Three takes on grammatical relations: a view from the languages of Europe and North and Central Asia.

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1. Introduction

Among the many approaches to grammatical relations (GRs) currently available there are three which exhibit a striking degree of convergence, namely the approach developed within Simon Dik's Functional Grammar (FG) as presented in Dik (1997) and earlier work, the view outlined by Kibrik (1997, 2001) in the context of his Relational Typology (RT) framework and the conception elaborated by Van Valin & La Polla (1997) within Role and Reference Grammar. All the three approaches may be broadly termed functional-typological. They converge in considering GRs to be: a) derived rather than primitive notions; b) definable on the basis of behavioral rather than coding properties of arguments; c) recognizable only when the behavioral patterns of arguments are not reducible to their semantic or pragmatic relations; and d) identifiable in terms of the presence of restricted neutralization of semantic and pragmatic distinctions. As a consequence of the above, in all three approaches GRs emerge as being not universal and further the languages which do have GRs as potentially differing with respect to the GRs that they exhibit. In other words, all three approaches identify GRs as a potentially significant typological parameter.

Taking the commonalities enumerated above as its point of departure, the present paper concentrates on three issues: the nature of the typologies of GRs that the three approaches offer, the typologies of languages that stem from the GRs recognized and how the languages of Europe, Northern and Central Asia, henceforth ENCA pattern with respect to the respective typologies. In considering the last point, we will take into account both the extent to which the recognized characteristics of the languages in the area are captured in terms of the proposed typologies and the extent to which the typologies in question reveal new, sofar unrecognized characteristics of the languages in the area.

The paper is structured as follows. Section 2 underscores the similarities in the conception of GRs found in FG, RT and RRG by providing a brief overview of the points of difference that do occur. The discussion will focus on two issues, the identification of GRs in terms of neutralization of semantic and pragmatic distinctions on the one hand, and the language-specific as opposed to construction-specific nature of GRs, on the other. Section 3 concentrates on the typologies of GRs recognized within each of the three approaches. These will be shown to differ in regard to the types of GRs that are distinguished and with respect to the strength of the GRs posited. Section 4 considers the typologies of languages which emerge in terms of the presence, nature and strength of GRs within the three approaches. Finally, in section 5 the typologies in question will be applied to the languages of Europe, Northern and Central Asia. The discussion will close

in section 6 with a brief evaluation of the typological value of the approaches to GRs under examination.

2. Two points of divergence

As mentioned in the introduction, FG, RT and RRG are in agreement with respect to the derived as opposed to primitive nature of GRs as well as the general conditions under which and means via which they should be identified. The recognition of GRs is deemed to be necessary only if the behavioral patterns of arguments are not reducible to the semantic or pragmatic properties that they display nor expressible in terms of argumenthood itself. And the diagnostic for the identification of GRs is the presence of restricted neutralization of semantic and pragmatic distinctions. However, there is some small discrepancy in relation to what precisely is meant by restricted neutralization of semantic and pragmatic distinctions. This will be elucidated in section 2.1. The second, again relatively minor, difference in the view of GRs adopted in FG, RT and RRG concerns the scope of GRs, i.e. whether they are seen as identifiable for the language as a whole or as being construction specific. This issue will be briefly discussed in section 2.2.

2.1. Restricted neutralization

In all three approaches neutralization as a diagnostic for GRs is considered in relation to core arguments.[1] Neutralization of semantic and/or pragmatic distinctions is understood as obtaining if arguments which normally exhibit distinctive behavior in line with the semantic and/or discourse-pragmatic roles that they bear, under a specific set of circumstances loose their distinctiveness and behave in an identical manner. The qualification "restrictive" is intended to capture the fact that the neutralization does not involve all arguments but only some subset of core arguments. Needless to say, the semantic or discourse-pragmatic roles recognized are specific to each of the three frameworks. In RRG, for example, neutralization of semantic role distinctions is stated relative to the macro-roles of Actor and Undegoer; in FG with respect to the 1st argument- semantic functions (agent, positioner, force, zero, processed) and 2nd argument- semantic functions (goal, reference, recipient, direction, location) and in RT on the basis of the hyper-roles such as Agentive vs. Patientive, Principal vs. Absolutive, or Sole vs. Agentive and Patientive. More important, however, is the fact that identity of the arguments involved in the neutralization is not the same in the three approaches.

Concentrating solely on the GR referred to as most privileged syntactic argument (or subject), in FG and RT of relevance to the issue of neutralization are the two arguments, A and P, of the same transitive predicate. The distinction between the two is neutralized if the P acquires the properties associated with the A or, conversely, if the A acquires the properties associated with the P. The first situation occurs in cases in which the A is treated identically to the S, the second in which the P is treated identically to the S. This is depicted graphically in figure 1.

[insert figure 1]

In RRG the notion of neutralization is used primarily as in FG and RT, but it is also extended to include the absence of distinctive properties between two types of arguments of intransitive predicates (Van Valin & la Polla 1997:265). The Ss of intransitive predicates are differentiated in terms of whether they are Actors, as in the case of the argument of a predicate such as `jump' or Undergoers, as in the case of a predicate such as `slip'. If the two are treated on a par syntactically, the distinction between them is also seen to be neutralized. Such neutralization typically goes hand in hand with the S being treated in an analogous manner to the transitve A. But it may also involve an identification of the S with the transitve P. This is shown in figure 2a and 2b respectively.

[insert figure 2]

The neutralization of semantic role distinctions between the A and P of the same predicate can only be achieved via a voice opposition, the personal passive or the antipassive. The personal passive neutralizes the P in the direction of the A/S, as depicted in figure 1a, and illustrated in (1) on the basis of Khalka Mongolian.

Khalka (Binnick 1979:103)

(1)   a.   Cagdaa   deeremč-ig   buuda-v
                police.NOM bandit-ACC   shoot-PAST
                `The police shot the bandit.'

        b.   Deeremč   cagdaa-d   buuda-gda-v
                bandit.NOM   police-DAT   shoot-PASS-PAST
                `The bandit was shot by the police.'

The antipassive, in turn, neutralizes the A in the direction of the P/S, as depicted in figure 1b and exemplified in (2) from Chukchee.

Chukchee (Skorik 1960:149)

(2)   a.   Morɣ-ənan mət−wiriŋərkənət   tumɣ-ət
                we-ERG   1PL-defend.PRES.1PL.3PL   friends-ABS
                `We are defending the friends.'

        b.   Muri   mət−ine−wiriŋərkən   tumɣ-etə
                we.ABS 1PL-ANTIPASS-defend.PRES.1PL   friends-all
                `We are serving as defenders of the friends.'

The neutralization of semantic role distinctions between two different predicates be it two intransitive ones or an intransitive and a transitive one, on the other hand, does not involve changes in voice. Thus whereas in FG and RT, the recognition of GRs is dependent on the existence of either a passive or antipassive opposition in a language (or both), this is not so in RRG. In other words more languages emerge as manifesting GRs in RRG than in FG or RT.

