

Ditransitive Constructions: Towards a new Role and Reference Grammar account?

MARTIN HASPELMATH

Max-Planck-Institut für evolutionäre Anthropologie, Leipzig

In this paper, I will examine the treatment of ditransitive constructions in Role and Reference Grammar and compare it to the perspective on ditransitives that I have developed in earlier work (Haspelmath 2005a, 2007a), as well as to some other formal grammatical frameworks. I will conclude by proposing a fairly radical revision of the standard treatment of ditransitive constructions in RRG (Guerrero & Van Valin 2004, Van Valin 2007).

1. Some foundational principles for syntactic theorizing

I have long been a sympathizer of Role and Reference Grammar (RRG), in particular because it adopts three foundational principles of syntactic theorizing that I regard as extremely important and that have been neglected in most other formal syntactic approaches:

(i) **Non-apriorism:** This principle says that descriptive concepts should not be selected a priori, but should be determined separately for each language on the basis of language-internal evidence (cf. Croft 2001, Haspelmath 2007b, Frajzyngier 2006). This principle is not very prominent in writings on RRG, but Van Valin (2006) stated very clearly at the beginning of a plenary conference presentation: "RRG is a non-aprioristic theory".

(ii) **Typological adequacy:** This principle says that the theoretical approach should be applicable to any language and not be biased toward individual languages such as English, German, Lezgian or Lakhota. This principle has been prominent in RRG since its inception and is perhaps the main reason why RRG looks so different from other mainstream formal theories such as Minimalism, LFG or HPSG.

(iii) **Semantic-pragmatic motivation:** It is recognized in RRG that syntax cannot be understood separately from semantics and pragmatics, because to a very large extent it is semantically and/or pragmatically motivated.

However, there are also two principles of RRG that are problematic and that I will argue should be reconsidered:

(iv) **Nonautonomy of syntax:** Syntax is not autonomous, and semantic and syntactic statements can be mixed freely. The principle has not been formulated in this way, but as we will see, RRG practice sometimes shows that a version of it is assumed.

(v) **Descriptive simplicity:** An optimal (semanto-)syntactic framework should allow linguists to formulate very simple rules. Again, I am not aware of an explicit statement of this principle in the RRG literature, but it is clear from many of the arguments for particular analyses that such a principle is often assumed, as it is in generative linguistics.¹

Finally, I want to argue against a principle that would probably not be defended by anyone:

¹ In a personal communication, Robert Van Valin confirms this: "RRG has always striven for the simplest, most general analyses possible with as little stipulation as possible."

(vi) **Passive Privilege:** Passivization is more important than other behavioural properties for the organization of syntax. We will see below that apparently something like this has been assumed.

2. Ditransitive constructions

Before going on to discuss how various grammatical frameworks deal with ditransitive constructions, I introduce here a few concepts that are crucial to my own understanding of the relevant range of phenomena.

2.1. Delimitation

Ditransitive constructions are defined here as three-argument constructions with an actor, a theme, and a "proto-recipient" (Primus 1999), i.e. an argument that is similar to a recipient and occurs in a three-place construction. Proto-recipients include the following more specific roles: recipient-possessor (with 'give', 'hand', 'donate'), goal-possessor (with 'bring', 'send'), addressee-listener (with 'tell', 'explain'), and addressee-viewer (with 'show'), as well as other closely related roles.

Not included in the category of ditransitive constructions are actor-theme-location patterns of the 'load/spray' type. Thus, following common usage in the literature, *ditransitive* is narrower than *three-place*.

The phenomena that are of interest here are various coding properties and behavioral properties of the theme argument (T) and the recipient argument (R), as well as alternations such as the Dative Alternation in English, illustrated in (1a-b).

(1) a. Prepositional Dative Construction:
Pedro gave Aisha (R) his e-mail address (T).

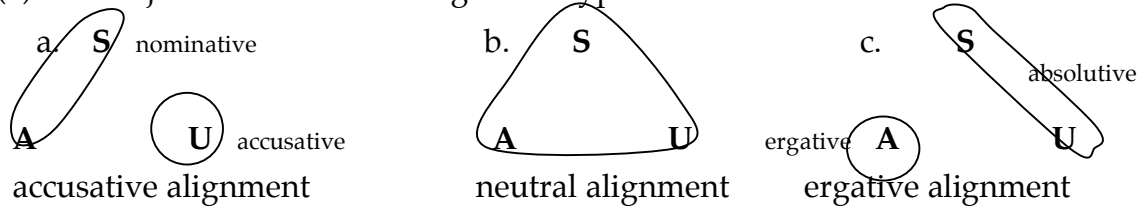
b. Double-Object Construction:
Pedro gave his e-mail address (T) to Aisha (R).

2.2. The three major alignment types

I start from the observation that in studying ditransitive constructions across languages, it is helpful to distinguish three main alignment types, analogous to the three well-known monotransitive alignment types (cf. Haspelmath 2005a, Siewierska 2004:57-63).

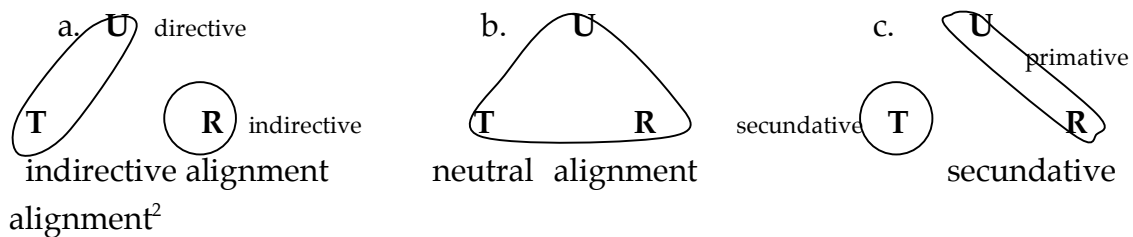
The picture that is shown in (2) has become standard textbook wisdom for two-place transitive constructions. If we use the well-known hyperroles S (single argument of intransitive verb), A (actor, agent-like argument of transitive verb) and U (undergoer, patient-like argument of transitive verb), we can say that if S and A are treated alike as opposed to U, we get **accusative alignment** (as in 2a); if all three are treated alike, we get **neutral alignment** (as in 2b); and if S and U are treated alike as opposed to A, we get **ergative alignment** (as in 2c).

