

# Prototypical adverbs: On the scalarity/radiality of the notion of ADVERB

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This paper is divided in two parts. Part I is an attempt to individuate the domain of the category ADVERB in front of other categories (NOUN, ADJECTIVE, VERB, and CONVERB) on the basis of two definitional criteria. While the first criterion has a formal nature, the second is functionally based. A comparative crosslinguistic analysis allows first for a scalar and then a radial representation of the category, with prototypical instantiations and less typical or even marginal items. Thus, the edge of ADVERB are blurred, as expected in a prototypical approach.

In Part II, two possible approaches to a prototypical structuring within the lexical class 'ADVERB' are discussed, leading to contrasting results. If one tries to build up a radial category for English *-ly* adverbs, then the centre, meant as the starting point of meaning and functional extensions, has to be identified with Manner Predicate adverbs. On the other hand, relying on both crosslinguistic frequency and text frequency criteria, the primacy of Manner Predicate adverbs is untenable with respect to Sentence and Adjective modifiers, or even focalizers. Structural data support this second point of view, since Manner adverbs are overwhelmingly built through derivational rules, while other subclasses display a greater amount of monomorphemic, totally opaque items.<sup>\*</sup>

## I. *Adverbs and surroundings.*

[...] one class of words where it does seem necessary to use many examples is the class of adverbs. Maybe this shows that adverbs do not form a genuine semantic class, but if so, then that gives even more reason for looking at many examples [...]. Semantically and also syntactically, as far as I can judge, adverbs seem the least understood large class of words in natural language (Cresswell 1981:21).

\* This paper is an outcome of a large inquiry led together by P.R. and D.R. within the EUROTYP project (Group 5: Adverbial Relations; cf. Ramat & Ricca, in press). Cross-readings and discussions make both authors equally responsible for the entire article. However, Part I is due to P.R., Part II to D.R.

### 1. A tentative definition.

Under the label 'adverbs' many different linguistic objects have actually often been collected, that show very different semantic values and syntactic behaviours. For instance Predicate adverbs such as *quickly* (c. *she writes quickly*), focalizers (Germ. *eben, gerade: Gerade dies wollte ich sagen*), Degree adverbs (e.g. *very: she looks very smart*), connectives and argumentatives (e.g. *however, nevertheless*).<sup>1</sup>

We will come back to the heterogeneity of the ADV class later in Part II. Starting now from the traditional and generally shared opinion that considers *wisely, contrariwise, often, here, well, very*, etc. – as well as the corresponding forms in the major European languages – to be adverbs, we may advance a tentative definition of the category ADV:

(i) *formally*, adverbs are invariable and syntactically dispensable LEXEMES (which may have derivational status, e.g. Lat. *simil-i-s* --> *simili-ter*, or even originate from inflectional status: *merito(d)* 'rightly'). Notice, however, that in a phrase such as *maximo merito* 'with the highest merit' there is no adverbial lexeme!).

(ii) *functionally*, adverbs are MODIFIERS of predicates, other modifiers or higher syntactic units.<sup>2</sup> In other words they ADD INFORMATION to other linguistic elements which can stand on their own semantically and syntactically.

According to the first criterion adverbial phrases such as *in my opinion, in principle, to my great surprise*, Germ. *auf keinen Fall*, It. *in nessun caso*, etc. do not fall in the realm of 'ADV'. The same holds true also for expressions such as It., Span. *concordemente a* 'according to' (≠ *accordingly!*), *contrariamente a* 'contrary to' (≠ *contrarily!*). In spite of their *-mente* formation, which is typical of adverbs, these have to be considered as bound elements, namely complex prepositions obligatorily introducing an NP, or a clause. This is valid also for the distinction between adverbs and so-called 'adverbial prepositions': Engl. *outside*, It. *sotto* 'down, under' are adverbs in *we could play outside*,

<sup>1</sup> Guimier (1991) presents an interesting collection of various definitions of the adverb as a part of speech and opens his paper with a quote which, written more than 450 years ago, already goes much in the sense of our introductory quote from Cresswell: "It is hard to a lemer to discern the difference bytwene an adverbte and the other partes of speeche". Palsgrave 1530.

<sup>2</sup> Examples: Noun modifiers: Fr. *même les rois se trompent*, Germ. *selbst die Könige irren sich*, It. *un vino veramente vino*, Mod. Gk. *κατά τὴν ἐδώ παραμυθὴ τοῦ*, lit. 'during the here staying his', i.e. 'during his stay here'; Adjective modifier: Span. *otros casos desgraciadamente existentes*; Verb modifier (typically Manner adverbs): It. *knock loudly at the door*; Adverb modifier (Degree adverbs, also called Intensifiers): *he started smoking rather heavily*, Fr. *Il se débrouille yachement bien*; Sentence modifiers (Sentence adverbs): Mod. Gk. *Ο Γιάβνης έχει φύγει, αναμωβόλα*, Ir. *D'irimh Séán siúráitíte* 'Surely John has left'.

*andare sotto* 'go down' and prepositions in *the dog was standing outside the house, sotto il tavolo* 'under the table'.

Therefore, also according to the second, functional, criterion the ADV category is to be kept apart from that of PREP. Prepositions are heads of SP and cannot be omitted: \**the dog was standing the house*, vs. *we could play*.

We may then conclude that ADV is not simply a lexical category, nor a functional one: rather, it emerges from the coalescence of both viewpoints.

But if the two criteria taken together enable us to distinguish between (1a) and (1b):

- (1) a. I treni NOUN.PLUR viaggiano veloci ADV.PLUR [= bound form]  
b. I treni viaggiano veloce ADV [= unbound form]

between *grandemente* and *contrariamente a*, things are not always so clear-cut. How can we distinguish, for instance, *light*<sub>ADJ</sub> (in *light music*) and *light*<sub>ADV</sub> (in *to sleep light*)? And what about (2)?

- (2) Il treno correva veloce

Does *veloce* apply to the NP or the verb? Is it necessary to add positionality to the above definitional criteria? (Contrast *Il treno veloce* [or even *Il veloce treno*] *correva nella notte* 'The rapid train was running in the night', and *Il treno correva veloce nella notte* 'The train was running fast in the night'). Isolating languages like Chinese or Vietnamese that lack specific markers for lexical categories would seem to advocate for a positive answer. But positionality clearly does not apply to all languages. Even in English adverbs are not always bound to a fixed position; cf. (3):

- (3) a. John has *probably* lost the key of his house  
b. *Probably*, John has lost the key of his house  
c. John has lost the key of his house // *probably*

1.1. Giving a definition of a (morphological) category does not entail that the defined category is to be met in all languages. But the fact that, e.g., the category – and the very concept of – NOUN does not apply to the Iroquoian language Cayuga (Sasse 1993) does not mean that this category has to be rejected. Its validity is limited to a certain (in reality fairly large) number of languages; however, the possibility of a universally valid definition of it will still remain unimpaired.

Adverbiality – meant as a modification added to and affecting the content of a semantically autonomous head – is a universal function, but adverbs – meant as a grammatical category (ADV) – are by no means universal. Hagège (1982:90f.) refers to Palauan (Austronesian) as a case

in point. In this language even the most usual adverbial functions such as time and space setting are expressed via periphrases: 'yesterday' is 'in the past day' and 'here' is 'in this place'. Lat. *hoc die* and OHG *\*hiu tagu* (cf. OFrs. *hiudega*) made use of the same deictic technique, but their developments, *hodie*, *heute* (Fr. *hjoed*) evolved into real adverbs.

The diachronic evolution of adverbs (cf. Ramat 1994, referring also to examples like *may be* (*that*), *peut-être* (*que*) et sim.) as well as its traces in synchrony clearly hint at the scalarity, or gradient character, of the category ADV.<sup>3</sup>

## 2. A prototypical approach.

Prototypical categories exhibit degrees of membership; in other words, not every member is equally representative for a category and prototypical categories can be blurred at the edges (Geeraerts 1989:593). But this does not amount to say that we may do without categorial definitions. On the contrary, the more the elements of a set appear to be distributed along a continuum, the more we are in need of individuating a crucial point, a focus where the definitional properties apply to the greatest extent (see Ramat 1990:8). This is precisely why we started with a tentative definition of the category we are dealing with. As clearly shown by Givón (1986) and Kleiber (1990:156ff.), prototype theory is different from Wittgenstein's 'family resemblances' where no member of a family can be said to show more characteristic features than others:

Ce n'est plus par relation avec une entité prototypique représentante de la catégorie que se fait la catégorisation [dans la structuration en 'aire de famille']: la catégorisation se trouve justifiée par des liens d'association entre les différentes instances (ou types de référents) et non pas par un rapport entre toutes ces différentes instances et une même unité, à savoir le prototype (Kleiber 1990:159).

As for adverbs, we maintain that prototypical adverbs do exist. According to both the formal and the functional criterion, *perhaps*, Du. *misschien*, It. *forse* or *seldom*, Germ. *selten*, Alb. *mezi* 'scarcely, hardly' etc. represent the PROTOTYPICAL FORM OF AN ADVERB, inasmuch as these invariable lexemes may be omitted with no change resulting in the syntactic structure of the sentence. If we accept a prototypical approach we must be ready to admit that a categorial definition may not be able to exclude the existence of unclear instances. In our case this means to admit that the ADV definition may be unable to rule out lexemes which

are not adverbs – as the already mentioned adjectival forms such as *light* or It. *veloce* in (2) have already shown. More on this in § 3.