While the presence of a personal passive or antipassive is a necessary condition for recognizing GRs in FG and RT and with respect to certain types of GRs also in RRG (see below), it is not a sufficient condition. In order for a language to be considered as having GRs, additional requirements on the voice opposition are imposed (see Dik 1997: 250f; Kibrik 2000:1417). First of all the voice opposition must be productive and thus syntactic as opposed to merely lexical. Secondly, it cannot be associated with meaning distinctions. This second requirement entails that the passive in, for example, the Samoyedic language Nenets which according to Salminen (19xx) always has modal meanings would have to be disregarded. The same applies to the passive constructions in the Tungisic language Even or the Turkic language Xakas which are claimed by Malchukov (1995: 23) and Anderson (1998:9) respectively to convey adversative meanings. Further conditions are more theory specific. For example, in FG predications related by a voice opposition which is interpretable as involving GRs (syntactic function assignment in FG terms) must manifest exactly the same state of affairs. Since a state of affairs featuring two explicit arguments cannot be considered to be identical to one in which only one of the arguments is syntactically overt, this suggests that all languages in which the passive cannot occur with an overt agent would not qualify as displaying GRs. Such languages are rather common and include several from ENCA, such as Northern Saami, Komi Zyrian, Mari, Chermis and Selkup. In RRG whether a voice opposition is considered to be diagnostic of the presence of a GR depends on its interaction with other syntactic rules. If a passive or an antipassive clause does not feed into other syntactic constructions, say relativization or question formation or conjunction reduction etc. the language is not considered as displaying GRs. In a nutshell, GRs are recognized only if they play a role in the grammar. This role, however, may be more or less significant, which brings us to the second point of difference in the nature of the GRs recognized in the three approaches, i.e. their scope.

2.2 The scope of GRs

While in both FG and RT GRs are established for the language as a whole, in RRG they are seen to be specific to constructions (Van Valin & La Polla 1997:281). Although this difference in the scope of GRs in RRG as opposed to FG and RT is at first sight highly significant, on closer inspection it turns out to be considerably less so. There are two reasons for this. The first is that neither Dik nor Kibrik make any claims with respect to the number or nature of constructions in a language in which GRs will be manifested. Significantly, it is not claimed that every clause must have a subject. This thus allows for the possibility of there being some constructions which display GRs and others which do not. The second reason why the difference in the scope of GRs in RRG as opposed to FG and RT is more apparent than real is that the construction specific nature of GRs in RRG in the main boils down to a construction displaying one of three possibilities: no GR, an invariable GR or a variable GR. As we shall see further below, the notion of variable GR has its direct GR equivalents in FG and RT. The notion of invariable GR has its correspondents in FG and RT as well though not in the form of GRs but rather crypto-GRs, that is the relation of first-argument in FG and the hyper-role of Principal in RT. Thus any language-internal variation with respect to the presence of GRs in different

constructions captured in RRG can be just as well captured in FG and RT, be it not solely with respect to the notion of GR.

Nonetheless, the specific tying of GRs to constructions rather than to a language as a whole focuses attention on the possibility of variation both with respect to the presence of GRs in a given construction acrosslanguages and the extent to which GRs are manifested across constructions within a single language. It thus increases the potential import of GRs as a typological parameter.

3. The typologies of GRs

So far we have been using the term GR holistically. Now it is time to consider in somewhat greater detail the actual typologies of GRs that the three models of grammar have developed. We will first review the types of GRs recognized in each framework. Then we will attempt to establish a means of evaluating the relative strength of the recognized GRs.

3.1 Types of GRs recognized

If we were to characterize the GRs recognized in the three frameworks under discussion using the traditional labels subject, direct object and indirect object, then only the subject would feature as a GR in all three frameworks. The direct object would appear in addition to the subject in FG and RT. And an indirect object relation would occur potentially only in RT. This is quite unlike in other models of grammar which recognise the importance of GRs such as Relational Grammar (e.g. Perlmutter 1983) or Lexical Functional Grammar (Bresnan 2000).[2] Since a subject relation is common to all three approaches, let us consider this GR first.

3.1.1 The Subject
The most elaborate subdivision of the subject GR is that adopted within RRG. The subject, referred to as the privileged syntactic argument (PSA), comes in 8 different guises. This 8-way typology is established in terms of three parameters. The first of these relates to whether the GR in the construction in question functions as a controller or controllee, where by a controller is meant the argument determining the form or referential identity of another argument and by controllee the argument typically in a dependent or coordinate clause whose form or referential identity is being determined.[3] The second parameter concerns the variable vs. invariable nature of the GR, an invariable GR being one embracing a subset of arguments the nature of which is determined solely in the lexicon and is not susceptible to change, and a variable GR one whose argument composition may be modified syntactically.[4] The existence of a variable GR is predicated on the presence of a productive personal passive or antipassive voice opposition in a language, which feeds into syntactic rules. An invariable GR on the other hand exists in the absence of a voice opposition.[5] The third parameter involves alignment, i.e. how the two arguments A and P of a transitive clause pattern relative to the sole argument S of an intransitive clause. The alignment may be either nominative/accusative with the A patterning like the S and the P being distinct or absolutive/ergative with the P patterning

like the S and the A being distinct. The three parameters give us the eight distinctions depicted in figure 3.

[insert figure 3]

Examples of syntactic behaviour reflecting S/A vs. S/P controllers and/or controllees are well known from the literature on grammatical relations, but these tend not to be further subdivided into variable and invariable. It is therefore not clear at present whether any language displays all 8 of the above GRs. But all 8 are definitely manifest cross-linguistically.

Let us begin with controllers. In many languages the possibility of deleting a coreferential argument in a coordinate or adverbial clause depends on the nature of the controller. This is the case in the Ob-Ugric language Northern Ostyak with respect to deletion in coordinate clauses. Unlike in English the deleted argument may be a P, not only an A or S. Deletion, however, is possible only if the controller is an S, as in (3a) or an A, as in (3b).

Northern Ostyak (Nikolaeva 1999a:51,50)

(3) a. A:ŋke-m   joxt-ə−s   pa   ma   ke:si-na   ma-s-e:m
        Mother-1SG come-EP-PAST.3SG and I   knife-LOC give-PAST-SG.1SG
        `Mother came and I gave her a knife.'

   b. Juwan$_i$ Pe:tra$_j$ re:sk-ə−s-li   śitna ma Ø$_{i*j}$ wo:st-ə−s-e:m
        John   Peter   hit:-EP-PAST-3SG   then   I   throw.out-EP-PAST-SG.1SG
        `John hit Peter therefore I threw him (John) out.'

   c. Juwan$_i$ Pe:tra$_j$ re:sk-ə−s-li   śitna   ma   **tume:1$_i$**
        John   Peter   hit:-EP-PAST-3SG   then   I   that-3SG

        wo:st-ə−s-e:m
        throw.out-EP-PAST-SG.1SG
        `John hit Peter therefore I threw him (Peter) out.'

If the controller is a P, for instance Peter in (3c), no deletion of the corresponding referent takes place. Significantly, though Northern Ostyak does have a productive passive, according to Nikolaeva, the controller of coordinate deletion cannot be a passive subject. Thus a clause corresponding to the English *Mother was hit and left* in which the controller is a derived S is ungrammatical. In sum, Northern Ostyak has an invariable S/A controller of coreferential deletion in coordinate clauses. In the Arawakan language Warekena, by contrast, the controller must be an S or a P.[6] Thus the gap in the second clause of (4a) can only be interpreted as being coreferential with 'jaguar' - the P of the first clause not with the A – 'man', unlike in English. When the controller is an A, as in (4b), no deletion of the coreferential referent is possible.