(2) The major monotransitive alignment types



Now as Blansitt (1984) and Dryer (1986) first pointed out (see also Croft (1990:100-108), Dryer 2007), the relationship between the two object arguments in ditransitive clauses can be conceptualized in exactly the same way. The hyperroles in ditransitive clauses are R (recipient-like argument, or proto-recipient) and T (theme-like argument). Depending on whether it is T or R that is treated like the monotransitive U, we get two different non-neutral alignment patterns and a neutral pattern, shown in (3a-c). In Dryer's (1986) terminology, when T is treated like the monotransitive U, we have a **direct-object/indirect-object** distinction. Renaming it to **directive/indirective**, as in (3a), makes the parallel to monotransitive alignment even clearer. And when R is treated like the monotransitive U, we have a **primary-object/secondary-object** distinction. Again, for terminological convenience this has been renamed to **primative/secundative** in (3c).

(3) The major ditransitive alignment types



These alignment types are relevant for any morphosyntactic pattern that could distinguish the arguments, but for expository convenience the following examples just show these alignment types as expressed in flagging, i.e. case and adpositional marking.

(i) indirective alignment: T and U show accusative case

(4) German

- a. *Sankt Georg (A) tötete den Drachen_{ACC} (U).*
'St. George killed the dragon.'
- b. *Sankt Martin (A) gab dem Bettler_{DAT} (R) seinen Mantel_{ACC} (T).*
'St. Martin gave the beggar his cloak.'

(ii) neutral alignment: U, T and R show accusative case

² Note that the alignment type is called *secundative*, after the secondary object (not *primative*), because the *secundative* argument is the special case (this is analogous to the terms *accusative alignment* and *ergative alignment*). See also Van Valin (2005:127), where it is noted that the term "primary object language" creates problems.

- (5) Martuthunira (Pama-Nyungan; Dench 1995: 156, 67)
- a. *Ngayu nhawu-lha kayarra-a tharratal-yu (U).*
 I.NOM see-PST two bird(sp.)-ACC
 'I saw two *tharratal* birds.'
- b. *Ngunhu kanyara ngurnu jinkarn-ku (T) yungku-lha*
 that.NOM man that.ACC stick-ACC give-PST
ngurnula-ngu-u mimi-i (R).
 that.DEF-GEN-ACC uncle-ACC
 'That man gave his uncle the digging stick.'

(iii) secundative alignment: only T shows a preposition

- (6) Yoruba (Benue-Congo; Rowlands 1969:21)
- a. *ó pa mí (U)*
 he kill me
 'He killed me.'
- b. *ó fún mí (R) l' ówó (T)*
 he give me SEC money
 'He gave me money.'

3. Some other approaches to ditransitive constructions

I will now look at a few formal syntactic frameworks and their way of dealing with ditransitive constructions, as a prelude to my discussion of Role and Reference Grammar's approach in the subsequent sections.

3.1. Relational Grammar

Relational Grammar (Perlmutter 1980, Blake 1990), an approach that is no longer widely practiced but that was highly influential in the 1970s and 1980s, was especially concerned with alternations such as the English Dative Alternation. This was analyzed in a way analogous to the passive alternation. Relational Grammar assumed the three core grammatical relations "1" (subject), "2" (direct object), and "3" (indirect object), as shown in (7) and (8) below the core arguments.

(7) *Pedro gave his e-mail address to Aisha.*
 1 2 3

(8) *Pedro gave Aisha his e-mail address.*
 1 3 2 (initial)
 1 2 Chômeur (final)

The "dative-shifted" form of the alternation in (8) is described by the operation of 3-to-2 Advancement, which changes the grammatical relation of the recipient *Aisha* from 3 at the underlying ("initial") stratum to 2 at the surface ("final") stratum. Since each grammatical relation can occur only once per clause, the former 2 (the theme *his e-mail address*) is turned into a *chômeur*, a special grammatical relation for a noun phrase with an underlying core relation that was ousted by an advancement process. The parallel with the

passive constructions shown in (9)-(10): Passivization is analyzed as 2-to-1 Advancement, and the agent phrase is a *chômeur*.

(9) *Aisha criticized Pedro.*
 1 2

(10) *Pedro was criticized by Aisha.*
 2 1 (initial)
 1 Chômeur (final)

Problems with this approach became apparent soon. One problem is that the system consisting of the universal core relations 1, 2, 3 and allowing no doubling of grammatical relations cannot handle cases with neutral alignment, where the recipient and the theme arguments have the same syntactic properties. Gary & Keenan (1977) cited the example of the Bantu language Kinyarwanda, which they claimed must be analyzed as having two (direct) objects. For the particular case of Kinyarwanda, Dryer (1983) claimed that there are some minor differences between the recipient and the theme object after all, so that the Relational Grammar account would still be viable. However, it is unclear how easily this solution can be generalized.

Another problem, highlighted by Dryer (1986) is the fact that cases of secundative alignment can be handled only by obligatory 3-2 Advancement, as proposed, for instance, by Aissen (1983, 1987) for Tzotzil, a Mayan language of Mexico. This is as if one were to handle ergativity by obligatory passivization, an approach that was widespread in the 19th century, but does not seem acceptable anymore. To address this issue, Dryer (1986) introduced the primary/secondary object distinction, but without abandoning the primacy of Relational Grammar's 2/3 contrast. It was only in later work, starting with Croft (1990:100-108), that the secondary/primary contrast was seen as fully parallel to and on an equal footing with the indirect/direct contrast.

3.2. Functional Grammar

Functional Grammar (Dik 1989, 1997) is a monostratal theory that is closer to Role and Reference Grammar in its basic architecture, but its Semantic Functions correspond fairly closely to Relational Grammar's initial stratum, while FG's Syntactic Functions correspond to Relational Grammar's final stratum. Each argument is assigned a Semantic Function, and an argument may additionally be assigned one of the two Syntactic Functions Subject and Object. Corresponding to Relational Grammar's initial 1, 2 and 3, we have Agent, Patient and Recipient, and corresponding to Relational Grammar's final 1 and 2, we have Subject and Object. Corresponding to the *chômeur*, Functional Grammar has Agent and Patient arguments without a Syntactic Function. This is illustrated for passivization in (11)-(12), and for the Dative Alternation in (13)-(14).