For reasons that will be clear immediately below, it is also important that prototypical adverbs do not show any transparent Word Formation Rule (WFR) – independently of their diachronic origin, which often hints at a remarkable tendency to UNIVERBATION: *perhaps* is a hybrid Romance-Germanic formation from Fr. *per* (as in *peradventure*, *perchance*) + the plural of a noun *hap* 'chance' (cf. the verb *to happen*); Du. *misschien* < *mach scien* '(it) may happen', *forse* < Lat. *fors sit*, etc.). On the other hand adverbs such as Fr. *heureuse-ment*, or Germ. *unglücklicher-weise* are transparent formations that maintain traces of their original NP-status in the agreeing adjectival element. The univerbation process went in French further than in German: the second member of the German compound may still appear as a word in itself, whereas French *-ment* may not. Between the two cases represented by *misschien* and *unglücklicher-weise* one can find the Engl. *-ly* formations (*quick-ly*), the Turk. *-ca/-ce* adverbs (*akıllı-ca* 'wise-ly', *güzel-ce* 'beautiful-ly') and even frozen inflectional endings which no longer belong to the inflectional paradigm such as Italic *-ē(d)*: Lat. *recte*, Falis. *rected*, Umbr. *rehte* 'rightly'. On the contrary, examples that show still living case endings of a nominal inflection (e.g. Lat. *merito(d)* [not \**merite*, or \**meriter!*], Mod. Gk. *ευγενικά* 'kindly' [Ntr.Acc.Pl.]) approach the Noun Phrase end of the scale. The difference may nicely be represented by the Mod. Gk. opposition between the adverbs ending in *-ως* (Adverbial suffix) and *-α* (Ntr.Plur.Acc.), sometimes also with a meaning opposition (απλώς 'simply, only, just' vs. απλά 'in simple terms', αμέσως 'immediately' vs. άμεσα 'directly, without intermediary').

Now, where do agglutinating forms like Turk. *kesin-lik-le* 'certainly', *genel-lik-le* 'generally' belong to? (*kesin-* 'certain' + *-lik-* ABSTR.SUFF *-(i)ly* + *-les* SUFF < *ile*: a primary, i.e. independent, Postposition meaning 'with' [cf. *vapur ile gitiniz*, word for word: 'boat with you-went', along with *vapurla* 'by boat', *otobüste* 'by bus']). Do they fall in the realm of ADV or outside it, like all Prepositional Phrases such as Turk. *açık bir sekil-de*, 'frankly' (lit. 'open a way-in:LOC'), Arm. *xeloc kerp-ov* 'cleverly' (lit. 'clever way-INST'), Fr. *sans doute* 'probably', Lith. *be abejo*, Engl. *beyond all doubt* 'certainly', etc.? Opinions diverge on this matter. Lewis (1988) does not include *-le*-formations in his chapter on Adverbs, whereas Wendt (1992:174) mentions *-le* among the "häufige Mittel, ein Wort als Adverb oder adverbiale Bestimmung zu kennzeichnen". And, indeed, this *-le* does not behave in a different way from case suffixes like Abl. *-den* (*geceden* 'from/through the night', *vapurdan*) or Loc. *-de*, which is actually used to build adverbs: *her-hal-de* 'certainly, surely; probably' (lit. 'every case in:LOC', like *gecede* 'in the night', *vapurda* etc.).

<sup>3</sup> "Il convient donc de réviser les théories, anciennes et modernes, qui posent des catégories discrètes et des traits binaires, et leur substituer une vue scalaire" (Hagège 1982:94).

Fig. 1 tries to represent the gradient scale which goes from prototypical adverbs at the left end to the adverbial periphrases that no longer belong to the realm of ADV, as defined at the beginning of this paper.

Opaque items	WFR-Adv (derivational)	WFR-Adv (compounding)	Transparent PPs/NPs (periphrases)
<i>perhaps, misschien</i>	<i>quick-ly, rect-e</i>	<i>glücklicher-weise</i>	<i>in my opinion, vapur ile, xeloc kerpov</i>

←----->

Fig. 1 - The scale of ADV

Derivational WFR-adverbs are 'opaque' in the sense that the second member of the item does not exist independently. Compounding WFR-adverbs are, from this point of view, more 'transparent'. A different, though related *continuum* of increasing opacity leads from forms like *merito*, *herhalde* (which are usually listed as adverbs, but belong at the same time to the actual paradigm of the fully existing nouns *meritum* and *hal*) to frozen items like Ancient Greek *πόλις* 'again', Lat. *clam* 'secretly', which etymologically are Accusatives of disappeared nouns (*πόλις* 'tum' and a noun connected with *celare* 'to hide', respectively). An intermediate step in this *continuum* may be provided by forms like Latv. *laikam* 'probably'. This form derives from – and is still identical with – the Dative of *laiks* 'time', but the semantic evolution has gone much further than in the case of *merito*, *herhalde*, so that in native speakers' intuition *laikam* 'probably' is no more motivated by *laiks*. As stated above, this *continuum* seems to lie on another plan which is radial to that represented in Fig. 1 (more on this below).

### 3. Blurred edges.

#### 3.1. ADV and ADJ.

Let's now go back to (2):

- (2) Il treno correva veloce  
 'The train was running fast'

Kees Hengeveld (1992:44) distinguishes between flexible and rigid languages, i.e. between languages in which a single part of speech may be used in different functions (e.g. Dutch),<sup>4</sup> and those in which every

<sup>4</sup> Cf. een mooi:ADJ kind vs. Het kind danst mooi:ADV beautifully  
 a beautiful child the child dances beautifully

part of speech has a single function like Wambon (Trans New Guinea). Wambon lacks a class of adverbs and does not allow the use of ADJ as ADV; instead, to create Manner expressions, it makes use of verbalized forms of adjectives that modify the main verb. In cases such as (2) Italian behaves like a flexible language.

We have already discussed case ending adverbs such as Lat. *merito*, Mod. Gk. *αλλά*. Moreover, many languages make use of lexemes functioning as adverbs that lack any particular marker like in (2): cf. among the Germanic languages Germ. *klug* along with *klugerweise* both 'wisely, cleverly', Du. (*voor-)*zeker = Germ. *sicher* '(for) sure, surely', Norw. *oppriktig* 'frankly' but also 'frank', *pussig* 'strangely' but also 'strange', etc.

Consequently, Hengeveld's distinction raises the problem of the universal (ontological) validity of parts of speech as categories. Should we distinguish between *klug*<sub>ADV</sub> and *klug*<sub>ADJ</sub> as two different lexical entries? Clearly the risk exists that we differentiate according to our traditional grammatical schemes between categories which need not be *a priori* differentiated (see Sasse 1993:203).

But, as stated earlier, accepting the prototypical approach does not mean to give up the idea of categorial definitions implemented by focal instances. In many cases it is evidently possible and even basically necessary to keep apart adverbs from adjectives,<sup>5</sup> though according to our two definitional criteria there may exist – and indeed do exist – cases where it is not possible to give a clearcut decision.

As a matter of fact, both adverbs and adjectives are modifiers of other linguistic units. No wonder that the edges between these categories may in some cases be blurred, both formally and functionally (on the category ADJ in a prototypical approach see 5 below).

Although there are hints that languages may tend to formally underline the difference between adverbial and adjectival function,<sup>6</sup> the link between adjectival and adverbial forms may be seen in nominal sentences like (4):

<sup>5</sup> Clearly, no -wise formation could function as an adjective. And just a few -ly formations can (*friendly, lovely*).

<sup>6</sup> In Hungarian, for instance, adjectives cannot be used in adverbial function without a special adverbial suffix. Contrast also (i) with its Germ. translation (ii):

(i) *Frankly*, you have gone too far  
 (ii) *Ehrlich (loffen) gesagt*, du bist zu weit gegangen  
*Frankly* is unambiguously an adverb, whereas *ehrllich* and *offen* could also be adjectives; the insertion of *gesagt* 'said' disambiguates their function as adverbs (see Ramat 1994).

On the function of *enough* (Du. *genoeg*, Norw. *nok*) to enhance and disambiguate the adverbial function, as in (iii) see Ramat 1994

(iii) Du. *Vreemd genoeg* is Jan al weggegaan  
 'Strangely (enough), John has already left'

- (4) a. Engl. It is clear that....  
 It. È chiaro che....  
 Germ. Es ist klar, daß...  
 Alb. Ëshhtë e qartë se...

with a predicative main clause, followed by a subordinate clause introduced by a complementizer (COMP). By dropping the copula we obtain (4b):

- b. \*Clear that....  
 Chiaro che....  
 Klar, daß....

Note that adverbs too may introduce subordinate clauses via a COMP. Not only in the French and Russian examples (5a-b):

- (5) a. *Peut-être* qu'il ne va pas répondre  
 'May be that he's not going to give an answer'  
 b. *Može byt', (čto) on i pridët*  
 'May be (that) he will also arrive'

which evidently derive from higher syntactic units (see below), but also in cases where the adverbial form is clearly recognizable:

- (6) a. French *Apparemment que* Monsieur ne croit pas au péché originel  
 (Voltaire, *Candide*, quoted in Hagede 1982:90)  
 b. *Heureusement que* Jean a dormi paisiblement toute la nuit  
 (with emphatic value: see Schlyter 1974:82)

- (7) Mod. Greek ίσως perhaps να that come:AOR:3:PLUR

(along with ίσως ήρθον, without complementizer);

- (8) Latvian *Saprotami* ADV/*Neticami* ADV, ka COMP J. Jānis  
 understandably/incredibly  
 jau ir aizgājis  
 already is left

'Understandably/incredibly, John has already left'

The adjectival/participial copula-construction has been extended to adverbial constructions (and our informant says that *ka* cannot be omitted in (8)).

Another hint that the edges between ADJ and ADV are blurred is represented by the fact that ADJ and ADV may coexist in the same clause, apparently without any semantic difference.<sup>7</sup> In Turkish we find both (9a) and (9b):

- (9) a. *Akilli-ca* bana cevap ver-me-di  
 Clever-ly I:DAT answer give-NEG-PAST  
 'Cleverly, he didn't answer me'  
 b. Bana *akilli-ca* bir *şekil-de* cevap ver-me-di  
 I:DAT clever-ly one way-LOC answer give-NEG-PAST  
 'He didn't answer me cleverly' (but lit. 'in a cleverly way!')