Warekena (Aikhenvald 1998:235-6)

(4)   a.   Enami   eda   washi   pala-mia
                   man   perceive   jaguar   run-PERF
                   `A man saw a jaguar and (the jaguar) ran.'

        b.   Enami   eda   washi   pala-mia   enami
                   man   perceive   jaguar   run-PERF   man
                   `A man saw a jaguar and the man ran.'

And since the language, according to Aikhenvald, has no passive or antipassive, the controller is invariably an S or P, never a derived S.

       A variable as opposed to an invariable controller of coreferential deletion can be observed in the case of converbial clauses with the converb -*GAš* in Tuva, a Turkic language of southern Siberia. The controller is an S/A based one. It may be an an A or an S, as in (5a) or a derived S (via the passive) as in (5b).

Tuva (Bergelson & Kibrik 1995:379,382)

(5)   a.   Kara-ool$_i$ čemnen-ip al-gaš,   Ø$_i$ ažɨlda-p   čort-kan
                   Karaool   eat-CONV   AUX-SS   work-CONV ride-PERF
                   `Karaool ate and went to work.'

        b.   Ool$_i$ ava-zɨ-n-ga   čug-dur-up   al-gaš,   Ø$_i$
                   boy   mother-3-SFX-DAT wash-PASS-CONV   AUX-SS
                   ojna-p   čoruur
                   play-CONV   AUX.IMPERF
                   `After the boy has been washed by his mother, he will go to play.'

An argument coreferential with the P of the main clause, however, cannot be deleted and the clause in question must be marked for different subject as illustrated in (5c).

(5)   c.   Ool xana-ni$_i$ dozulaarga ol$_i$ čaraš   apar-gan
                   boy wall-ACC paint.DS it   beautiful become-PERF
                   `The boy painted the wall and it became beautiful.'

Variable S/P based controllers are considerably less frequent than S/A based ones. A language celebrated for exhibiting such a controller of coordinate deletion is Dyirbal. Unlike in Warekena the controller of the elided subject may be not only an S (6a), or a P (6b) but also a derived S, via the antipassive (6c).

Dyirbal (Dixon 1972:67,130)

(6)   a.   Ba-yi   yaɾa-Ø   walma-nju   waynjdi-n
                   DEIC-ABS man-ABS get.up-TNS go.uphill-TNS
                   `The man got up and went up hill.'

b.   Ba-yi   yaɽa-Ø   ba-ŋgun   dugumbi-ɽu balga-n
            DEIC-ABS   man-ABS DEIC-ERG   woman-ERG hit-TNS
            badi-nju
            fall.down-TNS
            `The woman hit the man and (he) fell down.

c.   Ba-gul   yaɽa-gu   ba-la-n   dugumbi-Ø
            deic-DAT man-DAT DEIC-ABS   woman-ABS
            balga-ŋa-nju   badi-nju
            hit-ANTIPASS-TNS   fall.down-TNS
            `The woman hit the man and (she) fell down.

Again it is important to note that the elided referent in the second clause of (6b) could not be interpreted as coreferential with the A of the first clause, i.e. the woman. Such an interpretation is only possible if the first clause is an antipassive as in (6c).
        Turning from controllers to controllees, in many languages the controllee of infinitival complements of desiderative, phasall or manipulative verbs must be an invariable S/A This is the case in, for example, Hungarian as shown in (7).

Hungarian (Kenesei et al. 1998:33,35) **\$\$\$ CHECK; our Kenesei probably stolen \$\$\$**

(7)   a.   Peter   meg-probal   usz-nia
            Peter   PFX-try-3SG   swim-INF
            `Peter tries to swim.'

        b.   Anna meg-próbál-t-a   meg-tanul-ni   a   vers-et
            Anna   PFX-try-PAST-DEF.3SG PFX-learn-INF the poem-ACC
            `Anna tried to learn the poem.'

Hungarian lacks a productive passive, so there is no equivalent to the English *Anna tried to be loved* with the controllee as a derived S. An invariable S/P controllee is attested in the Ojm'akon dialect of the Tungusic language Even in the formation of internal relative clauses. Whereas all positions can be relativised in Even using an external relative clause strategy, internal relative clauses are confined to the relativisation of the S and P . The latter situation is reflected in the Om'akon dialect, as illustrated in (8a) and (8b).

Even: Ojm'akon dialect (Malchukov 1995:38,39)

(8)   a.   Beji-l   hör-če-wu-ten   emu-re-m
            Man-PL go-PERF.PART-ACC-3PL bring-NONFUT-1SG
            `I brought back the men who had left.'

        b.   [Asi-Ø   unta-l-bu   aj-ča-n]
            woman-NOM   shoe-PL-ACC mend-PERF.PART-3SG
            urke-le   desči-r

door-LOC   lie-NONFUT.3PL
The shoes that the woman mended are by the door.'

Variable controllees are widely attested, especially of the nominative/accusative type. A case in point is illustrated in (9) from Turkish in which the elided controllee of infinitival complements may be an S or A (9a) or derived S (9b) but not a P (9c).

Turkish (Knecht 1986:35,36) **$$$ CHECK $$$**

(9)   a.   Dilek [Cengiz-i   öp-mek]   isti-yor
             Dilek Cengi-ACC kiss-INF   want-PRG
             Dilek wants to kiss Cengiz

       b.   Dilek [parti-ye   davet-ed-il-mek]   isti-yor
             Dilek party-DAT   invite-PASS-INF   want-PRG
             Dilek wants to be invited to the party

       c.   *Dilek$_i$ [Cengiz Ø$_i$ öp-mek]   isti-yor
              Dilek Cengi   kiss-INF   want-PRG
              Dilek wants Cengiz to kiss her.

A variable controllee of the ergative type is attested in adverbial participle clauses in the Australian language Kalkatungu. The controllee may be an S, as in (10a) or a P as in (10b) but not an A. In order to form a participial clause of the relevant type with an underlying A as controllee, the clause needs to be antipassivized as shown in (10c).

Kalkatungu (Blake 1979:59-60) **$$$ CHECK; not in amsterdam $$$**

(10)   a.   Tuatu   pa-ji   marapal icaji iŋka-λ-iŋka-cin
             snake.ERG that.ERG   woman   bite   go-LIG-go-PART
             `The snake bit the woman as she was walking along.'

       b.   Kuntu caa   luŋa-na   ŋa-tu   la-njin-ka
             not   here   cry-PAST   I-ERG   hit-PART-Ø
             `He didn't cry when I hit him.'

       c.   ŋal   unuani njun-ku   nanji-ji-njin
             I.NOM   rejoice   you-DAT   see-ANTIPASS-PART
             `I'm happy to see you.'