(11) *Aisha criticized Pedro.*
 Ag Pat
 Subj Obj

- (12) *Pedro was criticized by Aisha.*
Pat **Ag**
Subj
- (13) *Pedro gave his e-mail address to Aisha.*
Ag **Pat** **Rec**
Subj **Obj**
- (14) *Pedro gave Aisha his e-mail address.*
Ag **Rec** **Pat**
Subj **Obj**

This system avoids the choice between (13) and (14) as the underlying structure that was a problem for Relational Grammar (as also discussed by Dryer 1986), because neither is more "basic" than the other. But Functional Grammar has the same problems as Relational Grammar with neutral ditransitive alignment as in Kinyarwanda, and it also has the same problems with secundative alignment. Interestingly, the solutions offered were quite parallel: Where Relational Grammar had to assume obligatory 3-to-2 Advancement, Dik (1989:240-241; 1997:282-289) had to assume FG's counterpart of this, obligatory Object assignment. This is completely against the spirit of Dik's Syntactic Functions, which are supposed to be relevant only when an alternation exists (i.e. Subject assignment is supposed to be restricted to languages with passivization, and Object assignment is supposed to be restricted to languages with a dative alternation; see also Siewierska 1998).³

3.3. Lexical Decomposition Grammar

Lexical Decomposition Grammar (Wunderlich 1997, 2006) is another ambitious attempt at accounting for the properties of verbal arguments in a systematic way from a cross-linguistic perspective. LDG operates with grammatical-relations features on arguments, as illustrated in the argument structure of German *töten* 'kill' in (15). This consists of the decomposition on the right hand side ('x acts and thereby y comes to be dead'), and the two arguments marked by lambdas, annotated by the features [\pm hr] ("there is a higher role/there is no higher role") and [\pm lr] ("there is a lower role/there is no lower role"). The feature [$+$ hr] corresponds roughly to Role and Reference Grammar's undergoer, and [$+$ lr] corresponds to actor (Wunderlich 2006:65).

- (15) *töten* λy λx {ACT(x) & BECOME DEAD(y)}
 $+$ hr $-$ hr
 $-$ lr $+$ lr
 (dir. object) (subject)

In LDG, cases also have features of the same type, and they must match the features of the arguments. Nominative/absolute case has the feature specification [] (i.e. complete underspecification), accusative is [$+$ hr], and ergative is [$+$ lr]. If a language has an accusative and a nominative/absolute, accusative must go on the direct object and nominative/absolute on the

³ Functional Grammar, like Relational Grammar, also has a problem with ergative alignment, and interestingly, Dik (1997:284-289) suggests a similar solution to ergativity: It could be explained (diachronically) by obligatory passivization.

subject, because otherwise the features do not match. If, however, a language has an ergative and a nominative/absolutive, ergative must go on the subject and nominative/absolutive on the subject. Thus, like RRG's Actor/Undergoer system, LDG's feature system is designed to account both for accusative and for ergative alignment. In this regard, LDG and RRG are clearly superior to Relational Grammar and Functional Grammar.

Now what happens in ditransitive constructions? Consider German *geben* 'give' in (16). Here the decomposition is 'x acts and thereby y comes to possess z'), and the three arguments marked by lambdas are shown in (16) as well (Wunderlich 2006:113):

(16) <i>geben</i> :	λz	λy	λx	{ACT(x) & BECOME POSS(y,z)}
	+hr	+hr	-hr	
	-lr	+lr	+lr	
	(dir. object)	(ind. object)	(subject)	

The indirect object is between the subject and the direct object in the hierarchy of roles, so it gets both the feature [+hr] (because the subject has a higher role) and [+lr] (because the direct object has a lower role). If it is assumed that the dative case has the feature specification [+hr, +lr] (more marked, corresponding to the fact that typically the dative case is morphologically more marked than the accusative or ergative), the linking between the cases and the arguments works: While both nominative and accusative would be able to unify with the indirect object's [+hr, +lr], the dative takes precedence because it is the more specific case.⁴

LDG has the same problems as Relational Grammar and FG with neutral alignment, but Wunderlich does not discuss such cases. However, he does discuss secundative alignment, and unfortunately, his elegant system becomes much less neat here. In (17), we see Wunderlich's lexical entry for a verb such as Yoruba *fún* 'give'. The feature [\pm hr], which distinguishes between the subject and the objects, is distributed in the same way, but instead of the feature [\pm lr], a new feature [\pm ho] ("there is a higher object/there is no higher object") is used to distinguish between the two objects.

(17) <i>fún</i> :	λz	λy	λx	{ACT(x) & BECOME POSS(y,z)}
	+hr	+hr	-hr	
	+ho	-ho		
	(sec. object)	(prim. object)	subject	

This is inelegant, because the secundative construction needs new machinery, while the indirective construction can be described with the same machinery that is independently needed to account for the accusative/ergative contrast. Moreover, the system cannot handle languages with ergative monotransitive alignment and secundative ditransitive alignment (Wunderlich 2006:137). Apparently the fact that European languages overwhelmingly show the

⁴ Interestingly, LDG's treatment of the dative is the exact opposite of RRG's, where the dative is considered the default case (Van Valin 2005:110). For LDG, an important further consideration is that the dative also tends to have the most specific overt marking, compared to nominative/absolutive (which are generally zero-coded) and accusative/ergative (which are at least sometimes zero-coded), so that overt coding ("formal markedness") corresponds to a doubly positive feature specification ("functional markedness"). (This is of no concern to RRG, which argues that causee marking by dative case supports the view of the dative as the default case; Van Valin & LaPolla 1997:§9.2.2.)

indirective construction has influenced the design of the theory.

4. Role and Reference Grammar

Readers of this volume will by and large be familiar with the main features of Role and Reference Grammar, so this overview can be brief.

4.1. Argument structures

In RRG, the argument structures are determined by possible Logical Structures, which are seen as properties of the human conceptual system. Table 1 shows the well-known list of possible Logical Structures according to the RRG system, with each Logical Structure corresponding to a basic verb class.

Verb Class	Logical Structure
STATE	predicate' (x) or (x,y)
ACTIVITY	do' (x, [predicate' (x) or (x, y)])
ACHIEVEMENT	INGR predicate' (x) or (x,y), or INGR do' (x, [predicate' (x) or (x, y)])
SEMELFACTIVE	SEML predicate' (x) or (x,y), or SEML do' (x, [predicate' (x) or (x, y)])
ACCOMPLISHMENT	BECOME predicate' (x) or (x,y), or BECOME do' (x, [predicate' (x) or (x, y)])
ACTIVE ACCOMPLISHMENT	do' (x, [predicate' ₁ (x, (y))]) & BECOME predicate' ₂ (z, x) or (y)
CAUSATIVE	α CAUSE β, where α, β are LSs of any type

Table 1: Lexical representation for Aktionsart classes (from Van Valin 2007)

All ditransitive predicates (in the sense of §2.1 above) are regarded as having a Logical Structure of the type in (18), where an agent x acts to cause a recipient y to be in some predicate relation to the theme z .

$$(18) \quad [\mathbf{do}'(x, \emptyset)] \text{ CAUSE } [\text{BECOME } \mathbf{predicate}'(y, z)]$$

In the case of transfer verbs, the predicate is **have'**, and for the sake of simplicity, we can limit ourselves to transfer verbs in this article. For mental ditransitive verbs like 'show', where the predicate would not be **have'**, the analysis would be basically the same.