Consequently, Fig. 1 has to be revised as follows:

ADJ	Opaque items	WFR-Adv (derivational)	WFR-Adv (compounding)	Transparent PPs/NPs (periphrases)
<i>klug</i> ,	<i>perhaps</i> ,	<i>quick-ly</i> ,	<i>glücklicher-weise</i>	<i>in my opinion</i> ,
<i>chiaro</i>	<i>misschien</i>	<i>recte</i>		<i>vapur ile</i> ,
				<i>xeloc kerpov</i>

Fig. 2 - The scale of ADV (2nd version)

The parameter for the scale is thus [ $\pm$ opacity]. This is highest at the left where adverbs are formally not distinguishable from their adjective counterparts (but see n. 6!), and decreases progressively, up to transparent periphrastic adverbial expressions (Prepositional Phrases or Noun Phrases).

### 3.2. ADV and VERB.

Also finite verbal forms can be lexicalized as adverbs. And here too the parameter [ $\pm$ opacity] is relevant. We find transparent formations that still retain the form of a main clause such as *peut-être que* in (5).

The most widespread lexicalization seems, indeed, to be the 'may/can be' (or 'happen')-type for the modal epistemic adverb 'perhaps', like in Fr. *peut-être*, Engl. *maybe* (cf. Russ. *može byt'*, Lith. *galbūt*, Latv. *varbūt*, Est. *võib-olla* etc.) or Du. *misschien* (cf. Norw. *kanskje*). When speaking of *perhaps*, *misschien*, *forse* we had already mentioned the tendency to univibration, that may result in a complete opacity of the

<sup>7</sup> In the present context we may disregard the fact that (9a) has a sentence adverb, whilst (9b) has a predicate adverb.

adverb.<sup>8</sup> Notice that in this univerbation process the complementizer may sometimes agglutinate into the new formation: Sber. *možda*, Slov. *morda*, lit. 'can-that', Alb. *mbase*, lit. 'hold/suppose-that'.

In other cases the verb 'can:3:SG' alone can play the same role, like in Pol. *może*, Lith. *gal* (near *galbūt*), Rum. *poate* (near *poate că*, lit. '(it) may that'), all meaning 'perhaps'. This confirms what we have seen in examples (5) and (7) regarding the fluctuating presence of COMP after adverbs and, at the same time, hints at a new fuzzy border of ADV, namely that with VERB (3:SG).

The opacity of forms such as Pol. *może*, Lith. *gal* used as adverbs is the same we find in adjectives such as *klug* or *chiaro* when used as adverbs. In both cases there is no formal cue of the adverbial status of the lexemes and only the syntactic context will disambiguate their function. This is the phenomenon usually known as "conversion". The noun *fun* 'amusement' is used as an adjective (= *funny*) in (10):

(10) That's not fun

In both cases (*može* and *klug*) we have to do with the reduction of a construction having sentential value as illustrated in (4): *è chiaro che... > chiaro che > chiaro = chiaramente* and (5) *peut-être que > peut-être*, or Rum. *poate că > poate*. The loss of functional load in the COMP element explains why it is possible to have it agglutinated to the verbal form (such as in Sber. *možda*, Slov. *morda*, Alb. *mbase*) on one side and overextended to adverbs not deriving from adverbial predicates like Fr. *heureusement que* in (6a), Latvian *saprotami / neticami, ka* in (8), on the other side.

Consequently, the second revision of Fig. 1 will look as follows:

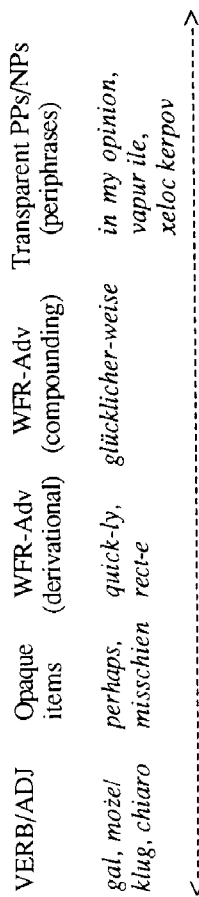


Fig. 3 - The scale of ADV (3rd version)

This figure better accounts for the opaque items of verbal origin such as *misschien* which are fairly frequent crosslinguistically.

However, when placing two categories, VERB and ADJ, at the same distance to the left of the prototypical instantiations of ADV, such as *perhaps* and *misschien*, we implicitly abandon the one-dimension scale

<sup>8</sup> Other nice examples of opacization are Friul. *salaçôr*, lit. 'if it is necessary', Prov. *be(n)/eu* probably from *bene leve*, lit. 'well light', Bret. *marize* lit. 'if it comes', all meaning 'perhaps'.

and move on to the model of a bidimensional radial set as illustrated by Lakoff (1987), Winters (1992) and many others (see also under 6.2). The set of ADV extends out towards other categories:

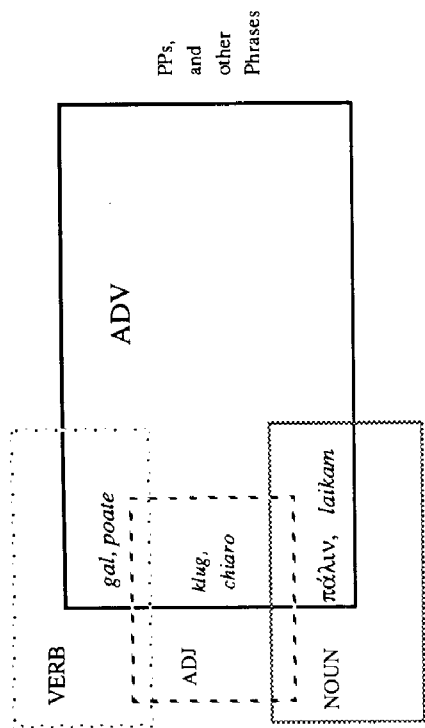


Fig. 4 - The radial set of ADV.

N.B. Of course we neglect here the problem of overlappings between ADJ and NOUN, VERB and ADJ (e.g. *like* both 'be fond of' and 'similar') and simply indicate in the figure that there may be an area where the two categories merge formally.

Adopting a radial model makes it possible to include in the scheme also those adverbs like *πόλις, laikam* (and even *merito(d)*) that are frozen forms of nominal declensions.

3.3. ADV and CONV.

The right border of ADV is given by criterion (i) of our initial definition: non-monolexic adverbial expressions (PPs, NPs) fall out of the category ADV as defined above.

Criterion (ii), on the other hand, shows a partial overlap of adverbs and converbs.<sup>9</sup>

<sup>9</sup> On the definition of converbs see Haspelmath (1995:3): "A converb is defined [...] as a *non-finite verb form whose main function is to mark adverbial subordination*. Another way of putting it is that converbs are verbal adverbs, just like participles are verbal adjectives". Cf. the following examples:

- (i) *Considering your height, your skill in basket-ball is unexpected (and, indeed, considering comes in this context very close to the meaning of 'in spite of', 'notwithstanding')*
- (ii) Die Beamten haben seinem Vorschlag *entsprechend* gehandelt
- (iii) *Nonostante* la pioggia uscì a fare una passeggiata
- (iv) La majorité, *hormis* deux personnes, vota le projet

The structure of an Adverbial Phrase, where adverbs function as heads of 'complex prepositions', may be the same as that of a Converb Phrase:

- (11) AdvP / \ PP  
 Adv / \ PP  
*contrariamente* / \ *a ogni aspettativa*

'contrary to every expectation';

- (12) ConVP / \ PP  
 Conv / \ PP  
*according* / \ *to every expectation.*

But then, the value of converbs comes near to that of adpositions (pre- or postpositions), not to simple adverbs that do not have arguments (cf. § 1). Actually, converbs like *according* are not modifiers of other constituents; adverbs are. *Considering*, *notwithstanding*, etc. cannot appear in isolation, which means that they cannot be omitted in the phrase where they appear, but adverbs can (see the analogy with prepositions as discussed under § 1). *Wisely*, *John dropped his cup of coffee* --> *John dropped his cup of coffee*, but not *Considering your height, your skill in basket-ball is unexpected* --> *\*your height, your skill in basket-ball....* On the other hand also the NP forming a PP together with the converb cannot be omitted: *\*Considering [...] your skill in basket ball is unexpected.*

However, non agreeing and unbound converbs may be considered as adverb equivalent. Kalmyk makes use of a form called 'converb' which is actually used for translating many English sentences that contain an adverb:

- (13) Namag *kündl-äd* xäru biçg biç-üv  
 1-ACC respect-cPRF in.return letter write-PS TP  
 'Kindly [lit. 'by respecting me'], he answered my letter'
- (14) Uxata [kün] *bol-äd*, nand xäru biçg biç-sn-uga  
 clever [man] be-cPRF 1:DAT in return letter write-nPERF-NEG  
 'Wisely/Cleverly [lit. 'being clever'], he did not answer my letter'
- (15) *Togtn-äd* cerg-t yargta-yar du yar-ç  
 be calm-cPRF soldier-DAT foolish-INST to talk-PS TI  
 'Wisely, he answered the soldiers' questions foolishly'

(note that in Old French we would have found *deux personnes hors mises!*); see Kortmann & König (1992).

N.B.: cPRF= 'converbum perfecti', which expresses the anteriority of the action/state of affairs versus that expressed by the main verb. PSTp= 'praeteritum perfecti', referring to a recent past. nPERF= 'nomen perfecti' in -*sz*, expressing a completed past action. PSTi 'praeteritum imperfecti'.