The RRG 8-way typology of subjects is considerably reduced in FG and RT. As mentioned earlier, FG and RT recognise only variable GRs. Further, while controllers are distinguished from controllees, the distinction is not elevated to one of grammatical relations. Therefore strictly speaking subjects may be only of two types: either nominative/accusative or absolutive/ergative. However, unlike in RRG, in addition to a subject relation a language may have an object one.[7]

3.1.2 Direct objects
In FG, the criterion for recognizing a direct object in a language is analogous to that for recognizing a subject relation, namely the existence of restricted neutralization of semantic and/or pragmatic role distinctions (Dik 1997: 253f). The neutralization in this case involves, however, not the distinction between the two arguments of a transitive clause, the A and P but rather the two non-actor arguments of a ditransitive clause, the T (theme) and R (recipient). The diagnostic for the presence of such neutralization in a language is the existence of a so called productive dative-shift opposition or anti-dative-shift opposition. In dative-shift the distinction between the T and R is neutralized by virtue of the R acquiring (some of) the properties of the transitive P. By contrast, in the anti-dative it is the T rather than the R that acquires some of the properties of the transitive P. The distinction between the two is presented graphically in figure 4.

[insert figure 4]

Dative shift is thus predicated on a basic identification of the T with the P, nowadays sometimes referred to as indirective or indirect object alignment, antidative on the existence of a basic identification of the R with the P, i.e. so-called secundative alignment. English examples corresponding to the two possibilities are given in (11) and (12).

(11)   a.   John bought a book.
       b.   John sent a book to the girl.
       c.   John sent the girl a book.

(12)   a.   John bought a book.
       b.   John presented the girl with a book.
       c.   John presented a book to a girl.

The tying of the direct object relation to the presence of dative-shift or anti-dative shift in FG makes of the direct object a rather infrequent GR cross-linguistically.[8] What is significant though is that a GR in addition to the subject is recognized and that like the subject it is seen to be typologically non-uniform.
        RT, like FG, also allows for the presence of a direct object in a language. Although the criteria for recognising such a relation have not been explicated in Kibrik (1997; 2000), the fact that he refers to languages as being subject/object languages suggests that the presence of a subject, automatically entails the presence of an object. An RT object is thus definitely not the same as an FG one. It is also worth mentioning that Kibrik (2000:1415) entertains the possibility of languages having a third type of GR, namely an indirect object encompassing the recipient of a ditransitive verb and the experiencer of bivalent verbs such as `see' or `love'. Such a relation would not be in the spirit of an FG object.
        We have seen that the three models of grammar under discussion all offer a rich typology of GRs. A parameter yet to be considered is the strength of the recognised GRs.

3.2 The strength of GRs

The most common measure of the strength of a GR relates to the variety of semantic roles that it can bear. One reflection of this is the invariable vs. variable contrast discussed earlier. Since the semantic roles of invariable GRs are determined in the lexicon and are not susceptible to change, such GRs are by definition weaker than variable GRs which in turn may manifest semantic roles cross-cutting the Macro-roles of Actor and Undergoer. Another reflection of this measure of the strength of GRs is the actual variety of semantic roles accessible to the GR, or to put it more bluntly how far down the semantic role hierarchy a GR can go. Thus, for example, a subject which can be realized by more than one non-actor semantic role, say a patient and recipient will be stronger than one which can be realised only by a patient.

An alternative measure of the strength of a GR is the centrality of the GR in the grammar of a language. It is widely recognised that languages differ in the extent to which syntactic constructions are sensitive to a given GR. In some there are many such constructions, in others considerably fewer. It might therefore seem that a measure of the centrality of a GR in a grammar should be readily available. Yet this is not the case. To a large extent, developments of such a measure have been impeded by the lack of a unified approach to GRs. This, however, is something that has now emerged by and large from the three frameworks under discussion. It therefore seems opportune for us to attempt to outline the form that a measure of the centrality of a GR in a grammar should take. We will take as our point of departure the classification of constructions/syntactic phenomena which tend to be sensitive to GRs cross-linguistically. The discussion will be confined to GRs as recognised in all three frameworks, i.e. the variable GRs.

Within the functional-typological paradigm, arguably the most widely accepted means of classifying constructions has been in terms of the type of argumental properties that they are primarily sensitive to (see e.g. Keenan 1976; Schachter 1977; Cole et. al. 1980; Foley & van Valin 1984; Givon 1999).[9] The major distinction made is between constructions which are primary sensitive to the semantic role-properties of their arguments and those which are primarily sensitive to the pragmatic (reference)-properties of their arguments.[10] In the case of the most privileged syntactic argument, i.e. the subject, in most languages the role-oriented properties centre on the role of actor and forge an identification of the S and A. The constructions/phenomena most commonly viewed as actor oriented are: the addressee of imperatives; control of reflexives; control of elliptical arguments in infinitival complements; control of elliptical arguments in non-finite adverbial clauses (purpose); controllees of infinitival complements; controllees of non-finite adverbial clauses and certain types of fronting. Constructions which are typically considered as being pragmatically oriented, on the other hand, include: controllers and controllees of coreferential deletion across coordinate clauses or in clause chaining; accessibility to relativization and question formation; launching of floating quantifiers; clefting; possessor ascension; extraction in wh-questions. Given the view of GRs adopted in FG, RT and RRG as arising from the neutralization of semantic and/or pragmatic role distinctions, the strength of a GR may be seen to be a function of the extent to which essentially role-oriented constructions on the one hand, and essentially pragmatically oriented constructions on the other, are sensitive to the GR rather than to role or pragmatic factors. This is captured in (13).

(13)   a. The more role-dominated phenomena are actually associated with a variable
          GR (not-role dominated), the stronger the G

        b. The more pragmatically-dominated phenomena are restricted to a
          variable GR (not purely pragmatically dominated), the stronger the GR

There is no mention in (13) of which of the two types of constructions, the role-oriented or the pragmatically-oriented, are the more likely to evolve into GR-dominated ones. This is an important issue which, however, can only be resolved once the pragmatically oriented constructions are subdivided into those based on topicality and those based on focality. Topic oriented constructions in the main involve the omission, reduction or fronting of predictable information. Focus oriented constructions, on the other hand, highlight new or less predictable information be it by special prosodic, morphological or lexical marking or positioning or some combination of these factors.

  Generally speaking, languages exhibit less restrictions on foci than on topics. Topics tend to be human or at least animate, are more often than not agentive, are typically associated with activated referents and are generally rendered by NPs. Foci, by contrast, exhibit no such restrictions. In fact in many languages any element of the clause can constitute the clausal focus, even an element below the word level. Given the above, it is not surprising that topics exhibit a much closer association with GRs than foci. This is in particular so with respect to subjects. Subjects are much more often topics than foci. And crucially topics are very often subjects.[11] This suggests that topic-oriented constructions are much more likely to evolve into GR-sensitive ones than focus-oriented constructions are. In fact focus-oriented constructions may be argued to exhibit a particular reluctance to develop into GR-based ones. Note for example the rarity of languages in which the only element of the clause that can be questioned or clefted is the subject. A reason for this may be that there is no obvious motivation for reducing the range of constituents which may be involved in a construction from all those that may bear focus to just those that can function as subject. In the case of topic-based constructions such a reduction may be seen to be motivated by the fact that topics typically receive little or no phonological encoding. Consequently, restricting the range of such constructions from all possible topics to only a subset of them, i.e. those which function as subjects may be seen to aid ease of recoverability of the referent and thus facilitate processing. However, foci typically do not pose analogous recoverability problems since they are overt and often explicitly marked. Accordingly, there must be special reasons for reducing the scope of a construction from a focus based one to a subject based one.