4.2. Coding and alternations

In English, there are two possibilities for realizing this logical Structure. Most straightforwardly, the theme can become Undergoer, following the universal Actor-Undergoer Hierarchy in Figure 1. According to this hierarchy, the theme (the second argument (z) of the **predicate'** in (18)) is "less marked" (i.e. universally preferred) as Undergoer than the recipient (the first argument of the **predicate'** in (18)).

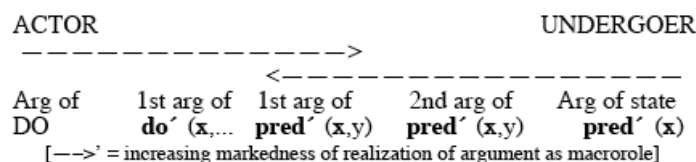


Figure 1: The Actor-Undergoer Hierarchy

This "default" choice of Undergoer yields the English Prepositional Dative Construction (*Pat gave the book to Kim*). The constituent structure, the Logical Structure and the linking to Actor and Undergoer are shown in Figure 2 (from Van Valin 2007). The choice of the preposition *to* for the recipient also follows a fairly general rule for English *to* (discussed in Van Valin & LaPolta 1997:376-377, Van Valin 2005:113).

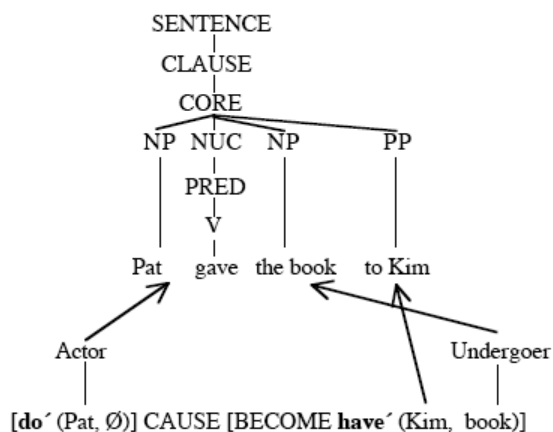


Figure 2: The English Prepositional Dative Construction

But English allows a second possibility, the Double-Object Construction (*Pat gave Kim the book*), where the recipient is chosen as undergoer. This linking is shown in Figure 3 (again from Van Valin 2007).

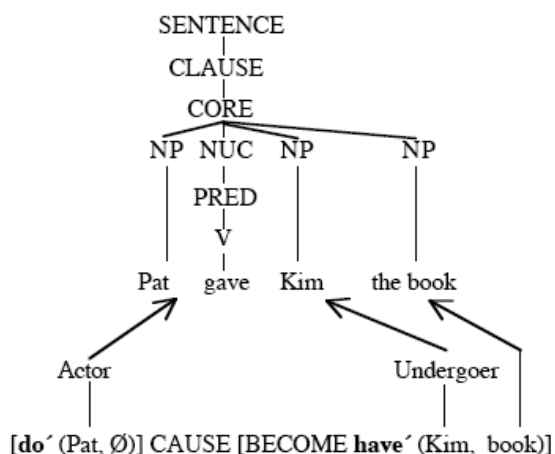


Figure 3: The English Double-Object Construction

This choice of undergoer is not derived from general principles, but is specifically stipulated for this construction. It is also called "marked undergoer selection" (Van Valin 2005:61, 2007:§3).

Thus, what the classical Role and Reference Grammar description shares with Relational Grammar, Functional Grammar and Lexical Decomposition Grammar is that the indirective pattern is privileged over the secundative pattern. The next section will discuss the RRG description and some of its problems in greater detail.

5. Problems with the RRG analysis

5.1. "Marked" Undergoer selection

Why should one of the possibilities for coding the ditransitive construction, namely the indirectly aligned pattern, be considered "unmarked" or default, while the other one is "marked"?

The term "(un)marked" has many different senses (cf. Haspelmath 2006), so the first question is in what sense the choice of undergoer is "unmarked". An obvious possibility is "unmarked" in the sense of "normal", or cross-linguistically frequent. It is true that the available cross-linguistic evidence indicates that the indirective pattern is more frequent than the secundative pattern and the neutral pattern. However, it is not much more frequent: Haspelmath (2005b) provides the figures in Table 2, based on a world-wide sample of 339 languages.

	languages	genera	families
Indirect-object construction	189	104	53
Double-object construction	84	51	20
Secondary-object construction	66	51	30

Table 2: The dominant ditransitive alignment patterns in 339 languages
(based on Haspelmath 2005b)

Also within languages that have both patterns (about 10% of the languages, both in Siewierska's (1998) data and in Haspelmath's (2005a) data), it is not the case that the dative pattern is necessarily the more frequent pattern. In English, for example, the double-object pattern is clearly more frequent, at least in the spoken language.

Van Valin (2005:62) gives several further reasons for considering the Prepositional Dative Construction in English "unmarked". One is that the Double-Object Construction is more constrained and does not, for example, allow personal pronouns in theme position (**Mary gave John them*). But this can also follow from the fact that the Prepositional Construction is more explicitly coded. That constructions with clearer coding have greater possibilities of combination is normal (as, e.g., in the case of complement clauses with and without *that*) and perfectly understandable from a functional point of view (cf. Rohdenburg 1996); no appeal to "markedness" is needed. Another reason is that in synthetic compounds like *flowergiver* and *girlgiver*, the first compound member is invariably interpreted as the theme. But this is evidently closely related to the fact that in such quasi-incorporation structures, the argument is non-referential, and human recipients are

normally referential. Even in languages in which the recipient is always the undergoer, only themes can normally be incorporated.⁵

Thus, one wonders whether the unequal treatment of the indirective pattern and the secundative pattern in RRG is a feature that was inherited from transformational approaches, where one of the alternating patterns is regarded as "underlying/initial", while the other one is "derived/final". RRG is a monostratal theory, so there would be no intrinsic reason to give privileged treatment to one pattern in an alternation, and the alternative RRG account suggested below in §6 treats them both equally.

