related to gender assignment (section 2). There is limited information on the resolution rules of languages with predominantly semantic assignment, but Tsakhur provides just the combination of factors we require make progress here. We therefore introduce Tsakhur in section 3, and then look at its gender system in section 4, before considering gender resolution in detail in section 5.

2. The typology of gender resolution

The term ‘resolution rule’ [Givón 1970] is used to refer to a rule specifying the form of an agreement target when the controller consists of conjunct noun phrases; it needs access to the feature values of the noun phrase conjuncts, and from these it determines a feature value for the agreement target. Thus in Slovene, if a masculine singular and a feminine singular are conjunct, it is the gender and number resolution rules which specify the form of the target, say the predicative adjective, as masculine dual [Lenček 1972]:

(*) Tanček in Marina sta prisadevn-λ
Tanček mop and Marina F be.DU assiduous: M.DU
Tanček and Marina are assiduous

There are many instances where it is possible instead to have agreement with one conjunct only, and then resolution is not involved. Such cases will not concern us here.

Gender resolution may follow two distinct principles: the semantic principle or the syntactic principle. Gender resolution by the semantic principle involves reference to the meaning of the conjunct elements, even if this implies disregard for their syntactic gender. The syntactic principle operates according to the syntactic gender of the conjuncted items, irrespective of their meaning. This gives us two types; there is a third (mixed) type since some languages use interesting combinations of the two principles. We shall consider these three types in turn; since our main concern in this paper is with the Tsakhur data, and their importance for the overall typology of gender resolution, we give only the rules required by the languages of the different types, referring the reader to the relevant sources for the examples which justify the rules given.

2.1. Semantic gender resolution

In this section we shall look at examples of gender resolution in which the meaning of the nouns which head the coordinated noun phrases determines the agreement form to be used. We find this type in Godoberi, an unwritten language of the Andic subgroup of the Avar-Andic group of Daghestanian (North-East Caucasian) languages, with about 2500 speakers living in two villages (the larger of which is called Godoberi) in the Botlikh area of Daghestan. The data are primarily from Aleksandr Evgen’evič [Kibrik 1994: 151–156], who generously carried out field work with about five speakers at my request; the relevant examples can be found in Corbett [forthcoming]. There are three genders in Godoberi, masculine (for nouns denoting male rationals), feminine (for female rationals) and neuter (for non-rationals). In the plural, however, there are only two agreement forms, the rational (for masculines and feminines) and the neuter.

The rules required are as follows:
1. if all conjuncts denote rationals the rational form is used;
2. if all conjuncts denote non-rationals the neuter form is used.

We do not need to specify that the plural is used since that will result from the number resolution rules. The rules as given do not allow for the combining of rationals and non-rationals; an alternative construction, the comitative, must be used. However, some speakers — besides accepting the comitative construction — also allow sentences, with rational plural agreement. They have a more permissive form of the resolution rules with an additional rule:
3. otherwise the rational form may be used.

These resolution rules are similar to those found in Dravidian languages, for which see Corbett [1991: 269–271]. Typologically similar rules, that is, rules based on the meaning of the conjuncts, may be found in Archi, Tsowa-Tush and various Bantu languages [Corbett forthcoming].

* The financial support of INTAS (grant 93-2378) and of the ESRC (grant R000236063) is gratefully acknowledged. I am also very grateful to Aleksandr Kibrik, Sandra Kadzic, Yakov Testelev and the other members of the 1995 expedition to Mishleš for their help and advice. Special thanks, for their patience and interest, are due to the Tsakhur speakers I consulted: Magomedagir Ajazov, Kurban Aşdiev, Sara Džumaneva, Bajram Ibragimov, Rizhulla Isayev, Ismail Mamedov, Solmaz Mamedova, Zijamtim Maxmu dov, Şirinul Şajdumova and Şaxban Xodžiev.
2.2. Mixed semantic and syntactic gender resolution

A language with rules of this type is Latin [Corbett 1991: 287]. The gender resolution rules are these:

1. If all conjuncts are masculine, then the masculine is used;
2. If all conjuncts are feminine, then the feminine is used;
3. If all conjuncts denote humans, then the masculine is used;
4. Otherwise the neuter is used.

Thus most of the rules refer to syntactic gender, while the third is based on semantics. A language with a comparable mix of principles, though rather different rules, is Polish [Corbett 1991: 285–287].