  As for role-oriented constructions, they may be viewed as falling in between the topic- and focus-oriented ones. That role-oriented constructions are less likely to evolve into GR-sensitive ones than topic-based constructions is rather uncontroversial. This follows from the fact that semantic roles are more closely tied to the semantics of the predicate than are pragmatic-discourse roles. Accordingly, constructions based on say actorhood are not expected to be readily extendable to undergoers. The only domain where this may be relatively easy is intransitives, where the semantic role of the single argument is easily derivable from the semantics of the predicate (the invariable GR).

Constructions based on topicality, on the other hand, can be more easily conceived of as generalizing over the restricted set of the semantic roles they may be assigned to. There is, on the other hand, much less motivation for constructions based on focality to develop semantic role restrictions, given the fact that they are largely independent from them. This is de facto what needs to happen in order for focus based constructions to evolve into GR-based ones. As argued above such a development entails a reduction of the range of constituents which can be focalized within a construction for which there may be local but not cross-the board rationale.

In the light of the above, GRs may be expected to reflect a preference for topic-oriented constructions, followed by role-oriented constructions and finally focus-oriented constructions, as shown in (14).

(14)   topic-oriented > role-oriented > focus-oriented.

A weak GR would thus be one which is manifested in a small number of constructions, all being of the topic-oriented type. A GR of medium strength would be manifested in a somewhat higher number of constructions of both the topic-oriented and role-oriented type. And a strong GR would occur in a yet higher number of constructions of all three types, topic-oriented, role-oriented and focus oriented. This is depicted graphically in figure 5.

[insert figure 5]

An example of a language with a weak GR is the previously mentioned Northern Ostyak (Nikolaeva 1999a). A variable GR of the S/A-dS type is in evidence only in person agreement on the verb and in adverbial clauses built on the *-ti/ ( )um* participial. As shown in (15) below the implicit argument of the adverbial participial must be an S (15a) or A (15b) or a derived S via the passive (15c).

Northern Ostyak (Nikolaeva 1999a:48,49)

(15) a. O:pe-m$_i$ [Ø$_i$ xo:ll-E-t-al-na]   nu:ms-ə-s
         sister-1SG   cry-EP-NPP-3SG-LOC   think-EP-PAST.3SG
          `My sister was thinking when crying.'

$$$ CHECK 15b, probably not from 1999a, maybe 1999b ???$$$

   b. [Ø$_i$ tas-l   sawit-tal   saxat]   ittam jox-lal
            heard-3SG   graze-PART-3SG   when   this   people-3PL

      pa   Imi-Xili$_i$ us-lə-lli
      again   Imi-Xili   find-3SG-P
      `These people found Imi-Xili again when he was grazing his heard.'

   c. [Ø$_i$ tu:ta   xoj-na   ji-te:-mən]   śa:t-l
            here   who-LOC come-NPP-1DU   be.heard-NONPAST.3SG

`It is heard that somebody is coming to us.'
(literally: We are heard to be visited by somebody)

A host of other phenomena are role-dominated, i.e. they work in terms of an invariable S/A GR. These include: control of elliptical arguments in coordinate clauses (illustrated earlier in (6)), infinitival complements, non-finite adverbial clauses of purpose and converbial constructions; the addressee of imperatives; and the omitted elliptical arguments of infinitival complements, non-finite adverbial clauses and converbial clauses. A wide range of yet other phenomena exhibit no sensitivity to GRs at all be it invariable or variable; they apply equally well to any core argument. This is so with respect to the controller of the elided argument in the adverbial participial clauses illustrated in (15). Observe that in (15a) the controller is an S, in (15b) a P and in (15c) a derived S. But it could also be an A. The same applies to the elided coreferential argument in coordinate clauses. The examples given earlier in (3) all involve an elided P. But the elided argument could be an A or S or even a derived S via the passive, as in (16) below.

Northern Ostyak (Nikolaeva 1999a:50)

(16)   O:xsar$_i$ so:wər   we:l-ə−s   śa:lta   Ø$_i$ mojpar-na
        fox   hare   kill-EP-PAST.3SG   then   bear-LOC
        xul-na   ma-s-a
        fish-LOC   give-PAST-PASS.3SG
        `The fox killed the hare, then the bear gave it (the fox) some fish.'

Other syntactic phenomena which do not display sensitivity to a GR in Northern Ostyak are control of possessive reflexives, accessibility to relativization, the launching of floating quantifiers and the ability to be questioned.
        A considerably stronger variable GR is in evidence in the Tungusic language Udihe. The variable GR, again of the S/A-dS type, may be observed in person agreement, as the target of coreferential deletion in coordinations and as the controler of elliptical arguments of infinitival adverbial clauses, converbial clauses, same-subject switch reference and possessive reflexives. The last of these is particularly worth noting as it contrasts with the situation in Northern Ostyak in which control of possessive reflexives can be achieved by any argument and thus shows no sensitivity to GRs. Compare (17) from Northern Ostyak in which the house may be interpreted as being posessed by either the A (the father) or the P (the son) with (18a) from Udihe in which a P cannot be the possessor unless the clause is passivized, as in (18b).

Northern Ostyak (Nikolaeva 1999a:66)

(17)   a:śi   pox-ə-l   xo:t-ə-l-na   wa:n-s-ə-lli
        father son-3SG   house-EP-3SG-LOC   see-PAST-EP-SG.3SG
        `The father$_i$ saw his$_i$ son$_j$ in his $_{i/j}$ house.'

Udihe (Nikolaeva & Tolskaya 2001:777)

(18) a. Nua-ni   jagdugu-xi   ni-we   ise:-ni
          he-3SG   spectacles-ADJ   man-ACC   see.PAST-3SG
          zugdi-du-i
          house-DAT-REFL
          `He$_i$ saw a man$_j$ in spectacles in his$_{i/*j}$ house.'

     b. Nua-ni   abuga-du-i   daŋči-w-o:-ni
          He-3SG   father-DAT-REFL   curse-PASS-PAST-3SG
          `He$_i$ was cursed by his$_i$ father.'

The primarily role-dominated phenomena in Udihe are considerably reduced. They include control of elided coreferential arguments in coordinations and infinitival complements, the elided coreferential arguments of infinitival complements and the adressee of imperatives. And of the pragmatically oriented phenomena only three show no sensitivity to GRs, accessibility to relativization, the launching of floating quantifiers and accessibility to question formation. Note that all three phenomena are focus- as opposed to topic-oriented.

A yet stronger variable nominative/accusative GR is to be found in Turkish. Of the typical role-dominated phenomena only two remain primarily role dominated rather than falling within the purview of the variable GR, namely control of ellipitcal arguments of infinitival complements and the addressee of imperatives. The controllees of non-finite complements are GR-sensitive. This is illustrated in (19) on the basis of a type of raising construction where the raised argument must be an A or S, basic, as in (19a) or derived via the passive, as in (19b).