But even if one of the two patterns (indirective and secundative) is to be given a privileged treatment, one would still have to show that the secundative pattern could not be the privileged, more basic pattern. In derivational accounts, it has occasionally been proposed that the indirective pattern should be derived from the secundative or the double-object pattern. Most prominently, Dryer (1986) proposed an "Antidative Shift" for English in the Relational Grammar framework. According to this approach, the double-object construction in (19) is primary, and the dative construction in (20) is derived from an underlying structure like (19) by SO-to-PO (secondary to primary object) advancement.

(19) *Pedro gave Aisha his e-mail address.*
SU **PO** **SO**

(20) *Pedro gave his e-mail address to Aisha.*
SU **SO** **PO**
SU **PO** **Chômeur**

In a similar way, RRG could modify the Actor-Undergoer Hierarchy in Figure 1 in such a way that the secundative pattern becomes the "unmarked" choice, but this would probably have undesired repercussions elsewhere. Overall, one gets the impression that an important reason (perhaps the most important reason) for saying that the theme undergoer is "unmarked" is that it fits better into the overall RRG system and makes it simpler (cf. the unstated principle of descriptive simplicity mentioned in §1). This is a gain that comes at the price of relative unmotivatedness of the choice of which argument is the "unmarked" undergoer.

In Guerrero & Van Valin (2004) and Van Valin (2007), a revised RRG account is presented, which recognizes that "the markedness relations expressed in Figure 1 are not valid universally". This account thus abandons the idea of a universal default, although the idea that there may be a language-particular default is still retained. I will discuss this revised account below in §7. Although Van Valin (2005:123-127) adopts this revised account, he still presents arguments for the markedness approach elsewhere in the book (p. 61-62), which is why I have included this discussion here.

⁵ Van Valin (2005:62) also observes that "dative-shift" alternations generally require overt applicative marking for the construction in which the non-theme is the undergoer, which would again support the "markedness" of non-theme undergoer assignment. However, it seems that applicative marking with typical ditransitive verbs is quite rare. Most applicatives are beneficiary, comitative and instrumental applicatives (Peterson 2007).

5.2. Undergoer as a "semantic macrorole"

Van Valin (2004:74-78) emphasizes that Actor and Undergoer are *semantic macroroles*, i.e. that in contrast to purely syntactic grammatical relations of other frameworks, these concepts have semantic import. Given this, it is expected that there should be a semantic difference between a theme-undergoer and a recipient-undergoer construction.

That this is sometimes indeed the case can be seen clearly in the locative alternation (Van Valin & LaPolla 1997:145, Van Valin 2007:§3):

- (21) a. *Oxfam loaded the plane (U) with relief goods.*
 b. *Oxfam loaded relief goods (U) on the plane.*

It is well-known that (21a) and (21b) are not identical semantically, and it is reasonable to relate their differences to the fact that the location is undergoer in (21a), while the theme is undergoer in (21b).

Such a semantic difference can also be observed for directional-motion verbs like 'throw':

- (22) a. *Pedro threw the ball (U) to Aisha.* ('in the direction of')
 b. *Pedro threw Aisha (U) the ball.* ('into the possession of')

It is only in the latter case that it can be inferred that Aisha came to have the ball.

In the recent literature on these patterns, two different event structures have often been posited (e.g. Goldberg 1992, 1995, Harley 2002, Wunderlich 2006:§6.6):

- (23) a. [**do'** (*Pedro*, \emptyset)] CAUSE [BECOME **be-at'** (*ball*, *Aisha*)]
 b. [**do'** (*Pedro*, \emptyset)] CAUSE [BECOME **have'** (*Aisha*, *ball*)]

Given these event structures, the semantic difference between (22a) and (22b) is easily explained. (Different event structures are also possible for the locative alternation in (21), cf. Kailuweit 2005).

However, such a dual-event-structure approach is not motivated for all ditransitive verbs in English, as was pointed out by Rappaport Hovav & Levin (2006). Simple transfer verbs like 'give', 'lend', 'show' do not have different meanings in the two constructions, and for these verbs there is no evidence that two event structures are involved.

Moreover, the non-default choice of undergoer must be lexically specified and cannot be derived fully from a verb's meaning. In this sense, undergoer is clearly a syntactic device. Van Valin (2004:77-78) notes that nondefault macrorole selection is not completely arbitrary, but seems to be semantically motivated – but this is quite typical of syntactic rules: They cannot be stated in purely semantic terms, but they are not entirely arbitrary semantically. Crucially, undergoer selection must make reference to non-semantic information, unlike (Jackendovian) thematic roles or (Dowtyan) proto-roles.⁶

⁶ The features +lr and +hr of Lexical Decomposition Grammar, which correspond to actor and undergoer (as we saw in §3.3), are similar in that they may also be introduced by "exceptional lexical marking" (Wunderlich 2006:106), not just derived by rule from the decompositional structure.

Van Valin (2004:75) suspects that approaches like Manning's (1996), where the counterparts of actor and undergoer have syntactic status, are motivated by the assumption of the autonomy of syntax. But "autonomy of syntax" can mean two things:

(i) syntax should be described and understood without regard for semantics (rejected by most linguists, especially functionalists) (*formalist autonomy*)

(ii) semantic and syntactic statements should be carefully distinguished (assumed by most linguists) (*descriptive autonomy*).

It seems to me that there are very good reasons for rejecting formalist autonomy in (i), and no good reasons for rejecting descriptive autonomy in (ii). In fact, the formalist/functionalist divide in linguistics cannot be usefully linked to the autonomy notion, despite what some functionalists and some formalists have claimed (especially Croft 1995 and Newmeyer 1998; see Haspelmath 2000). Manning's reasons for claiming that actor and undergoer have syntactic status is probably just motivated by descriptive autonomy. I would urge that RRG, too, should adopt the principle of descriptive autonomy (cf. §1), and either accept that actor and undergoer are not (entirely) semantic concepts, or redefine their role in such a way that nonsemantic rules such as lexically specified undergoer selection are excluded. (The latter approach will be pursued in §6 below.)

5.3. What to do with "symmetrical languages", i.e. fully neutral alignment?

As we saw earlier, some languages have been reported as not making a grammatical distinction between R and T in ditransitive constructions. An example of a language in which both the T and the R are coded with the same case (Accusative) is the Pama-Nyungan language Martuthunira that we saw earlier in (5). The examples in (24) show that both the R and the T may be passivized.