2.3. Syntactic gender resolution

This type may be illustrated by the South Slavonic language Slovene, which has three genders. Attempting to specify the rules according to semantics is unsatisfactory, since the inanimate nouns are spread across the three genders. However, by referring directly to gender, we can formulate simple resolution rules [Corbett 1991: 280–282]:

1. If all conjuncts are feminine, then the feminine form is used;
2. Otherwise the masculine is used.

Rules of this type are common, being found also in French, Italian, Spanish, Latvian, Hindi, Panjabi and modern Hebrew [Corbett, forthcoming].

2.4. Gender resolution and gender assignment

The type of gender resolution system found in a particular language depends in part on the assignment system. An assignment system is a model of the native speaker’s ability to allot nouns to genders on the basis of information which must in any case be stored as part of the lexical entry. Assignment may depend on two types of information: semantic and formal (the latter being a cover term for morphological and phonological information).

The first type of information is always used: genders always have a semantic core (there are no purely formal systems). Systems in which semantic information is sufficient for gender assignment are those which we call semantic assignment systems. These are well represented in the Dravidian family. There are also found elsewhere in the world, including in the Caucasus, as in Godoberi. There are many languages, however, where there are semantic assignment rules covering a large proportion of the noun inventory, but which appear to allow sets of exceptions. A good example is Archi [Kibrik, Kodzashvili, Ovbijanikova & Simedov 1977: 55–66; Corbett 1991: 27–29]. Such languages have predominantly semantic assignment rules.

There are many languages in which large numbers of nouns fall outside the semantic assignment rules. These nouns may be handled instead by formal assignment rules, which depend on the form of the nouns involved rather than on their meaning. These rules are of two types, morphological and phonological. Thus in Russian, for those nouns which cannot be assigned to a gender according to their semantics, it is the declensional class which determines gender. However, in languages like

Qafar, an East Cushitic language, it is phonology which determines gender, for nouns not denoting sex-differentiabes [Corbett 1991: 51–52].

There is an interrelation of resolution and assignment systems:

Languages with strict semantic assignment systems (like Godoberi) have semantic resolution systems, as do those with predominantly semantic systems (like Archi).

Languages with formal assignment systems may have semantic resolution (Luganda), mixed (Polish) or syntactic (= formal) resolution (as in the case of Slovene).

Thus:

gender resolution may not be determined by semantic considerations to a lesser degree than is gender assignment.

More justification is given in Corbett [forthcoming]. Languages with predominantly semantic assignment systems are of particular interest for this typology: because the nouns are assigned largely by semantics, it may not be clear whether the resolution rules are operating to a semantic or a syntactic principle, since in many cases the outcomes would be identical. Thus we should look for languages with the crucial evidence to choose between the two possibilities, and hence to provide support or counter-evidence relating to the claim above linking the typologies of resolution and assignment.

3. The linguistic background of Tsakhur

Tsakhur is a member of the Lezgic group of the Dagestanian family. A summary of the phonetics is given in [Kibrik & Kodzashvili 1990: 343–344]; there are notes on syntax in [Kibrik 1980], a grammar by Ibragimov [1990] and another by Kibrik [1998]. According to Ibragimov [1990: 3] there are around 30,000 Tsakhurs (though he does not indicate how many speak the language). More Tsakhurs live in Azerbaijan than in Dagestan. Fieldwork was carried out in Mishlesh, the largest Tsakhur settlement, with around 1,000 inhabitants. Mishlesh is situated on the River Samur, somewhat higher up the valley than the settlement of Tsakhur itself, at about 1,800 metres. Tsakhur is the language normally heard in Mishlesh, though many people know Russian, to varying degrees, and some know other languages too, notably Azeri and Dagestani. Work with consultants was conducted in Russian.

There is considerable dialect variation in Tsakhur and the Mishlesh dialect shows several interesting features. For instance it has remarkably free word order (whereas Dagestanian languages are normally verb final). Speakers are well aware of differences, particularly lexical ones, and will identify particular words as belonging to other dialects and give the corresponding Mishlesh form.

4. The gender system of Tsakhur

Like several other Dagestanian languages Tsakhur has four genders; because of the semantic transparency of these classes of nouns by comparison to Indo-European genders, Caucasianists sometimes prefer the term 'noun class', and then use numbers
(I, II, III, IV) instead of names. The distinction is purely one of tradition. The existence of the four genders can be demonstrated by verb agreement (see Table 1):

<table>
<thead>
<tr>
<th></th>
<th>singular</th>
<th>plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Ga3e-wor</td>
<td>Go3e-wob</td>
</tr>
<tr>
<td>II</td>
<td>Ge3e-wor</td>
<td>Go3e-wob</td>
</tr>
<tr>
<td>III</td>
<td>Go3e-wob</td>
<td>Ga3e-wod</td>
</tr>
<tr>
<td>IV</td>
<td>Ga3e-wod</td>
<td>Ga3e-wod</td>
</tr>
</tbody>
</table>

Table 1. Present tense of 'see' with postposed auxiliary in Tsakhur

There are interesting syncretisms here. This set of forms distinguishes all four genders in the singular (many agreement targets make fewer distinctions). In the plural, there is a split between genders I and II versus III and IV; this latter pattern is general in Tsakhur. We shall now consider how nouns are assigned to these four genders. What we find is a predominantly semantic system. Nouns are assigned to the four genders as shown in Table 2.