Turkish (Kornfilt 1997:$$$) $$$ CHECK $$$

(19) a. Demet   sen-I   Izmir-e   giti-ti   san-dɨ
          Demet   2SG-ACC   Izmir-DAT   go-PAST   think-PAST
          `Demet thought you went to Izmir.'

     b. Hikmet sen-I   tevkif   ed-il-di   san-dɨ
          Hikmet 2SG-ACC   arrest   PASS-PAST think-PAST
          `Hikmet thought you to have been arrested'.

As in Udihe, accessibility to relativization and question formation is not GR sensitive nor is the deleted coreferential argument in one type of coordination, namely with the coordinator –ve.

English may be seen as having an even stronger variable GR in that, unlike in all the other languages mentioned so far, the addressee of imperatives and the antecedent of a reflexive may be a derived S as in (20a) and (20b) respectively.

(20) a. Don't you be fooled by him!

     b. McGovern wasn't defeated by Nixon; he was defeated by himself.

Further, quantifier float which in the other languages is not diagnostic of GR-status, is restricted to the S, A or derived S. Nonetheless, there are still syntactic phenomena which apply indiscriminantly to all core arguments. These include control of emphatic reflexives, accessibility to relativization and question formation,

In Malagasy, in contrast to English and the other languages mentioned, accessibility to relativization and question formation is dependent on GR-hood. Only the S, A or derived S can be relativised or questioned. In fact all the types of syntactic phenomena discussed above are sensitive to GRs with the exception of control of the elided arguments of infinitival clauses which is role-dominated; the controllor can only be an S or A. Thus in terms of the measure of strength currently discussed, the GR of Malagasy qualifies as the strongest.

If we accept that a measure of the strength of a GR such as that outlined and illustrated above constitutes a potentially interesting typological parameter, the typology of GRs, in the case of the most priviledged syntactic argument, might look something like that in figure 6, where W stands for weak, M for medium and S for strong.

[insert figure 6]

It is by no means clear whether the three degrees of strength indicated in figure 7 can indeed be correlated with the GR-takeover of (some subset of) topic-oriented, role-oriented and focus-oriented constructions respectively, as captured earlier in the hierarchy in (14). However, even if other cut off points for labelling a GR weak, medium or strong prove to be more appropriate, it is unlikely that more distinctions than the three proposed will be found to be revealing.

The typologies of GRs elaborated in FG, RT and RRG, particularly if further qualified in terms of the strength of the posited GRs along the lines just outlined, allow for a very rich typology of languages based on GRs. What is of primary interest in this context is which of the logical possibilities stemming from the distinctions made actually do occur within languages and further which of the attested possibilities are the preferred as opposed to the dispreferred ones. It is to this that we now turn.

4. The typology of languages in terms of GRs

Since in all three frameworks GRs are not universal, the primary typological division of languages in terms of GRs that emerges is between languages that do and do not have GRs. Recall, however, that the line between the two types of languages is drawn somewhat differently in FG and RT as opposed to RRG. RRG makes a distinction between invariable and variable GRs while in FG and RT all GRs are variable ones. If we apply the finer grained RRG typology, we arrive at a three way distinction of languages with no GRs of any type, languages with only an invariable GR and languages with at least one variable GR.

The first group of languages does not appear to be very numerous, though future research may reveal many more instances. Some cases in point are: Achenese (Durie 1985), Archi (Kibrik 1997), Cayuga (Mithun 1991), Classical Tibetan (Andersen 1987),

Mandarin (Van Valin & La Polla 1997: 260-263, 662) Meithei (Chelliah 1997:93-), Mongsen (Coupe 2003, Nunggubuyu (Heath 1986), Riau Indonesian (Gill 1994) and Tsez (Comrie 2000).[12] In these languages the syntactic phenomena which are typically sensitive to at least an invariable GR are either absent, or role-driven or apply to all core arguments An example of a language in which a number of the controllers and controllees of syntactic constructions are purely role driven is Achenese. Archi and several other Dagestanian languages such as Godoberi, Lak, Dargwa are argued by Kibrik (1997) to be also of this type though with a different type of role-orientation. Moreover, in these Dagestanian languages the role orientation co-exists with a wide range of phenomena which are simply sensitive to core-argument status but do not distinguish between different types of arguments. Nunggubuyu in turn lacks productive counterparts to infinitival or other nonfinite complements or participles (Heath 1986: 395) as well as imperatives (pp. 386) which are simply one use of the future verb form (positive and negative). In addition reflexive/reciprocals (pp. 385) are intransitive derivatives not restricted to agents or actors. And verbal person marking which is the phenomenon most likely to forge an identification of the S/A or S/P works on a hierarchical basis and thus too cannot be viewed as identifying an invariable GR. In Cayuga (Mithun 1991) too due to the obligatory cross-referencing there is no omission of coreferential arguments be it in complement clauses or coordinations or clause chaining. By the same token the addressee of imperatives is always explicit. Moreover, there are no nominalizations or raising structures.

The second group of languages with only an invariable GR, by contrast is the most numerous. It is estimated that between 70-80% of the world's languages fall into this category. As there are two types of invariable GRs S/A and S/P, one would expect there to be two subgroups of languages, one containing those with an invariable S/A and the other with an invariable S/P. However, this is not quite the case. While there are languages in which the only invariable GR is of the S/A type, there are none attested in which the only invariable GR is of the S/P type (Van Valin & La Polla 1997:305).[13] As we have seen, languages may have invariable S/P controllers, as in Warekena (4) or controllees as in Even (7) in some constructions but these always co-exist with S/A based ones in other constructions. It is also worth noting that languages with only an invariable GR of the S/A type are very common. Those which have just invariable GRs but of both the S/A and S/P type are by contrast rare.

The third group of languages is the one with at least one variable GR. It is of primary interest to us as it is the only group with GRs as defined in all three frameworks. It is also the group with respect to which the analyses of GRs in the three frameworks are most divergent.

In FG the basic subdivision within this group is between languages which have just a subject and those with both a subject and direct object.[14] The former make up the majority of the languages in this group, as direct objects in the FG sense are quite infrequent. The languages with just a subject may display a nominative/accusative subject or an ergative/absolutive one. And theoretically both types of subject could be further classified in terms of whether they are weak, medium or strong. It needs to be noted though that it is somewhat unclear how a measure of strength such as that discussed in 3.2 should be applied to S/P subjects.[15] In the languages with both a subject and object, in contrast to those with just a subject, the subject can be only of the

nominative/accusative type. This is due to the fact that in languages with an S/P subject the FG criteria for objecthood are never met. Recall that in FG objects like subject are defined in terms of the neutralization of semantic role distinctions. The only candidate for objecthood in a language with an ergative/absolutive S/P subject is the A. There are, however, no syntactic constructions comparable to dative-shift or anti-dative-shift which lead to neutralization between the R of a ditransitive clause and the A of a transitive one corresponding to the neutralization between the R and P. There can thus be no objects in languages with an S/P subject. In languages with nominative/accusative subjects, on the other hand, direct objects are possible. The direct objects may be of the indirective type, defined by dative-shift or of the secundative type, defined by anti-dative shift. The former type of objects appear to be more common, though quite a few languages are in fact open to either analysis, as is English (see e.g., Dryer 1986: 821).