(24) Martuthunira (Dench 1995:229)

- a. *Ngunhu pawulu yungku-yangu murla-a nganaju-wu-lu yaan-tu.*
 that.NOM child give-PASS.PFV meat-ACC I-GEN-EFF wife-EFF
 'That child was given meat by my wife.'
- b. *Nhiyu murla yungku-yangu yirna kanyara-a ngulu wartirra-lu.*
 this.NOM meat give-PASS.PFV this.ACC Mann-ACC jene.EFF woman-EFF
 'This meat was given to this man by that woman.'

Other languages with "fully neutral" constructions are Cavineña (Tacanan; Bolivia; Guillaume 2006), the Peruvian Panoan languages Shipibo-Konibo (Valenzuela 2001) and Matsés (Fleck 2001), and Haruai (Upper Yuat; Papua New Guinea; Comrie 1993:317). Another such language is Kinyarwanda according to Gary & Keenan (1977).

Full neutrality of this sort has been a problem for Relational Grammar, which claims that 1, 2 and 3 are universal relations. Thus, R and T are predicted to be distinguishable in all languages in some way, though nothing is said about how. As I noted earlier in §3.1, Gary & Keenan (1977) had claimed that Kinyarwanda shows a fully symmetrical ditransitive construction, and Dryer (1983) rescued the Relational Grammar account of Kinyarwanda by observing that there are some less salient ways in which the T and the R differ after all in Kinyarwanda (with respect to causativization and "locative advancement"). Unfortunately, this claim is immune to

falsification in practical terms: There is no way one could exhaustively examine all possibly relevant constructions to determine whether they privilege one of the two arguments, so one can always claim that there is probably some construction with respect to which R and T differ, even though it hasn't been discovered yet.

Symmetry of this sort also presents a challenge to Role and Reference Grammar, as it does for other frameworks. Do these languages have two undergoers in ditransitive constructions? Or do they have no undergoer (i.e. are the M-intransitive)? The former is excluded by the principle that there are at most two macroroles per clause (Van Valin 2005:64), and the latter is hardly an attractive option because Martuthunira allows passivization. Van Valin (2007:§4.2) discusses symmetrical passivization in Kinyarwanda and proposes that passivization does not make reference to the undergoer notion in this language, but targets all non-macrorole direct core arguments. He does not say anything about which of the two non-Actor arguments is undergoer in Kinyarwanda, and presumably in a fully neutral language, there would be no undergoer at all (or at least no evidence for it). This position is probably consistent with the overall framework (after all, there are other three-argument verbs lacking an undergoer, e.g. *talk to somebody about something*), but intuitively it is strange to claim that ditransitive constructions are intransitive.

5.4. Which properties are relevant for Undergoer selection?

But it seems that some criteria for distinguishing arguments are given more weight than others by some authors. Hudson (1992) notes that only passivization supports the R-as-direct-object description of the English Double-Object Construction. As shown by (25b-c), the R can be the privileged syntactic argument ("subject") of the passive, and the T cannot (or cannot for many speakers).

- (25) a. (monotransitive) *Pedro was criticized by Aisha.*
 b. (passive) R=U_M *Pedro was given money by Aisha.*
 c. (passive) T=U_M *??Money was given Pedro by Aisha.*

As Hudson observes, quite a few other behavioural properties support the grouping of T with monotransitive U. For example, both the U and the T can be pivot with omitted-object infinitives:

- (26) a. (monotransitive) *I bought it_i to put Ø_i on the table.*
 b. T=U_M *He gave her_j it_i to put Ø_i on the table.*
 c. R=U_M **He gave her_j it_i to cheer Ø_i up.*

Hudson does not privilege the passive, but instead counts the number of properties that treat T and U alike, and finds that there are many more than properties that treat R and U alike. He concludes that it is better to say that the T is the direct object in English.

Carrying this argumentation over to RRG, could one say that in English, the ditransitive theme is the Undergoer? Van Valin (2007: n. 2) answers negatively:

This is untenable, for the following reason. The RRG analysis of passive is that the undergoer appears as the PSA ('subject') in languages like English.

The RRG analysis predicts that the passive acceptable to all English speakers will be *Kim was given the book by Pat*, whereas the other analysis predicts that the universally acceptable passive form would be *The book was given Kim by Pat*.

So apparently passivization is a knock-down criterion for Undergoer selection. But why is passivization given so much prominence? Passivizability is just one among many properties of objects, and it would seem to be difficult to argue that it should be more important than the other argument properties (cf. the questionable Passive Privilege principle of §1).⁷

6. A sketch of a radical alternative RRG account

To address the issues raised above, the RRG account of ditransitive constructions would have to be revised. Although I am not in a position to provide a full-fledged RRG account, I will now sketch the outlines that such an alternative account could have.

6.1. Four macroroles: A, U, R and T

First of all, RRG would need two additional macroroles, recipient (R) and theme (T), in addition to actor (A) and undergoer (U):

(27) four semantic macroroles and their definitions

A = actor, defined as before

U = undergoer of monotransitive sentences

R = macro-recipient, corresponding to Primus's (1999) proto-recipient

T = (macro-)theme

In the radical alternative account, the problems discussed in §5 would be avoided. The four macroroles are defined purely semantically, i.e. the radical alternative account avoids the mixing of semantic and syntactic information and observes descriptive autonomy (see §5.2). There is no "non-default" or "marked" selection of macroroles, so that the markedness problems of §5.1 are avoided. No criterion for grouping roles is given inherent priority, i.e. passivization would not be more important than other criteria (see §5.4). Symmetrical constructions with neutral alignment are simply regarded as constructions where U, R and T are coded in the same way (see §5.3). Since the non-actor arguments of monotransitive and ditransitive sentences have different macroroles, the question of which ditransitive non-actor argument is the undergoer would not arise.

Note also that the RRG literature already contains one argument for the macrorole (macro-)recipient: Such a macrorole would be useful for describing recipient passives in German, as argued by Diedrichsen (2004).

6.2. Coding rules and the parallel with monotransitive alignment

⁷ Perhaps the importance of passivization in RRG has to do with the fact that RRG arose in the 1970s, when many syntacticians were interested in passivization, and all major grammatical theories, such as Relational Grammar, FG, GPSG, LFG, Space Grammar/Cognitive Grammar, felt compelled to begin the justification for their grammar with an analysis of the passive.

An important criterion for an RRG analysis is the elegance with which rules for coding arguments can be formulated. While this criterion of descriptive simplicity is problematic (as was noted in §1), it is still interesting to see how the rules for coding elements would have to be reformulated in the new system with four macroroles.