In (13) the converb is used transitively (*namag* = Pron. 1 Pers. Acc.), but in (14) and especially (15) it seems really to approach adverbial use, i.e. that of an unbound and omittable lexeme. This reminds us of some uses of gerunds such as It. *riassumendo*, Germ. *zusammenfassend* which semantically can be roughly compared to Engl. *briefly*, a Manner illocutionary adverb which qualifies (modifies) the entire sentence (and may be omitted, leaving a meaningful sentence):

- (16) Briefly, the public debt amounts to the totality of tax income.<sup>10</sup>

Cf. also Sanskrit (17-18):

- (17) *abhiśrāmam* juhoti  
 approach:GER:ACC sacrifice:PRES:3SG  
 'while approaching (scil.: the fire) he sacrifices'

- (18) *tantrām yuvatī abhyākṛāmam* vavataḥ  
 web:ACC maiden:DU:NOM go up:GER:ACC weave  
 'The two maidens weave the web while going up (scil.: to it)'

(MacDonell 1962:333). Notice in this example the absolute, unbound position of the gerund.

Converbs such as *togtnäd*, *riassumendo*, *zusammenfassend*, and *abhyākṛāmam* do indeed fit both our definition of ADV and Haspelmath's definition of CONV.<sup>11</sup> We already referred to the development of verbal forms into (complex) adpositions with the examples of *considering*, *entsprechend*, *nonostante*, *hormis* (cf. especially Kortmann 1992); in the same way we may speak of a categorial reanalysis of (non finite) verbal forms (participles and gerunds) as adverbs.<sup>12</sup> The process is basically the same that led *recte*

<sup>10</sup> Lonzi (1991a:587) is right in noticing "un uso specificamente avverbiale del gerundio [...] costituito dalle locuzioni con valore avverbiale di atto linguistico [...] e di inquadramento" as in:

(i) *Parlando con tutta franchezza*, l'impegno non è stato eccessivo

(ii) *Giudicando dai risultati*, l'impegno non è stato eccessivo

'Judging from the results,....'

These uses of gerunds leading to adverbial functions will be discussed in 6.2 (cf. ex. (21)).

<sup>11</sup> In support of the possible functional (but also formal) overlappings between adverbs and converbs also see the following remark by Haspelmath (1993: § 2.2): "Converbial constructions are generally not arguments but modifiers, and they generally modify verbs, clauses or sentences."

<sup>12</sup> A further functional similarity between ADV and CONV has to be noticed: Converbs may refer (i.e. have in their scope) the entire following sentence or just a part of it (normally the predicate):

out of the nominal paradigm and created an autonomous adverbial lexeme (from inflection to a derivational WFR).<sup>13</sup> Remember that non-agreement of the converbs is just one of the conditions for them to be considered as adverbs, the other condition being that they have to be unrelated to (not controlled by) any other element of the sentence. In the following example (see Kortmann 1988), the converb cannot be considered as an adverb:

- (19) *Given the present conditions, I think she's done rather well*

The same holds also for Latin absolute constructions: *auspicato* 'having observed the birds (for the omen)' may be considered as an adverb (> 'auspiciously'); *aubus auspicatis* (same meaning) may not (see Ramat 1991:345ff.). The opposition is the same as that obtaining between *merito(d)* and *maximo merito* discussed in the definition of ADV at the beginning of this paper.

The last modification of our scheme will consequently look as follows:

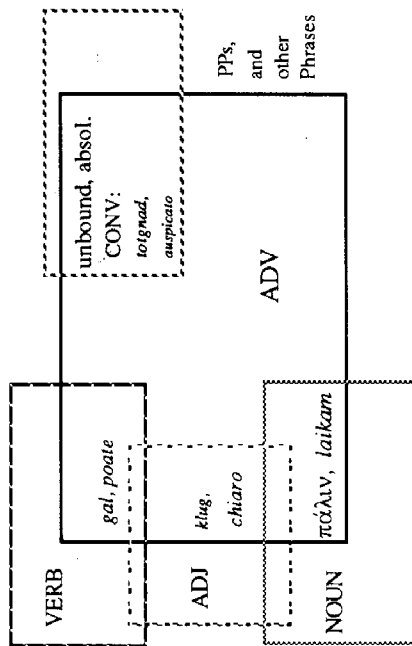


Fig. 5 The radial set of ADV (revised).

It might seem that we insist too much on the external, purely formal criterion of ADV as a class of lexemes. However, the coterminous

- (i) *Fumando* si rischia l'infarto  
'If you smoke you risk a heart attack'  
(ii) Si arrabbiò ferocemente e uscì dalla stanza *fumando*.  
'He got furious and went out of the room smoking.'  
Cf. the opposition between (ii) and (iv):  
(iii) *Wisely* he didn't answer me  
(iv) He didn't answer me *wisely*.  
<sup>13</sup> This process is fairly usual in language evolution: cf. participles and gerunds such as It. *rasente* 'near to, along-NP', Fr. *pendant* 'during', etc. which lost their connection with the corresponding verbal paradigm and were reategorized as prepositions (see Giacalone Ramat 1994).

phrases at the right of the ADV domain show that this criterion is necessary. Nothing would be gained from a generalized merging of PPs (such as *considering X, notwithstanding X* or even *two years ago*), absolute constructions (e.g. *the city of Sydney will organize, come 2000, the Olympic Games*), and 'free adjuncts' (e.g. *walking home John found a wallet*) into an undifferentiated large category ADV.

#### 4. Provisional conclusions.

We have seen that grammatical categories may formally and functionally be defined in an unambiguous way; but their lexical instantiations have fuzzy boundaries, as has been shown for participles, conjunctions, prepositions etc. (see, e.g., Kortmann 1992). Adverbs do not represent an exception to this general behaviour.

It has finally to be noted that the internal semantic differentiation between adverbs was not considered in this first part of the paper which aimed at a general definition of the category ADV, though some restrictions depending on the semantic value of the adverbs have implicitly been mentioned. The basic distinction between Sentence adverbs and Predicate adverbs does not seem to be relevant for the definition either (cf. note 7).

The aim of this first part has been to define the limits of the grammatical category ADV in relation to other contiguous categories. It is obvious that what has been said about the fuzzy boundaries of this category applies to other grammatical categories as well – at least to those which are contiguous to ADV.

## II. Which kind of prototypical structuring for the category ADVERB ?

### 5. Prototypes and lexical categories: the example of the category ADJECTIVE

We would now like to look more deeply into the category ADV itself, trying to detect some internal prototypical structuring. To be sure, several different treatments of parts of speech based on prototype semantics can be found in the literature, but adverbs have usually been excluded from this approach, or better simply ignored. Moreover, different authors do not seem to mean the same thing when they give a prototypical characterization of a part of speech. It may be useful to illustrate this point by referring to the part of speech Adjective, which comes intuitively nearest to Adverb (both share the feature of being



primarily modifiers; see 3.1) and has also probably been the first one to be characterized in a prototypical way.

Dixon's (1977) typological study showed that while some languages have a fully productive word class of adjectives, and other apparently have none, still others (e.g. Hausa, Igbo) possess only a limited, closed inventory of words functioning as adjectives. Now, these words happen to reflect the same set of concepts in different languages: dimensions ('long/short', 'big/small'), age ('old/new'), basic colours, value ('good/bad'). No language, according to Dixon's generalization, can possess a productive word class of adjectives without including words corresponding to this core set of concepts, which today could be labelled as 'prototypical property concepts' or even 'prototypical adjectives'.

Labelling Dixon's set as prototypical adjectives means to apply the frequency criterion of prototypicality/unmarkedness<sup>14</sup> (see e.g. Croft 1990:84-89): prototypical (unmarked) adjectives are those which are most frequently lexicalized as such in the languages of the world (and therefore even in languages with a small closed adjectival word class). More precisely, this is the crosslinguistic frequency criterion. One could reasonably hope that a second possible frequency criterion, namely token frequency in single languages which possess open adjective classes, will yield a coherent result: that is, adjectives corresponding to the core set of property concepts should turn out to have the highest ranks among adjectives in frequency lists based on real speech corpora.

Interestingly, Dixon gives other independent evidence (beyond crosslinguistic type frequency) to identify prototypical adjectives. Some languages possess broad or open classes of adjectives, but only a handful of them take plural inflections. This subgroup substantially overlaps with the core set identified above. This has to do with the behavioural criterion of markedness, again as stated in Croft (1990:79): prototypical members of a word class show more inflectional distinctions than other members of the class.

Finally, the structural criterion of markedness (cf. Croft 1990:72-76) lies in the very presuppositions of Dixon's research, namely in the fact that by enumerating the seven basic semantic subclasses of adjectives for English, only monomorphemic adjectives come into consideration. Somehow radically, Dixon (1977:74 n.10) treats derived adjectives (denominal like *noisy* or deverbal like *burning*) as 'deep nouns' and 'deep verbs' respectively; a weaker version of this statement may be agreed with, namely that adjectives morphologically derived from other

<sup>14</sup> The approach followed in Croft (1990) (especially pp. 124-154) seems to fundamentally identify prototypicality with unmarkedness. We are not completely convinced of the identity of the two concepts, since we think that the notion of prototype should always retain some cognitive basis: even when applied to linguistic categories, a prototype should remain "the most distinctive instance, the first example to come to one's mind" of the category, which is not necessarily the case for unmarked items. We agree with Croft, however, in believing that most criteria for unmarkedness could help, as diagnostic devices without defining power, to identify prototypical items as well.

parts of speech do not belong to the prototypical core of the category. This last viewpoint, which excludes derived items from prototypicality candidates, may be quite straightforward for adjectives, but can have dramatic consequences with adverbs, as we will see later.

The approach followed in Croft (1990, 1991) is not very different. Croft proposes a prototypical account of all three lexical categories NOUN, VERB and ADJECTIVE with respect to their semantic functions (almost nothing is said of adverbs, nor is it clear how they could fit in the frame<sup>15</sup>). The prototypical verb denotes actions and processes, the prototypical noun denotes physical objects, and the prototypical adjective denotes properties. The prototypicality (or unmarkedness) of the subclasses of nouns, verbs and adjectives which perform their basic functions is structurally reflected in morphology or syntax: prototypical nouns chiefly occur as monomorphemic items (*dog*), while (syntactic) nouns which denote properties (*happiness*) or actions (*arrival*) are often morphologically marked. Similarly, one finds marking devices for predications which do not denote actions and modifiers which do not denote properties.