      In RT the typology of the languages with variable GRs is quite different than in FG. First of all it seems that the presence of a subject automatically entails the presence of an object. Accordingly, there are many more languages with both a subject and object in RT than in FG. And secondly, while the same two alignments of subjects are recognized as in FG, unlike in FG, languages with a ergative/absolutive subject may have an object, be it one corresponding to the A rather than the P. Objects, therefore differ semantically much more substantially than in FG. As in FG, the subjects, in either alignment, may be further qualified in terms of their strength.

      Finally in RRG recall that there is no object GR just a subject one. The languages with a variable GR fall into three types: those with a variable S/A-dS GR, those with a variable S/P-dS GR and those with both variable GRs, i.e. S/A-dS and S/P-dS ones. The first two types of languages overlap more-or less completely with the corresponding types in RT and FG (with and without a direct object in the case of the S/A type). Languages of the S/A-dS type are by far the more numerous of the two. Examples of languages belonging to the second type include the previously mentioned Dyirbal and Kalkatungu as well as the Austronesian languages Selayarese (Mithun 1991) and Karao (Brainard 1997). The third possibility of a language in which there is a variable GR of both the S/A-dS and S/P /dS types is not something that is directly catered for in either FG or RT. This is in a sense not surprising as there appears to be no obvious motivation for the presence in a language of two variable GRs both involving neutralization between the A & P. Observe that both a productive passive and antipassive allow for the S/A and P and S/P and A respectively to participate in syntactic rules. Consequently the addition of a passive to a language which already has an antipassive or vice versa does not increase the range of semantic roles that are accessible to the privileges syntactic argument. Nonetheless, there are languages which qualify as having both a variable S/A-dS GR and a variable S/P-dS GR. Van Valin & La Polla (1997: 282-5) mention only two, both Mayan, namely Jacaltec and Tzutujil. We can add Mam (England 1983) and Quiche (Campbell 2000), which are also Mayan. This is not to say that only these languages have both a passive and an antipassive construction. Both constructions are to be found also in, for example, Kapampangan (Mithun 1994), West Greenlandic (Bitner & Hale: 569), and Chukchee (Dunn 1999). However, typically in languages which have both a passive and an antipassive either the passive or the anti-passive is lexical and/or introduces semantic distinctions or does not feed into syntactic constructions and thus is not diagnostic of the existence of a second variable GR. In the Mayan languages mentioned above, however,

both the passive and antipassive appear to be productive and do feed into syntactic rules. It is important to note that the S/A-dS GR is involved in topic-oriented phenomena such as coreferential deletion, the S/P-dS GR in focus/oriented processes, such as extractions of wh-questions, relativization and clefting.

The three subtypes of languages with a variable GR may be further subdivided along two different lines. The first is in terms of the strength of the variable GRs, as in FG and RT. The second is with regard to the alignment of the invariable GRs that the variable ones co-occur with in a language. In relation to the second subdivision, the most common pattern is S/A & S/A-dS.

Having established how the typologies of GRs developed in the three frameworks transplant onto languages, we are finally in a position to consider how the languages of ENCA pattern with respect to these typologies.

5. Languages of Europe and north and central Asia

Whereas the syntax of many of the languages of Europe has been explored in some detail, the same cannot be said for most of the languages of north and central Asia. Therefore the remarks below pertaining to the patterning and nature of GRs in these languages must be treated with some caution.

The first point to note is that on the fringe of the ENCA area, in the south-west there are languages which appear to lack GRs of any type, i.e. do not have even an invariable GR. These are the Dagestanian languages mentioned earlier and discussed by Kibrik (1997). This fact is significant due to the apparent cross-linguistic rarity of such languages. The second point is that in the ENCA area there is an abundance of languages in which the only GRs are of the invariable type. The majority of the languages in question appear to have just a single invariable S/A GR. This seems to be the case in the Uralic languages Finnish, Livonian, Saami, Hungarian, Mari, Udmurt, Erzya Mordvin and Nenets as well as in the Tungusic language Xakas, the Mongolic languages Dagur, Bonan, Santa, Ordos and in the isolate Gilyak. Considerably fewer languages have two invariable GRs, i.e. both an S/A and an S/P. This is so, for example, in Even, Basque, and at least some of the Northwest Caucasian languages such as Abkhaz, Adyghe and Abaza all of which manifest at least S/P based cross-referencing coupled with S/A based control-structures.

Turning to variable GRs, these are well represented in ENCA, though their distribution is geographically skewed. The overwhelming majority of the variable GRs in the area relating to the most privileged syntactic argument are of the S/A-dS type. Such a variable GR occurs in virtually all the Indo-European languages in the area, in many Turkic languages (e.g. Turkish, Tatar, Karachay-Balkar, Tuva), a few Uralic (e.g. Ostyak, Vogul), some Tungusic (e.g Evenki, Udihe), Mongolic (e.g. Khalka) and even Chukotko-Kamchatkan (e.g. Itelmen) as well as the isolates Ket and Burushaski. The only instances of a variable S/P-dS are found in the Chukotko-Kamchatkan languages Koryak and Chukchee. In both languages an S/P-dS GR is in evidence in participles functioning as relative clauses; an S or P may be relativised freely while an A needs to first be antipassivized. In Koryak this seems to hold for both positive and negative participles while in Chukchee only for negative ones (Comrie 1979:239, Dunn

1999:216). [16] Languages with both a variable S/A-dS and S/P-dS are not attested in the area. Itelmen and potentially Koryak (Ard 1978) as well as Burushaski (Wilson 1996:43) appear to have both a passive and an antipassive, but the passives in the first two languages and the antipassive in the third seem to be more lexical than syntactic.

The variable S/A-dS GRs in ENCA differ considerably with respect to their strength. The strongest variable GRs are arguably in Germanic, and in particular in English followed by those in Romance and then Slavonic as well as in Turkish. By contrast in the few Uralic, Mongolic and Tungusic languages which actually have a variable GR, the GR is quite weak. We have seen this in the Ob-Ugric language Northern Ostyak. The same holds for another Ob-Ugric language, Vogul (Kulonen 1989), the Tungusic language Evenki (Nedjalkov 1997) and Khalka Mongolian (Binnick 1979). GRs of medium strength are to be found among the Turkic languages such as Tuva and Karachay-Balkar as well as in the Tungusic language Udihe. The two instances of a variable S/P-dS mentioned above, i.e. in Koryak and Chukchee both qualify as quite weak. Control phenomena (e.g. desideratives, gerundials, supines) in both languages work in terms of an invariable S/A, as does reflexivization and due to the presence of cross-reference of S, A and P there is little actual argument omission.