Taking into account the major alignment patterns of both monotransitive and ditransitive constructions, we can distinguish four major types of languages (cf. Dryer 2007). Since the ergativity parameter and the secundativity parameter are independent of each other (Haspelmath 2005a), all four are well attested (cf. also Van Valin 2005:127). Figure 4 shows these four types, with one exemplifying language for each type. The labels below the language names are the macrorole groupings that are treated alike in the language (here only case-marking is relevant; other constructions may behave differently).

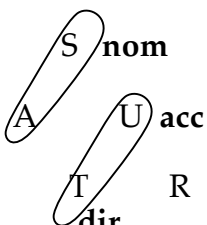
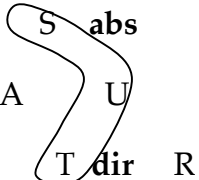
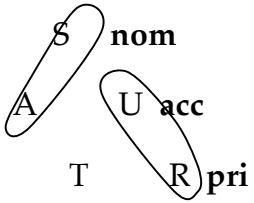
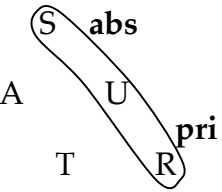
	accusative alignment	ergative alignment
indirective alignment	 <p>German (nominative and accusative-directive)</p>	 <p>Lezgian (absolutive-directive)</p>
secundative alignment	 <p>Yoruba (nominative and accusative-primative)</p>	 <p>Greenlandic (absolutive-primative)</p>

Figure 4: Four types of languages, accusative and ergative alignment

To describe the rules for cases, RRG appeals to a simple Macrorole Hierarchy "actor > undergoer". In the radical alternative system, with four macroroles, the macrorole hierarchy would be as in (28):

- (28) Macrorole Hierarchy
A > R, U > T

That is, actor is highest on the hierarchy, and ditransitive theme is lowest. Ditransitive recipient and monotransitive undergoer are both intermediate (and not ranked with respect to each other).

The case-marking rules of traditional RRG are given in (29) (Van Valin & LaPolla 1997:§7.3). (Note that MR stands for macrorole.)

- (29) a. (accusative alignment)

Nominative case is assigned to the highest-ranking MR argument, then **accusative** to the other.

b. (ergative alignment)

Absolutive case is assigned to the lowest-ranking MR argument, then **ergative** to the other.

This is a very simple and straightforward system, and the additional rule for dative case (it is the default case) could not be simpler. By contrast, the case-marking rules of the radical alternative macrorole approach would be somewhat more complex, as shown in (30).

- (30) a. (German-style alignment combination: accusative-indirective)
Accusative-directive case is assigned to the lowest-ranking MR argument, then **nominative** is assigned to the highest.
- b. (Yoruba-style alignment combination: accusative-secundative)
Accusative-primative case is assigned to the second highest-ranking MR argument, then **nominative** to the highest.
- c. (Lezgian-style alignment combination: ergative-indirective)
Absolutive-directive case is assigned to the lowest-ranking MR argument, then **ergative** to the highest.
- d. (Greenlandic-style alignment combination: ergative-secundative)
Absolutive-primative case is assigned to the second lowest-ranking MR argument, then **ergative** to the highest.

This is not dramatically more complicated, and it accounts for a lot more facts than the traditional RRG case-marking rules.⁸

6.3. Objections against "a third macrorole"

The possibility of positing a third macrorole has come up earlier in the RRG literature. Van Valin (2004:79-81, 2005:64-66) argues that a third macrorole should not be posited, for a number of reasons (see also Bellosta von Colbe 2004:194-198). I do not find these reasons compelling, and some of them may be weakened by the current proposal, which actually posits four rather than three macroroles. Van Valin's objections to a third macrorole are:

(i) A third macrorole would not be universal. This may be so, but it is not clear why universality should be a criterion. If the theory is non-aprioristic (see §1), it should even allow for the possibility of different macroroles in different languages. Moreover, actor and undergoer are also somewhat variable across languages. And in the current proposal, this argument has little force because macroroles are purely semantic and therefore are universal by definition (assuming that meaning is universal, at least at some level).

(ii) R and T are not treated consistently across languages, in contrast to A and U, which are always "direct (core) arguments". The problem with this argument is that it is not clear that A and U are really significantly different

⁸ However, as Robert Van Valin points out (p.c.), they do not extend automatically to intransitive verb, so in this regard they are admittedly less general.

from R and T. The concept "direct (core) argument" is not defined very well. In Van Valin & LaPolla (1997:29) it is said to be an argument that is not adpositionally marked, but presumably instrumental and locative arguments would not count as "direct (core) arguments". Van Valin (2005:7) is more precise: Nominative/absolutive, accusative/ergative and dative count as "direct", whereas all other cases are regarded as "oblique". No principled reason is given for this, and no definition of "dative" is given.

(iii) "A third macrorole would be markedly less important for the syntax than A and U... It also plays no role in the major typology of syntactic systems: ergative vs. accusative vs. split-intransitive." (Van Valin 2004:81) This is a matter of perspective. It is true that the roles R and T are less important than A and U in the straightforward sense of occurring less frequently in texts. But otherwise the parallels between monotransitive and ditransitive alignment are striking,⁹ and in traditional RRG the accusative/ergative contrast is treated in a way that is very different from the indirective/secundative contrast.

Probably the most serious objection to the radical alternative that I have proposed is that it would make analyses of other phenomena that I have not discussed here more complicated (e.g. of causative constructions). This may well be, but it would not necessarily be an argument against the proposal. Recall from §1 that descriptive simplicity is a criterion that I do not regard as particularly important, because we have no strong reason to assume that languages were designed to be simple. On the other hand, the other criteria (and non-criteria) of §1, taken together, clearly favor the alternative over the traditional account. Thus, whether the alternative is adopted will ultimately depend on how one relates to the principles of §1. I would hope that future work on RRG will at least clarify where RRG stands on these matters.

The remainder of this paper will discuss two further issues: The revised RRG approach introduced by Guerrero & Van Valin (2004) and Van Valin (2007), and the possibility of a second grammatical relation for ditransitive constructions.

7. The revised RRG account (Van Valin 2007)

Guerrero & Van Valin (2004) and Van Valin (2007) recognize that the RRG approach to ditransitives as set out by Van Valin & LaPolla (1997) does not sufficiently take into account languages with secundative alignment and thus violates the principle of typological adequacy (see §1). They discuss one such language, Yaqui (a Uto-Aztecan language of Mexico), in some detail, showing that the simplest description for Yaqui is one in terms of the rule that the undergoer is the second highest ranking argument in the Logical Structure. This is in conflict with the universal markedness principle of Figure 1, which they abandon in favour of a "parameterized" system for undergoer selection. This is summarized in Figure 4.