In this approach, prototypicality does not necessarily imply fuzziness of borders (it is a prototypicality of the 'bird-type', if we follow for instance Geeraerts 1989:596). The word class definition criteria are functional: nouns are referential items, verbs are predicative items and adjectives are modifier items. Proper semantic criteria come into play later, to identify prototypical elements of each class. Thus a prototypical adjective is a modifier which denotes a property. Basically the same set of prototypical adjectives can be found in Dixon's and Croft's accounts, although Dixon's set is probably a proper subset of (still 'more prototypical') items than Croft's.<sup>16</sup>

Both accounts have some conceptual difficulty in delimiting the class of adjectives with respect to minor non-nominal, non-verbal classes, i.e. numerals, demonstratives, possessives and quantifiers. These items are intuitively felt to be outside the class of adjectives proper, but they can undoubtedly be seen as modifiers (particularly numerals and possessives), and in many languages (if not in English) they also show a grammatical behaviour very near or identical to that of adjectives. Indeed, items such as English *each* have sometimes been considered as atypical adjectives (Taylor 1989:185). Paradoxically, if items like numerals, possessives, demonstratives, quantifiers (or a subset of them)

<sup>15</sup> Incidentally, Croft (1990:186) refers to adverbs as denoting "verbal properties", so they would possibly lie somewhere near adjectives; but of course this semantic characterization holds only for a subclass of adverbs, namely Predicate Manner adverbs. In a footnote (Croft 1991:286 n.15), he refers to both manner and sentential adverbs as "core adverbs", saying that they "function as modifiers as well, but as modifiers of actions instead of (or as well as) modifiers of objects".

<sup>16</sup> In fact, Dixon's procedure shows so to say a double application of prototypicality criteria: first, a set of "basic adjectives" is isolated referring to English only, with the help of language-specific criteria; then the set of concepts denoted by those English adjectives is projected on a cross-linguistic "superprototypical adjectives" referring to Dixon's set.

are included among adjectives, they will immediately show up as very prototypical members of the class under many of the criteria stated above: (i) monomorphematicity; (ii) crosslinguistic frequency (at least for numerals, demonstratives and quantifiers) and token frequency (for all of them); (iii) number of distinctions (e.g. plural inflection for English demonstratives, formal distinction between attributive and predicative use for English possessives etc.). This is undesirable, since we could accept these items as borderline adjectives, but we surely do not want them to belong to the core of the category. Thus, we see that prototypicality may take different forms according to different criteria. Similar difficulties will be met when dealing with adverbs, and, indeed, probably occur in every attempt to treat lexical categories in term of prototype semantics.<sup>17</sup>

There is at least another sense in which prototype semantics has dealt with adjectives, this time trying to insert them in a macro-prototypical description of a whole Part-of-speech *continuum* NOUN - ADJECTIVE - VERB (note that adverbs are again excluded). From this point of view, adjectives as a whole constitute a non-prototypical part of speech, somehow intermediate between the two prototypical categories NOUN and VERB. In a way, ADJ can be considered as a possible instantiation of the fuzzy boundary between NOUN and VERB. This collocation would explain why only some languages lexicalize Property concepts via a special word class ADJECTIVE, while others treat these concepts together with verbs, others together with nouns and still others split them into the two prototypical word classes VERB and NOUN. Two different ways of interpreting and explaining this *continuum* are represented by Givón (1979) and Thompson (1989).

Givón (1979:320-322) argues that the NOUN-ADJ-VERB *continuum* is ordered according to the parameter of time stability. The least time-stable concepts (i.e. events) are lexicalized as verbs, the most stable (i.e. objects) as nouns, with adjectives lying in the middle. Stative verbs are non-prototypical instances of the category, and consequently in many languages they do not display the full behavioural features of prototypical verbs (e.g. they are excluded from some types of inflections).

Thompson accepts Givón's view of a VERB-ADJ-NOUN *continuum*, but rejects time-stability as the key ordering parameter. Adjectives, she argues, refer to entities which are generally as time-stable as those denoted by nouns. According to the author, the ordering parameter has

<sup>17</sup> Significantly, Croft (who does not remark the difficulty for adjectives, though mentioning numerals as an intermediate class between adjectives and nouns) deals with a similar problem concerning the category NOUN. He notes (Croft 1991:126-127) that personal pronouns "display the properties of being behaviorally unmarked relative even to core or prototypical nouns". He does not seem to see any problem, however, in labelling consequently personal pronouns as "superprototypical nouns", thus maintaining his substantial identification of prototypicality and unmarkedness. On the other hand, from the point of view of a more cognitive approach to prototypicality, it would be questionable to see a pronoun as "the best example of the category NOUN".

to be looked for in a discourse perspective. Adjectives in real discourse are employed with two functions: predicating a property like in *John is tall* (that's the most frequent use) and identifying a new referent, like in *I met a very nice person yesterday*. Adjectives share the first function with verbs, and the second one with nouns, hence their intermediate position between the two basic categories. Incidentally, one finding of Thompson's constitutes a major problem for Croft's description, and for everyone's intuition that attributive function is the most characterizing function of adjectives. If it is true that adjectives in real discourse are mostly employed as predicates, how can this fact be reconciled with the labelling of adjectives as basically modifiers, without dismissing the validity of the frequency criterion of markedness?

## 6. Looking for a prototypical structuring for the category ADVERB.

### 6.1. The main difficulty: the heterogeneity of the category.

The extreme heterogeneity of the supposed word class of adverbs is the first serious problem we are confronted with when trying to shed some light on the internal structuring of the category.<sup>18</sup> Even leaving aside a few very basic items that grammatical tradition normally labels as adverbs for want of a better choice ('yes/no' words, presentatives like French *voilà*, It. *ecco*, probably sentence negation as well), we are left with at least six main syntactically and/or functionally pretty distinct subclasses, which can in turn be split into many significant subdivisions. As a background to the discussion, a list of the main subgroups is given below.<sup>19</sup>

1) Predicate adverbs: these are the nearest to the etymological meaning of *ad-verb*, since they can be viewed as 'verb or verb-phrase modifiers', much like adjectives function as 'noun and noun-phrase modifiers'. Among them, the most productive class in many languages is given by Manner adverbs (roughly paraphrasable with 'in a X way': e.g. *quickly*), but other subtypes occur too which are equally tightly bound to the predicate, such as directional adverbs (*westwards*) and some items characterizing the predicate aspectually (*already*, *repeatedly*, *again* etc.);

2) Degree adverbs: they have the function of modifying a modifier (namely an adjective or another adverb): *very*, *extremely*, etc.;<sup>20</sup>

3) Sentence adverbs: the way these adverbs act as 'modifiers' is much more elusive than the two preceding subclasses, but surely their semantic scope can go beyond the single constituent, to embrace some aspect of

<sup>18</sup> This point is underlined for instance by Feuillet (1990:39). See now Bhat (1994:68ff.).

<sup>19</sup> Clearly, the subdivisions mentioned here are not meant to be exhaustive or universally accepted. Compare, among others, Greenbaum (1969), Quirk *et al.* (1972, 1985), Jackendoff (1972:47-107) and Dik *et al.* (1990).

<sup>20</sup> On Degree adverbs cf. now Peters (1993).

the whole utterance. In languages like English, this is a very wide class which is in turn very heterogeneous from both a semantic and functional point of view. Sentence adverbs could refer objectively to the event denoted by the utterance (e.g. *frequently*). More often they express some attitude of the Speaker, either concerning his evaluation of the event (*unfortunately, strangely*) or his commitment to the truth-value of the sentence (*probably, allegedly*). Still others rely on the illocutionary content of the sentence; they do not qualify the denotation of the sentence, but the speech act itself (*frankly* in the sense 'frankly speaking', *briefly* in the sense 'to be brief' etc.). To the class of Sentence adverbs probably belong the so-called 'Domain adverbs'<sup>21</sup> as well, which limit the domain in which the current assertion is meant to be valid (by the Speaker): *legally, logically, nominally* and so on.

4) 'Setting' adverbs of space and time, like *today, now, here, recently*. They could have been included in 3), as they generally also have the entire sentence in their scope, but there are some features which make them stand apart. Firstly, they can behave as arguments, when cooccurring with suitable verbs (*it happened yesterday, I live here*) which is not the case for adverbs, except (rarely) those under 1). Secondly, they can function as NPs and even be governed by prepositions (*today is a beautiful day, from here to there, until recently*).

5) Focalizers (*only, also, even, purely, exclusively*): these are highly deviant items among traditional adverbs, since they typically modify (have scope on) NPs rather than VPs or sentences. For some examples, see note 2.

6) Text adverbs (or 'conjuncts', 'connectives' and so on), like *firstly, consequently, nevertheless*: these items do not really pertain to the sentence level. Of course, syntactically they belong to a given sentence, but functionally they do not actually modify it. Rather, they operate on the textual level, giving textual coherence to a sequence of sentences; thus they are functionally very close to conjunctions. In many languages, however, their syntactic behaviour clearly distinguishes them from conjunctions (e.g. in German, when they occupy the forefield position, they force Verb-Subject inversion. Compare *aberCONJ ich hasse ihm nicht*, with *trotzdemADV hasse ich ihm nicht*).

## 6.2. A possible family resemblance structuring for English -ly adverbs.

Given the extreme heterogeneity of the category just sketched above, it is clear that the paradoxical situation exemplified for the Adjective category by items like possessives or demonstratives can play here a much more relevant role. Of course, one could simply give up the idea of the existence of a macro-category ADVERB and possibly try to look

for prototypical items within each subclass. It is a matter of fact, however, that traditional grammarians always grouped items under 1)-6) under a single label. Indeed, we started from this widespread consensus in proposing a definition of ADV at the beginning of this article. And this definition has proved to be viable in order to keep apart ADV from contiguous categories, so that the traditional point of view can hardly be considered as fully arbitrary. If it is difficult to subsume all subclasses 1)-6) under a single category with basic traits shared by all its members, it is equally hard to treat them as wholly unrelated.