<table>
<thead>
<tr>
<th>criterion</th>
<th>gender</th>
<th>examples</th>
<th>glosses</th>
</tr>
</thead>
<tbody>
<tr>
<td>male rational</td>
<td>I (masculine)</td>
<td>daky</td>
<td>father</td>
</tr>
<tr>
<td>female rational</td>
<td>II (feminine)</td>
<td>jedy</td>
<td>mother</td>
</tr>
<tr>
<td>animate</td>
<td>III (animate)</td>
<td>bakan</td>
<td>horse</td>
</tr>
<tr>
<td>(also some</td>
<td></td>
<td>daddal</td>
<td>cock</td>
</tr>
<tr>
<td>inanimates</td>
<td></td>
<td>(gaw)</td>
<td></td>
</tr>
<tr>
<td>other</td>
<td>IV (neuter)</td>
<td>t'et</td>
<td>flower</td>
</tr>
<tr>
<td>(including</td>
<td></td>
<td>ni3e</td>
<td>cheese</td>
</tr>
<tr>
<td>a few inanimates</td>
<td></td>
<td>(kabaq)</td>
<td>(butterfly)</td>
</tr>
</tbody>
</table>

Table 2. Gender assignment in Tsakhur

Assignment to genders I and II is relatively straightforward: I is for male humans (but also gods, angels and so on) while II is for female humans (and 'female mythical beings'). The other two genders are more difficult. Most of the remaining animates are assigned to gender III. Just a few, however, are in gender IV, along with some mythical beings. And inanimates are found both in genders III and in gender IV (see [Melnikov & Kurbanov 1964; Ibragimov 1990: 54–56], and references there).

There is a small number of nouns which will prove important for the argument. There is the noun <i>kudaf</i> 'child', which does not fit into any of the genders as given above. In the singular, it takes gender IV agreement, but in the plural it takes I/II. A similar noun is <i>x639</i> 'child'. We will not treat these nouns as a separate gender, such a gender would be 'inquotare' <sup>2</sup>. Rather we shall treat them as lexical exceptions. A second type of noun we should take note of is <i>itar</i> 'new born baby', which is a gender IV noun, and takes the regular III/IV agreements when in the plural [Ibragimov 1990: 54–55]<sup>3</sup>.

5. Gender resolution in Tsakhur

To investigate gender resolution in Tsakhur, simple sentences with conjoined noun phrases were devised and checked for problems; they were presented to ten consultants and their judgements are recorded in the appendix. The names of the consultants are given in the starred footnote, but to preserve anonymity the consultant columns in the appendix are given letters rather than names. The examples are the in the order presented to consultants, and are referred to as [A 1], [A 2] and so on in the text. Where case is not specified in glosses it is absolutive (sometimes called nominative); the verb agrees with absolutive noun phrases.

When both conjuncts were headed by nouns from gender I or gender II, then not surprisingly there were no problems: consultants readily accepted the I/II plural agreement form:

(2) dōk-<i> i</i> d-li Xa: wobummi  
father.i-<i> and</i> son.i at home are I/II
father and son are at home

(3) jēd-<i> i</i> jīš Xa: wobummi  
mother.ii-<i> and</i> daughter.ii at home are I/II
mother and daughter are at home

Similarly, with conjuncts of genders I and II together (see also [A 10], [A 13] and [A 16]):

(4) dōk-<i> i</i> jēdy Xa: wobummi  
father.i-<i> and</i> mother.ii at home are I/II
father and mother are at home

The rule for the examples so far could be stated either in terms of the genders of the nouns involved, or in terms of their semantics (they all denote humans). That is to say,

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<sup>2</sup> The term 'inquotare gender' comes from the notion of there being so few members that they do not make a quorum; see [Corbett 1991: 170–175] for discussion and examples. Rather than treating Tsakhur <i>kudaf</i> 'child' and <i>ustak</i> 'child' as forming a fifth gender, we should rather say that they are lexical exceptions, marked as taking gender agreement forms required by other nouns, but with an exceptional singular-plural pairing of agreements (IV singular, and I/II plural).