⁹ Even a "split-transitive" type (cf. Siewierska 2003) has been identified, analogous to the split-intransitive type in monotransitive alignment.

ACTOR				UNDERGOER
Arg. of	1 st arg. of	1 st arg. of	2 nd arg. of	Arg. of state
DO	do' (x, . . .)	pred' (x, y)	pred' (x, y)	pred' (x)
Actor selection: Highest ranking argument in LS				
Undergoer selection:				
Principle A: Lowest ranking argument in LS (Principle C: default only)				
Principle B: Second highest ranking argument in LS				

Figure 4

Yaqui follows Principle B (like other secundative languages), German follows Principle A (like other indirective languages). (See also Conti Jiménez 2004, who argues that this accounts for the cross-linguistic facts.)

This approach does more justice to the symmetry of the indirective and the secundative alignment patterns, and thus addresses the problems discussed in §5.1. But there are still a number of problems:

(i) Undergoer selection is now parameterized for the indirective-secundative contrast, in much the same way as some theories parameterize "subject selection" for the accusative-ergative contrast. This is rejected by RRG, but now that the parameterization option has been allowed into RRG, one could ask why the cross-linguistic variation in monotransitive constructions is not treated in the same way.

(ii) RRG's macroroles actor and undergoer were designed to capture what accusative and ergative systems have in common—there are no Principles A (for accusative languages) and B (for ergative languages). Given the parallels between monotransitive and ditransitive alignment, it seems more in the spirit of RRG to posit macroroles also for ditransitive alignment. The new RRG account thus does not express the parallels between monotransitive and ditransitive alignments in the same straightforward way as the radical alternative.

8. Do we need a grammatical relation for R and T?

As explained in detail in Van Valin & LaPolla (1997: ch. 6), Van Valin (2005:89-107), grammatical relations are posited by RRG when there is a restricted neutralization of semantic roles for morphosyntactic purposes. This is the case in a number of constructions for which a privileged syntactic argument (PSA) has been posited.

Roughly, the PSA corresponds to what has been called "subject" in other approaches. Since these other approaches often also posit a grammatical relation "object", one might wonder whether an analogous concept of an "SSA" (Secondary Syntactic Argument) might be needed in RRG as well. Van Valin (1993:65-72) argues that no such concept is needed, and that all the work done by an "object" relation in other theories is done by the undergoer macrorole and other RRG notions.

However, not all groupings of non-Actor arguments can be captured by the macroroles. In particular, one and the same construction may sometimes show both the U + T grouping (i.e. directive, or "direct object") and the U + R grouping (i.e. primitive, or "primary object"). An example comes from Hyow, a Tibeto-Burman language of Bangladesh:

(31) Hyow (Peterson 2003: 174, 179)

- a. *yɔntuʔa uy=la key ʔɔ-ŋoʔwey-sɔ*
 yesterday dog=ERG I[ABS] 1SG.U/R-bite-CONCL
 A U
 'Yesterday a dog bit me.'

- b. *cu=la key=a cɔ ʔe-pek*
 he=ERG I=LOC book[ABS] 1SG.U/R-give
 A R T
 'He gave me a book.'

Here case-marking shows an indirective pattern (U + T is zero-coded, and R is in the locative), while indexing ("agreement") is secundative (U + R are indexed overtly, and T is not indexed).

In traditional RRG, this cannot be described in terms of macroroles, unless one admits that a clause gets two undergoers, one "A-undergoer" for case-marking (assigned by Principle A), and one "B-undergoer" for indexing (assigned by Principle B).

A similar example comes from English, where Passivization and Omitted-Object Infinitives behave differently, as observed by Hudson 1992 (cf. also the earlier discussion in §5.4):

Passivization: secundative (U + R (passivizable) vs. T (not passivizable))

- (32) a. (monotransitive) *Pedro was criticized by Aisha.*
 b. (passive) R=U_M *Pedro was given money by Aisha.*
 c. (passive) T=U_M *??Money was given Pedro by Aisha.*

Pivot with Omitted-Object Infinitives: indirective (U + T vs. R)

- (33) a. (monotransitive) *I bought it_i to put Ø_i on the table.*
 b. T=U_M *He gave her_j it_i to put Ø_i on the table.*
 c. R=U_M **He gave her_i it_j to cheer Ø_i up.*

Thus, in terms of grammatical relations, it appears that we need to say that in English, the controller of Passivization is U + R, while the pivot of Omitted-Object Infinitives is U + T. Of course, in RRG one could always resort to analyses that do not make reference to macroroles (e.g. one could say that the pivot of Omitted-Object Infinitives is the lowest ranking core argument, as Robert Van Valin points out, p.c.), but it seems that there is not always a principled way of deciding when reference should be made to macroroles and when it macroroles should be left aside.

In any event, while there may be no construction requiring two different privileged syntactic arguments at the same time (which would lead to the need of an SSA in addition to a PSA), it does seem that also with respect to grammatical relations, ditransitive constructions behave much like monotransitive constructions.

9. Conclusion:

Shifting the syntax-semantics boundary in favour of syntax

In conclusion, I would like to propose that RRG should become less aprioristic and should separate syntax and semantics more strictly: the

macroroles should be strictly semantic, and correspondingly, somewhat more work should be done by syntax. As suggested by the discussion in §8, we seem to need grammatical relations other than PSA.

It must be admitted that if the approach favored here is adopted by RRG practitioners, the resulting descriptions will often be less elegant and more complex than those of traditional RRG. However, I do not believe that it is a virtue of grammatical theories if they allow linguists to formulate simple descriptions of languages (see the discussion of descriptive simplicity in §1), at least not if this comes at the expense of a complicated architecture with macroroles that have a mixed semantic-syntactic motivation.

It needs to be emphasized that separating syntax and semantics in the way advocated here does not mean accepting formalist autonomy. Descriptive autonomy of the semantics and syntax is fully compatible with functionalism (as argued by Newmeyer 1998, and shown by the fact that this author has gone on to pursue a fully functionalist agenda in Newmeyer 2005).

Adopting the alternative approach proposed here would mean a rapprochement with the non-aprioristic approaches of Dryer (1997) and Croft (2001), both of which emphasize that languages are far more diverse than is generally recognized (thus requiring extensive language-particular stipulation), but that whatever generality exists is amenable to explanation in semantic-pragmatic terms.

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