Moreover, there is widespread morphological evidence supporting a common categorization of the items under 1)-6). In English, items derived through the -ly suffix occur in all six subclasses: -ly suffixation is the only productive deadjectival word-formation rule for adverbs in English, and new formations are frequent in all the three open classes 1)-3) (the other three classes are not so freely open, even if they do not constitute entirely closed sets either). This fact seems not to be an idiosyncrasy of English: unrelated suffixes like Italian/Spanish *-mente*, Ancient Greek *-os*, Finnish *-sti*, Albanian *-isht* or Armenian *-oren* seem to behave much the same way.<sup>22</sup> Moreover, many lexical items derived through -ly (and its parallels in the other languages cited) clearly belong to more than one subclass: e.g. *frankly, sincerely, wisely, strangely* both to 1) and 3), *surprisingly, incredibly* both to 2) and 3), *strongly, deeply* both to 1) and 2). Such a polyfunctionality is so systematic – both within and across languages – that it would make little sense to treat it in terms of multiple independent instances of fortuitous homonymy.

The macro-category ADV may at least be given a structuring in the shape of a family-resemblance (Wittgenstein 1953), where each subclass shares some features with its neighbours, but no common defining feature holds for all subclasses.

As discussed in § 2, a family resemblance structuring of a category does not necessarily imply the existence of prototypical instances of that category (Kleiber 1990). It does not exclude it either, however: if the different subclasses can be seen as different meaning and/or functional extensions starting from a common source, this source subclass can be viewed as the center of a radial category (Lakoff 1987:91), with its members qualifying for prototypical status.

As an illustration of this approach we can take a proper subset of the macro-category of English adverbs, i.e. -ly adverbs. This open class exhibits the same heterogeneity of the whole category ADV, while having the advantage of being morphologically well defined.<sup>23</sup>

<sup>22</sup> Data for these (and many other) European languages have been collected through a questionnaire for the EURO-TYP research project on Sentence adverbs; cf. Ramat & Ricca, in press.

<sup>23</sup> For sake of brevity, we shall restrict the discussion to English, keeping in mind that most examples could easily find their equivalent in the above mentioned languages (and many others) which possess a similar deadjectival adverbial suffix.

<sup>21</sup> The term 'Domain adverbs' is due to Bellert (1977); cf. now Bertuccelli Papi (1992).



In this case, the transition from (24) to (25) also cancels the last traces of the Manner semantics, which could perhaps be considered as still partially present in (24).

Modal adverbs like *probably* could also provide the link with the most deviant category of *-ly* items, namely focalizers (*exclusively, precisely, especially, equally*). As already noted above, these last items have a very atypical feature, since they can act directly on NPs:

- (26) a. *Especially* John was impressed  
b. I mean *precisely* this.

But also probability adverbs can take just a NP in their scope:<sup>25</sup>

- (27) At the meeting you'll *probably* see John and *perhaps* Mary.

If we compare focalizers with Predicate adverbs, we get – together with the disappearance of Manner semantics – a nearly complete reversal of functional properties (apart from the common macro-feature of Modifier): instead of a verb-modifier we deal here with an all-constituent modifier, nouns included (not to mention the fact that focusing is a very special sense of modifying). Nevertheless, a family resemblance structure could still account for such a dramatic evolution, provided that the hypothesized bridge given by modal adverbs is acceptable.

In most of the cases seen above, the extensions of *-ly* adverbs starting from the supposed central role of Manner verb-modifiers primarily had a functional character: i.e. some items acquired new modifying capabilities (adjectival phrases, sentences) without any abrupt change in meaning. That's why so many items can occur in more than one of the subclasses 1)-3). In the case of aspectual (or action-quantifying) adverbs like *repeatedly*, on the other hand, the contiguity with the Manner *-ly* class is more a continuity of scope than one of inherent semantic value: both subgroups are predicate modifiers ("he *furiously* knocked / knocked *repeatedly* at the door"), while the semantics of aspectual adverbs has less to do with Manner and can mainly be inferred from the base adjective.

To be sure, action-quantifying adverbs can also extend their scope beyond the predicate on the whole sentence: that's very often the case with adverbs like *frequently, usually*. When they quantify over the whole state of affairs, they can even have scope on quantifiers bound to the predicate, as *frequently* does on *twice* in (28):

- (28) I *frequently* ring the bell *twice*<sup>26</sup>

A further step is exemplified by time (and space) setting adverbs, which can only have sentential scope, such as in (29-30):

- (29) *Recently*, I met one of your friends  
(30) *Locally*, the economical situation is pretty good

Thus, adverbs semantically related to temporal-aspectual properties of the event (and the rare place adverbs ending in *-ly*, like *locally*) can lose the last property they share with the central subclass of Manner predicate adverbs, namely the restriction to Verb and Verb Phrase modification, as it may happen in categories structured according to family resemblance. Taking these already marginal items as the starting point for a further shift, the last subclass, namely Text adverbs, can be reached. The link can be provided by adverbs ordering event sequences, like in (31):

- (31) *Firstly*, I went and picked up mushrooms, *secondly* I cleaned and cooked them, and *finally* I could enjoy a fantastic meal

These same adverbs can in fact act as conjuncts, being employed to order textual sequences instead of event sequences. See e. g. (32):

- (32) *Firstly*, he's not so clever; *secondly*, he is not suitable for that job; and *finally*, I do not like him at all

Summing up what has been presented so far, meaning and functional extensions of *-ly* adverbs in English seem clearly to possess an orientation in which Manner predicate adverbs are a central starting point. Therefore, the structuring of *-ly* adverbs (and their equivalent in other languages) resembles Lakoff's (1987) "radial category" and may allow us to assign a prototypical character to Manner predicate adverbs, at least within this morphologically well-defined lexical subclass. The whole picture can be summarized under the scheme below:

<sup>26</sup> Action-quantifying adverbs and their double scope possibilities are currently being studied by J.C. Moreno. Referring to (28), he would label *frequently* as Iterative Adverbial Quantifier and *twice* as Multiplicative Adverbial Quantifier (Moreno 1991).

<sup>25</sup> The focusing properties of Sentence adverbs have been particularly stressed and studied by Koktová (1986a, 1986b).

Fig. 6 shows some other links which connect subclasses other than the central one. There are many lexemes with both a Sentence adverb and a Degree adverb function, which can be employed as Predicate adverbs only marginally. This is especially the case for evaluative Sentence adverbs: e.g. *astonishingly in astonishingly, he didn't accept the proposal and an astonishingly good work*. But on the whole the central role of Manner adverbs for the class of *-ly* adverbs seems to be clear.

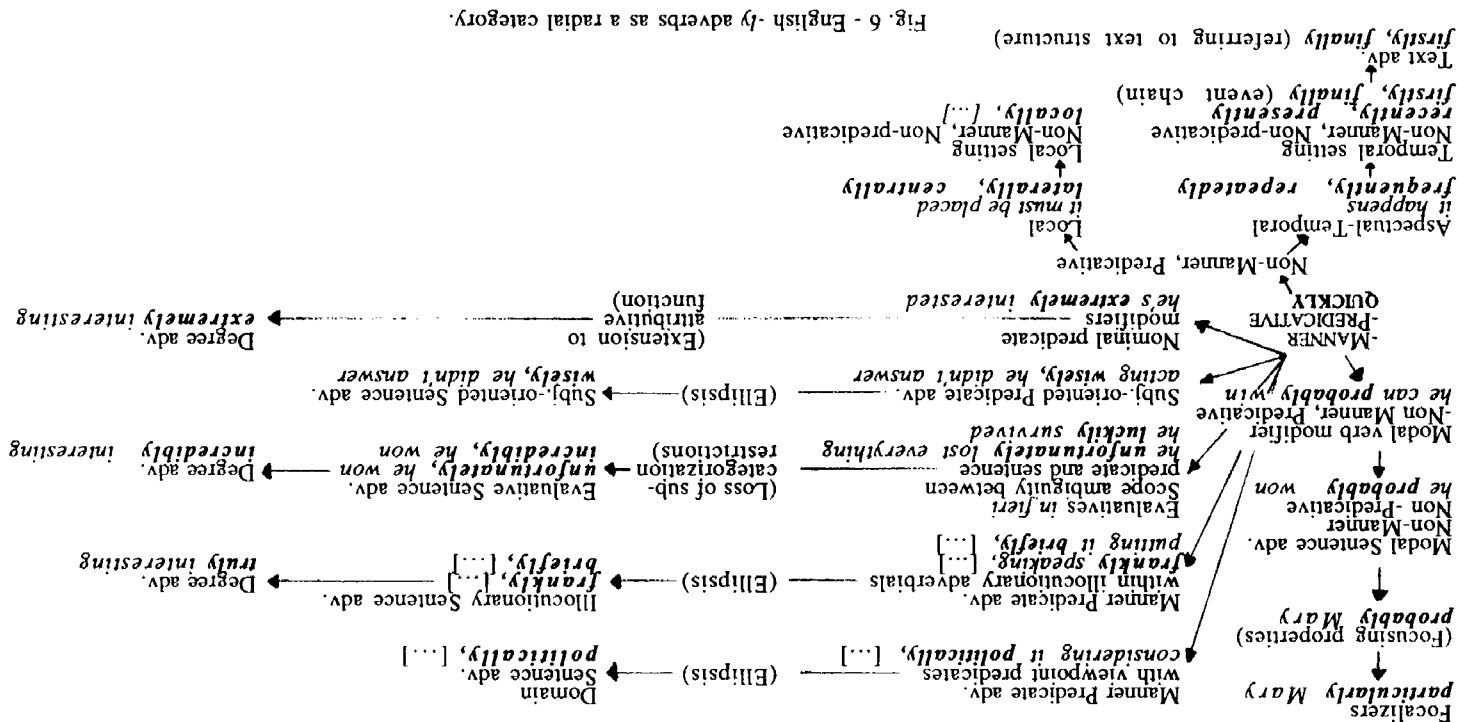
The scheme in Fig. 6 is complementary to that in Fig. 5. While the latter tries to define the external boundaries of the category ADV towards other coterminal categories, the former attempts to sketch the internal structure of the most productive subgroup of English adverbs. The crosslinguistic dimension of Fig. 5 makes it more appropriate to use the notion of prototype in the strictest sense and basically relies on formal criteria. Fig. 6 refers, on the contrary, to a particular language with its semantic and functional shifts, so that the concepts of radial category and family resemblance seem to apply more convincingly.