<sup>3</sup> Two informants diverged from [Ibragimov 1990: 54–55] in this (and not all were asked); one had <i>itar</i> 'new born baby' with the same agreement as <i>kudaf</i> 'child'; and one was simply not sure about the word (it was not an active vocabulary item).
'if all nouns are of genders I and II, then the I/II gender form will be used' OR 'if all nouns denote humans, then the I/II gender form will be used'. A similar situation holds when we consider conjuncts headed by nouns from genders III and IV. With nouns of the same gender, the situation is relatively straightforward:

(5) ḥaknum-/-i: amnili Xa: wodummi
    horse.III- and donkey.III at home are.III/IV
    the horse and the donkey are at home.

While most consultants accepted this sentence, two preferred the phrase ḥje: 'in the barn' rather than Xa: 'at home'; see also [A 17] and [A 25]. With conjuncts from gender IV (apart from one consultant who preferred a singular verb here, hence no resolution) there was acceptance of the III/IV form:

(6) ḥaknum-/-i: tett-/-i: Xa: wodummi
    butterfly.IV- and flower.IV at home are.III/IV
    the butterfly and the flower are at home.

With conjuncts of genders III and IV together, there is again a clear situation:

(7) tett-/-i: ḥaknum-/-i: Xa: wodummi
    fly.III- and butterfly.IV at home are.III/IV
    the fly and the butterfly are at home.

The same nouns but in the plural are given as [A 18]. These examples involve nouns denoting living things: examples were also checked with inanimates (see also [A 7]):

(8) g'q'ili/-i: niše Xa: wodummi
    egg.III- and cheese.IV at home are.III/IV
    the egg and the cheese are at home.

With these some consultants allowed (and in one instance required) a singular verb; when resolution was allowed, which it was in almost all cases, the gender III/IV form was the accepted form.

As before, the rule could be stated in terms of gender (III and IV) or in terms of semantics (all conjuncts denote non-humans). We now turn to instances with noun phrases headed by nouns from gender I or II conjoined with noun phrases headed by nouns from gender III or IV.

(9) ḥaknum-/-i: amnili Xa: wodummi
    father.I- and horse.III at home are.I/II / are.III/IV
    father and the horse are at home.

Since it was known that such sentences were problematic, both variants were checked with all consultants. Three rejected (9) with either form of agreement. Others found difficulty with both variants or just with the III/IV form; note that one consultant accepted both variants, but then he accepted practically all the sentences offered, so that his judgements are somewhat suspect. In the case of (9), the set of judgements show a preference for the II/I form wobummi 'are'. With the plurals ([19] and [20]) too, the III/IV form was slightly preferred. Clearly, however, an alternative construction is preferred.

Example (9) showed genders I and III conjoined; I and IV caused difficulties too:

(10) ḥaknum-/-i: kaba ḥ Xa: wodummi
    boy.I- and butterfly.IV at home are.III/IV
    boy and the butterfly are at home.

Here the two forms were about equally problematic. When we turn to gender II conjoined with the non-human genders there is a similar picture:

(11) ḥaknum-/-i: kaba ḥ Xa: wodummi
    mother.II- and horse.III at home are.I/II / are.III/IV
    mother and the horse are at home.

In (11) the gender II form did relatively well by comparison with the III/IV gender form (seven acceptances to two, including the judgement of the most accommodating consultant, who accepted both). In the next pair, the alternatives fared about equally badly:

(12) ḥaknum-/-i: kaba ḥ Xa: wodummi
    daughter.II- and butterfly.IV at home are.I/II / are.III/IV
    the daughter and the butterfly are at home.

Clearly, then, certain combinations are unnatural. Once again we could state the restriction in terms of syntactic gender (if nouns of genders I or II are conjoined with nouns of genders III and IV, the result is unnatural/unacceptable). It could also be stated in terms of semantics (if nouns denoting humans are conjoined with nouns denoting non-humans the result is unnatural/unacceptable). We should like to distinguish between rules dependent on syntactic gender and rules dependent on semantics, but there are a very few examples which make this possible; this is where the nouns discussed at the end of Section 4 become important:

(13) ḥaknum-/-i: ḥaknum-/-i: Xa: wodummi
    mother.II- and child.(IV) at home are.I/II
    mother and child are at home.

Recall that ḥaknum 'child' does not fit into any of the genders; it takes gender IV agreements when singular (hence '(IV)' the example) but II/II agreements when plural. (13) was readily accepted by consultants (see two notes relating to [A 21] in the appendix). If the resolution rules were stated in terms of gender, we should require a separate rule for this noun and the very few like it. However, if the rules are stated in terms of semantics, then it fits naturally, since it denotes a human.