The remaining variable GR is the object in the FG sense of the term. Clear instances of a T/P-dP or potentially a R/P-dP object occur only in Germanic, more specifically in English, Dutch and Danish. Alternations in the marking of a recipient reminiscent of dative-shift or anti-dative shift are also to be found in several miscellaneous languages such as Northern Ostyak (Nikolaeva 1999b), Kolyma Yukaghir (Maslova1998 :118, 430), Gilyak (Grudzeva 1998:42) and Burushaski (Wilson 1996:35). However, in all four languages the alternations in question appear to be much more restricted than in English. And, significantly, the difference in the marking of the recipient does not appear to be accompanied by a change in its syntactic behaviour. This last statement needs to be somewhat qualified for Northern Ostyak in which the alternation in marking involves agreement and encompasses not only ditransitive clauses but also patients in transitive clauses. The presence vs. absence of agreement is argued by Nikolaeva (1999b) to be accompanied by changes in syntactic behaviour. Nonetheless, Nikolaeva attributes this to changes in information structure rather than to changes in grammatical relations. Thus even Northern Ostyak does not qualify for having an object relation in the FG sense of the term.

The above considerations suggest that the area of ENCA exhibits considerable diversity with respect to GRs. There are languages with a strong variable GR and even with two variable GRs, if the FG approach to objects is adopted, languages with only an invariable GR and languages with no GRs of any type. Further, this distribution of GRs has a geographical dimension, the likelihood of a language being rich in GRs declines as we move from west to east. The languages with the richest and strongest GRs are all in western Europe, while the majority of those in northern and central Asia have at most only an invariable GR and some of those in the Caucusus not even that. The west-east cline with respect to GRs correlates with genetic groupings. All the Indo-European languages of Europe have a variable GR. The non-Indo-European ones such as Basque, Hungarian, Finnish, Livonian, Saami , by contrast, have only an invariable GR. This trend for only an invariable GR persists in the Uralic languages of northern Asia and the Mongolic and Tungusic ones of central Asia. The Turkic are less consistent, some having

a variable GR others only an invariable GR. And the languages of the Caucuses are even less consistent. Georgian evinces a variable GR, Abkhaz an invariable one and Archi no GR at all.

In all, the dominant pattern outside of Europe, i.e. in NCA is for languages to have only an invariable GR. Thus to the typological characteristics of this area such as agglutinative morphology, rich case marking, quirky marking of the S/A, differential marking of the P and switch-reference marking we may add absence of a variable GR and presence of an invariable GR.

6. Conclusions

We have reviewed the typologies of GRs and the languages manifesting the GRs elaborated in FG, RT and RRG and applied them to the languages of ENCA. We have seen that these typologies converge in distinguishing the languages of Europe from those of NCA with respect to GRs; the former are much richer in GRs than the latter. While in Europe the presence of a variable GR is the norm, in NCA it is rather the exception. This finding is a direct result of the approach to GRs adopted in the three frameworks that we discussed. It could not have emerged from a more traditional view of GRs such as that commonly used in the functional-typological literature of the last three decades or so. Under this more common view the languages of Europe and those of NCA would be seen as both manifesting nominative/accusative subjects. The fact that the subjects in the former are variable and those in the latter are not would simply go unnoticed. By the same token so would the need of elaborating fine tuned typologies of morpho-syntactic phenomena not determined by variable GRs for which the languages of NCA so clearly testify. This need is currently being addressed by scholars well versed with the languages of the area such as Kibrik. Only these finer grained typologies will ultimately reveal the full extent of the differences pertaining to GRs among the languages of ENCA that we have here merely suggested.

Abbreviations

1	First person
3	Third person
ABS	Absolutive
ACC	Accusative
ADJ	Adjectival
ANTIPASS	Anti-passive
AUX	Auxiliary verb
CONV	Converb **($$$??? $$$)**
DAT	Dative
DEIC	Deictic
DS	Different Subject
DU	Dual
EP	Epenthetic

ERG	Ergative
IMPERF	Imperfective
INF	Infinitive
LIG	Ligature **($$$??? $$$ the –λ in 10a, maybe gloss as EP???)**
LOC	Locative
NOM	Nominative
NONFUT	Non-future
NONPAST	Non-past
NPP	Non-past participle
PART	Participle **($$$??? $$$ from 15b)**
PASS	Passive
PAST	Past
PERF	Perfective
PL	Plural
PFX	Prefix
PRES	Present
PRG	**($$$??? $$$ from 9a/b/c)**
REFL	Reflexive
SG	Singular
SS	Same Subject
SFX	Suffix
TNS	Tense

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[1] Strictly speaking Kibrik does not use the term neutralization but rather amalgamation. What he calls grammatical relations are the result of the analgamation of semantic role and flow [=pragmatic] dimensions.

[2] For a fuller acount of Relational Grammar see Blake (1990).

[3] Van Valin & La Polla (1997) actually use the terms controller and pivot rather than controller and controlee but as the term pivot is used somewhat differently by Kibrik (1997), we have opted for the more neutral term controllee.

[4] It is important to note that an invariable GR in RRG is a syntactic not a semantic relation, since it always cross-cuts the boundaries of macro-roles. In addition to invariable GRs, RRG recognises semantic controllers and controllees, but we will not be considering these here.

[5] The variable vs. invariable GR opposition is comparable to final vs. intial subjects in Relational Grammar and to some extent VP-external vs. VP-internal subject in Chomskian generative grammar.

[6] This restriction pertains only to third person referents. First and second person referents are cross-referenced on the verb. Therefore, there no deletion is involved.

[7] Van Valin & La Polla (1997: 285, 352) see no need for positing a direct object relation as they argue that all phenomena traditionally dealt with in terms of such a relation can be dealt with reference to the macro-role of Undergoer and the concept of core argument.

[8] Some cross-linguistic data on the presence of dative shift is provided in Siewierska (1998) and Haspelmath (2005), neither of whom, however, make a systematic distinction between dative-shift and anti-dative- shift.

[9] An interesting alternative classifcation of some of the same constructions within a generative context is offered by Davies & Dubinsky (2001).

[10] The qualification "primarily" is crucial here since we are not discussing strict role-dominance as would be the case in languages which consistently treat the intransitive S in two different ways depending on whether it is an actor or undergoer but rather syntactic process which are likely to have arisen diachronically from role dominance and subsequently generalized them.

[11] While there is also a relationship between the direct object and focus, unlike that between subject and topic, it is unidirectional; direct objects are frequently focal, but the focus is much less frequently the direct object by virtue of the fact that intransitive clauses lack direct objects and even in transitive ones the focus may fall on the verb or some other constituent.

[12] Note that these languages differ widely in the genetic and areal sense.

[13] It is possible though that some of the Dagestanian languages treated by Kibrik as being purely role oriented on an ergative/absolutive basis may on closer inspection display some constructions which forge an identification of the S & P as opposed to the A irrespective of the actual semantic roles involved.

[14] The existence of a direct object is taken to be predicated on the existence of a subject. Therefore the possibility of languages with direct objects but no subjects is ruled out.

[15] It might be the case that variable S/P subjects are primarily focused- as opposed to topic-based which would require reversing the order of the three types of constructions in the hierarchy in (14) and of course identifying role-based constructions appropriate for the S/P rather than the S/A.

[16] Several other languages such as Bezhta (Kibrik 2001) have an antipassive construction but the constructions are not productive and/or do not feed into syntactic rules and consequently do not identify a variable S/P-dS.