## 7. A different approach to adverb prototypes

### 7.1. Prototypical adverbs according to frequency and structural criteria

The approach described and exemplified in § 6 is surely not the only possible way of applying the notion of prototype to adverbs. In § 5 the concept of prototypical adjectives has been shown to rely heavily on frequency criteria, both within and across languages. If this kind of evidence is also looked for in adverbs, no support for Manner Predicate adverbs as prototypical instances of the category can be found.

To begin with crosslinguistic type frequency, it is a matter of fact that many languages (such as notably German and Dutch, cf. n. 4) do not lexicalize Manner Predicate adverbs through a separate productive part of speech. Several other examples in a balanced sample can be found in Hengeveld (1992), who proposes a Part-of-speech implicational hierarchy of the form Verb > Noun > Adjective > Manner Adverb: if a language has an independent Part of speech among those mentioned in the hierarchy, then it also has all those on its left. It is true that the universality of Manner adverbs would not automatically run counter to their supposed prototypical status, since languages which do not possess any strategy for lexicalizing adverbs as a separate part of speech would be simply not relevant to that claim. The thorny issue is, however, that most languages – including most of those without a productive class of Manner adverbs – appear to possess a core of lexical items which are usually subsumed under the label 'Adverb': temporal and spatial setting items meaning 'here', 'today', 'now' (especially the deictic ones), time quantifiers like 'never', 'always', 'often', 'some Degree adverbs ('very',



'more', 'less'), focusing items like 'even', 'also', 'only', and at least 'perhaps' among Sentence adverbs. Thus it is this heterogeneous core group, and not Manner Predicate adverbs, which qualifies for prototypical status under the criterion of crosslinguistic frequency.

Fairly coherent results can be found taking into account the language-specific criterion of textual token frequency. In English and Romance languages at least, many of the non-Manner 'core adverbs' rank far above the first representatives of the productive Manner adverb class in every frequency word list. Not surprisingly, structural evidence also points to their prototypicality: they are all basically unanalyzable, monomorphemic items, at least synchronically. Historically many of them can derive from univertation processes (see e.g. *al-ways*, *al-so*, *to-day*, *per-haps*, just to mention English), but definitely not from productive word-formation rules (for more discussion on this topic we refer back to Part I). On the other hand, there are relatively few non-derivational Manner Predicate adverbs: English has only *well* and *fast*, French *bien*, *mal*, *mieux* and *vite* only.

## 7.2. Frequency and meaning for English -ly adverbs.

More intriguingly, the supposed central status of Manner predicate adverbs as hypothesized in 6 is threatened even within the realm of morphologically derived -ly adverbs. At a closer look the most frequent members of this subclass turn out not to be Manner predicate adverbs at all. A survey of frequency lists of the LOB Corpus for British English (Hofland & Johansson 1982) and of the Brown Corpus for American English (Kučera & Francis 1967) – two 1,000,000-words corpora of modern, written, basically non-dialogic language, built on exactly the same criteria for purpose of comparability – gives the results reported in the next page.

Barring *only* and *early* which do not properly belong here (they are also adjectives and they are no longer transparent derivations), we consider the first 50 -ly adverbs, ordered according to token frequency. First of all, the two corpora are fairly consistent: 43 out of 50 entries occur in both lists, most discrepancies being due to the necessary arbitrariness of the cut-off point.<sup>27</sup>

<sup>27</sup> Only one British adverb (*mainly*) and three American adverbs (*approximately*, *primarily*, *greatly*) among the first 40 of each list do not occur among the first 50 of the other list. Only four adverbs show an unbalanced distribution between the two corpora which is significant using a chi-square test (0.001 s.l.), namely *directly* and *apparently* (prevalently American), *quickly* and *mainly* (prevalently British). Perhaps the most significant difference is that in the British corpus -ly adverbs are on the whole slightly more frequent than in the American corpus: the first 50 outnumber their American counterparts by a 15% factor (5869 against 5086) and the fiftieth is around rank 1750 in the British corpus, around rank 2175 in the American corpus (word definitions are the same in both corpora, so that ranks are comparable: in neither counts there is any lemmatization or separation of homographs whatsoever).

Am. Eng.		Brit. Eng.		Am. Eng.		Brit. Eng.	
Adv.	Occ.	Adv.	Occ.	Adv.	Occ.	Adv.	Occ.
(only)	1747	(only)	1813	entirely	91	entirely	105
(early)	366	really	313	frequently	91	exactly	105
really	275	(early)	283	<b>quickly</b>	<b>89</b>	highly	99
probably	261	probably	279	<b>carefully</b>	<b>87</b>	naturally	97
usually	206	usually	239	relatively	85	possibly	93
finally	191	certainly	235	slightly	83	equally	89
<i>simply</i>	170	<i>particularly</i>	235	fully	80	<i>mainly</i>	86
actually	166	suddenly	174	approximately	71	largely	85
<i>especially</i>	160	<i>especially</i>	167	naturally	70	fairly	84
suddenly	153	finally	166	largely	68	relatively	81
<i>particularly</i>	146	nearly	165	<b>close</b>	<b>66</b>	<b>rapidly</b>	<b>77</b>
certainly	143	<b>quickly</b>	<b>150</b>	<b>rapidly</b>	<b>65</b>	apparently	76
<b>directly</b>	<b>141</b>	hardly	139	<i>primarily</i>	64	<b>close</b>	<b>75</b>
nearly	141	<i>simply</i>	133	<i>equally</i>	62	<b>carefully</b>	<b>73</b>
<i>merely</i>	135	generally	130	greatly	62	eventually	71
generally	132	completely	129	<b>(friendly)</b>	<b>61</b>	<b>directly</b>	<b>70</b>
clearly	128	<b>easily</b>	<b>129</b>	possibly	60	frequently	68
apparently	125	recently	127	heavily	60	<b>quietly</b>	<b>67</b>
immediately	123	surely	126	fairly	58	previously	64
recently	123	obviously	124	previously	58	<b>perfectly</b>	<b>60</b>
<b>slowly</b>	<b>115</b>	clearly	124	<b>properly</b>	<b>55</b>	normally	60
obviously	114	<i>merely</i>	120	practically	53	sufficiently	60
completely	110	actually	114	eventually	52	necessarily	59
<b>easily</b>	<b>106</b>	fully	111	widely	52	<b>gently</b>	<b>59</b>
hardly	106	immediately	106	<b>gradually</b>	<b>51</b>	widely	59
<i>exactly</i>	103	slightly	106				
highly	94	<b>slowly</b>	<b>106</b>				

(Occ. = Occurrences)

In the list above, those items which function basically as Manner Predicate modifiers are given in boldface, while italics are used for focalizers (see below) and other classes are not marked. Admittedly, there is some unavoidable uncertainty in assigning a class to each adverb. As already seen in § 6, -ly adverbs can often have more than one function: e.g. they can act both as sentence and verb modifiers, or verb and adjective modifiers, and so on. *Perfectly*, for instance, has been placed among Manner adverbs although it can also serve as Degree adverb (cf. *he played his part perfectly vs. you're perfectly right*). The opposite choice has been made for *fairly*, privileging its intuitively more frequent use as Degree adverb. Since we had not access to the contexts



of occurrence, we could not split up the figures correctly in those cases of polyfunctionality.<sup>28</sup>

Nevertheless, this amount of quantitative uncertainty is unlikely to affect the qualitative result. Among the most frequent *-ly* adverbs, Manner Predicate adverbs clearly show up as a minority, both as tokens and as types. It is perhaps useful to compare them with focalizers, a "fairly limited set of items" (Quirk *et al.*, 1972:431) and a neatly definable subclass as well. Both the American and British lists display seven of them, with almost perfect consistency – apart from the nearly synonymous couple *primarily/mainly*. Their total token frequency alone outnumbers that of Manner Predicate adverbs among the first 50 items.

To be sure, this count disregards all adverbs with lower token frequency, which would give a majority of Manner adverb types. However, since we are looking for candidates for prototypical status, it is certainly reasonable to limit ourselves to the first 50 entries. It seems then undisputable that high-frequency *-ly* adverbs distribute among the different subclasses given in § 6, confirming the pattern displayed by the core undervived items like *today*, *even*, *always*, *perhaps* and heavily disconfirming a central status of Manner Predicate adverbs even in their most favourable domain.