A second example confirms this.

(14) ḥaknum-/-i: ḥaknum-/-i: Xa: wodummi
    mother.II- and baby.IV at home are.I/II
    mother and (new-born) baby are at home.

The noun ḥaknum 'new-born baby' belongs to gender IV. Sentence (14) was accepted by all consultants except one, who was not sure of this noun. If our rules were stated in terms of syntactic gender, then this example would be exceptional: we have genders II and IV conjoined, and we would expect it to be of doubtful acceptability, as in the case of (12). However, if we state the rules in terms of semantics, then (14) is fully regular, and no special rule is required. Thus although in most instances the rules could be stated either way, examples like (13) and (14) show that they can be stated more economically in terms of semantics:
7. Conclusion

In most cases the data concerning gender resolution in Tsakhur could be covered by rules referring either to syntactic gender or to semantics. However, with a small number of nouns, there is clear evidence that the semantic approach is the correct one. In this respect Tsakhur is comparable to Archi [Kibrik 1977: 186-187; Corbett 1991: 271-273]. This means that we have another example of a language with predominantly semantic gender assignment rules and semantic gender resolution rules. This in turn supports the typological claim that gender resolution may not be determined by semantic considerations to a lesser degree than is gender assignment.

REFERENCES


9. jed- i: balkan Xa: wobumni
teacher, I and horse, III at home are, I/I
the teacher and the horse are at home

10. gadej- i: ići Xa: wobumni
boy, I and girl, II at home are, I/I
boy and the girl are at home

11. gadej- i: kabaj Xa: wobumni
boy, I and butterfly, IV at home are, III/IV
boy and the butterfly are at home

12. gadej- i: kabaj Xa: wobumni
boy, I and butterfly, IV at home are, III/IV
boy and the butterfly are at home

13. jis- i: diXa: wobumni
director, II and son, at home are, I/I
the director and the son are at home

14. jis- i: kabaj Xa: wobumni
director, II and butterfly, IV at home are, III/IV
the director and the butterfly are at home

15. jis- i: kabaj Xa: wobumni
director, II and butterfly, IV at home are, III/IV
the director and the butterfly are at home

16. adam- e- r: jed- a- r Xa: wobumni
man, I and woman, II at home are, I/I
the men and women are at home

17. balkan- a- r: almall- er jie- e: wobumni
horse, III and donkey, III, in barn are, III/IV
the horses and the donkeys are in the barn

18. t'ot- a- r: kob- er Xa: wobumni
fly, III-PL and butterfly, IV-PL at home are, III/IV
the flies and the butterflies are at home

19. adam- e- r: balkan- ar jie- e: wobumni
man, I and horse, III-PL in barn are, I/I
the men and the horses are in the barn

20. adam- e- r: balkan- ar jie- e: wobumni
man, I and horse, III-PL in barn are, III/IV
the men and the horses are in the barn

21. jed- i: kulyfat Xa: wobumni
mother, II and child, (IV) at home are, I/I
mother and child are at home

22. jed- i: čaran Xa: wobumni
mother, II and baby, IV at home are, I/I
mother and (new-born) baby are at home

23. dok- i: diXa: wobumni
father, I and son, I at home are, I/I
father and son are at home

24. jed- i: jis Xa: wobumni
mother, II and daughter, II at home are, I/I
mother and daughter are at home

25. dada- i: kaltet Xa: wobumni
cock, III and hen, III at home are, III/IV
the cock and the hen are at home

26. kabaj- i: t'et Xa: wobumni
butterfly, IV and flower, IV at home are, III/IV
the butterfly and the flower are at home

NOTES

a Sentence not accepted with Xa: 'at home', but accepted with jie- e: 'in the barn'.
b Consultant preferred jie- e: 'in the barn'.
c wobumni 'be, IV, SG' also possible.
d wobumni 'be, IV, SG' (a variant of wodum) also possible.
e wodum 'be, IV, SG' required.
f At first consultant said wodumni 'are, III/IV', then said some would say wobumni 'are, I/I', then said wobumni 'are, I/I' was better.
g Consultant not sure of the word čaran 'new-born baby'.
h wodum 'be, IV, SG' preferred.

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4 Note that jed- e- r means 'women' and jed- e- r 'mothers'. In this, as in the other examples of plurals given, the -er/-ar-/er is the plural marker, and -e- marks absolutive plural (dropping in the oblique cases).