### 7.3. A comparison with Romance -ment(e) adverbs.

The results given here for English can be checked in three main Romance languages which possess a similarly productive deadjectival derivation strategy, namely Sp. / It. *-mente* and Fr. *-ment*. These languages happen to possess frequency counts on 500,000 word corpora of written language which, if not precisely comparable with English corpora – for instance they include drama, and their texts span over the whole century –, have been built intentionally with the same criteria, so that they are fairly comparable with each other. The lists for the three languages are given below:

Fr. Adv.	Occ. (on 500,000)	It. Adv.	Occ.	Sp. Adv.	Occ.
<i>seulement</i>	258	<i>solamente</i>	284	<i>precisamente</i>	74
<i>vraiment</i>	111	<i>specialmente</i>	110	<i>solamente</i>	51
<i>evidemment</i>	68	<i>veramente</i>	83	<i>naturalmente</i>	48
<i>simplement</i>	66	<i>certamente</i>	59	<i>especialmente</i>	45
<i>particulièrement</i>	61	<i>finalmente</i>	54	<i>perfectamente</i>	45
<i>naturellement</i>	59	<i>naturalmente</i>	53	<i>seguramente</i>	43
<i>exacément</i>	56	<i>completamente</i>	48	<i>completamente</i>	42
<i>complètement</i>	52	<i>particolarmente</i>	44	<i>directamente</i>	33
<i>parfaitement</i>	51	<i>probabilmente</i>	39	<i>immediatamente</i>	32
<i>actuellement</i>	47	<i>precisamente</i>	37	<i>principalmente</i>	32
<i>brusquement</i>	46	<i>generalmente</i>	36	<i>unicamente</i>	31
<i>précisément</i>	46	<i>directamente</i>	34	<i>verdadamente</i>	30
<i>absolument</i>	45	<i>perfectamente</i>	34	<i>exclusivamente</i>	29
<i>immédiatement</i>	39	<i>facilmente</i>	31	<i>rapidamente</i>	27
<i>certainement</i>	37	<i>evidentemente</i>	28	<i>facilmente</i>	25
<i>autrement</i>	36	<i>assolutamente</i>	26	<i>definitivamente</i>	24
<i>généralement</i>	35	<i>essenzialmente</i>	26	<i>constantamente</i>	22
<i>justement</i>	35	<i>rapidamente</i>	25	<i>probabilmente</i>	22
<i>heureusement</i>	34	<i>recentemente</i>	24	<i>absolutamente</i>	20
<i>(notamment)</i>	34	<i>lentamente</i>	23	<i>finalmente</i>	20
<i>facilement</i>	31	<i>attualmente</i>	21	<i>realmente</i>	20
<i>nullement</i>	30	<i>immediatamente</i>	21	<i>propriamente</i>	19
<i>directement</i>	29	<i>necessariamente</i>	20	<i>totalmente</i>	19
<i>réellement</i>	29	<i>relativamente</i>	20	<i>igualmente</i>	18
<i>entièrement</i>	26	<i>exclusivamente</i>	20	<i>paramente</i>	18
<i>légerement</i>	24	<i>improvvisamente</i>	19	<i>seccellamente</i>	17
<i>relativement</i>	24	<i>profondamente</i>	17	<i>particolarmente</i>	17
<i>tellement</i>	23	<i>semplicemente</i>	17	<i>eternamente</i>	16
<i>aisément</i>	22	<i>largamente</i>	16	<i>recentemente</i>	16
<i>profondément</i>	22	<i>realmente</i>	16	<i>simplemente</i>	16
<i>sûrement</i>	22	<i>notevolmente</i>	15	<i>ciertamente</i>	15
<i>fortement</i>	21	<i>continuamente</i>	14	<i>generalmente</i>	15
<i>probablement</i>	21	<i>giustamente</i>	14	<i>claramente</i>	14
<i>suffisamment</i>	21	<i>successivamente</i>	14	<i>profundamente</i>	14
<i>longuement</i>	20	<i>effettivamente</i>	13	<i>frequentemente</i>	13
<i>principalment</i>	20	<i>esaltamente</i>	13	<i>lentamente</i>	13
<i>sérieusement</i>	20	<i>ugualmente</i>	13	<i>nuevamente</i>	13
<i>malheureusement</i>	19	<i>leggermente</i>	12	<i>suficientemente</i>	13
<i>uniquement</i>	19	<i>praticamente</i>	12	<i>anteriormente</i>	12
<i>habituellement</i>	18	<i>propriamente</i>	12	<i>arbitrariamente</i>	12
<i>nécessairement</i>	18	<i>appositamente</i>	11	<i>exacatamente</i>	12
<i>forcément</i>	18	<i>diversamente</i>	11	<i>indubabilmente</i>	12
<i>infimement</i>	17	<i>dolcemente</i>	11	<i>seriamente</i>	12
<i>largement</i>	17	<i>regolarmente</i>	11	<i>enteramente</i>	11
<i>constamment</i>	16	<i>definitivamente</i>	10	<i>intensamente</i>	11
<i>proprement</i>	16	<i>fortemente</i>	10	<i>tranquilamente</i>	11
<i>purement</i>	16	<i>netamente</i>	10	<i>afortunadamente</i>	10
<i>spécialement</i>	16	<i>strettamente</i>	10	<i>aproximadamente</i>	10
<i>doucement</i>	15			<i>vagamente</i>	10
<i>éventuellement</i>	15				
<i>pratiquement</i>	15				
Totals	1863		1534		1127

<sup>28</sup> A further problem may concern a couple of items, *immediately* and *suddenly*, whose semantics could possibly be considered borderline between Time and Manner; it seems rather clear, however, that these adverbs act at the sentence level, qualifying the whole state of affairs and not the predication alone; thus they do not belong to the subclass of Manner Predicate adverbs.



Despite the differences in overall frequencies (if the corpuses were to be considered even roughly comparable, it would result that *-ment(e)* adverbs in Romance are globally much less frequent than *-ly* adverbs in English), the pattern displayed in these three Romance languages is remarkably similar to the one shown in English: Predicate Adverbs are a minority among the most frequent *-ment(e)* adverbs, and can hardly be found in the very highest ranks. The semantics of the most common items is fairly similar too. The most frequent Manner Predicate adverbs neatly correspond to English *directly*, *quickly* and *easily*, the same focalizers occupy many of the highest ranks, and all other subclasses are well represented: Sentence adverbs (It. *certamente*, *naturalmente*, *probabilmente*, *generalmente*), Degree adverbs (*completamente*, *assolutamente*), temporal setting adverbs (*recentemente*, *attualmente*) and possibly even conjuncts (*finalmente*).

It might be objected that these data concern corpuses based exclusively on written material. However, although no frequency dictionary is available, to our knowledge, for the well-known London-Lund corpus of Spoken English, a comparison could be made between written and spoken Italian, as the first Frequency Lexicon of Spoken Italian (LIP) has recently appeared (De Mauro *et al.* 1993). The corpus is exactly the same size as Juilland and Traversa's corpus of written, literary Italian, namely about 500,000 words. The differences between the two lists are immediately noticeable: interestingly, as concerns *-mente* adverbs, data for Spoken Italian display a still more pronounced prevalence of non-Manner Adverbs among the high-ranking items, together with a strong increase in their absolute frequency.<sup>29</sup> Since spoken language should in principle be considered the most suitable source for markedness considerations based on frequency, this fact strongly supports the primacy of non-Manner meanings even for derived adverbs. The frequency list of LIP – for the first 25 items only – is given below. The list of Juilland and Traversa is reported next to it for comparison:

Spoken Italian LIP		Written (Literary) Italian Juilland & Traversa	
Adv.	Occ.	Adv.	Occ.
veramente	243	<i>solamente</i>	284
praticamente	203	<i>specialmente</i>	110
naturalmente	137	veramente	83
sicuramente	132	certamente	59
probabilmente	122	finalmente	54
ovviamente	108	naturalmente	53
certamente	103	completamente	48
assolutamente	97	<i>particolarmente</i>	44
completamente	69	probabilmente	39
<b>direttamente</b>	<b>65</b>	<i>precisamente</i>	37
chiaramente	63	generalmente	36
giustamente	63	<b>direttamente</b>	<b>34</b>
evidentemente	62	<b>perfettamente</b>	<b>34</b>
<i>solamente</i>	57	<b>facilmente</b>	<b>31</b>
effettivamente	52	evidentemente	28
<i>semplicemente</i>	50	assolutamente	26
eventualmente	45	essenzialmente	26
<i>esattamente</i>	37	<b>rapidamente</b>	<b>25</b>
immediatamente	35	recentemente	24
normalmente	32	<b>lentamente</b>	<b>23</b>
personalmente	31	attualmente	21
estremamente	27	immediatamente	21
<i>particolarmente</i>	26	necessariamente	20
<b>perfettamente</b>	<b>26</b>	relativamente	20
sinceramente	26	<i>esclusivamente</i>	20

#### 8. Conclusions

In the previous discussion (sections 6 and 7) we have attempted to show that in the domain of the lexical category ADVERB different criteria for prototypicality can give contradictory results.

On the one hand, non-Manner meanings and non Verb-modifying functions for derived deadjectival adverbs seem to be secondary, in the sense that they could be logically derived from the Manner function, in terms of meaning extensions, loss of subcategorization constraints, ellipsis of predicates, while the opposite direction seems to be highly unrealistic. Diachronic evidence also supports this view.

<sup>29</sup> As already noted by the authors of LIP (De Mauro *et al.* 1993:131-132), this shift towards the upper ranks concerns essentially those items which are not tightly bound within the sentence, but rather ensure textual connection or simply perform a phatic function, by keeping the communication channel open during the gaps which characterize real, unplanned discourse.

On the other hand, as regards the frequency of adverbs in real discourse, the primacy of Manner adverbs is untenable: the most frequent functions appear to be exactly those which cannot be logically and diachronically primary, namely sentence and adjective modification or even focusing. Structural data support this second point of view, since Manner adverbs are overwhelmingly built through derivational rules, while Sentence, Degree or focusing adverbs display a greater amount of monomorphemic, totally opaque items.

The main problem with this second approach is that the group of core items suggested by frequency and structural criteria still exhibits the whole semantic and functional heterogeneity of the traditional category ADVERB. We are faced with the paradox that items like *also* or *today* could be reasonably ruled out of the category ADVERB due to their very atypical functional properties, but if they are admitted to the class, they turn out to be fairly prototypical members. They satisfy the traditional criteria for prototypicality, but much less the criteria for mere membership. This is a strong confirmation of Kleiber's claim that the main difficulty for prototype theory does not reside in discovering prototypes, but in establishing the sets among which they can be looked for (Kleiber 1990:138-46).

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