Abstract
The paper examines short adverbs such as *drive slow* and *eat spicy* in French and English. In the first case, *slow* refers to a quality of a process (“manner”), while in the second *spicy* denotes a quality of the food (“inner object”). The modification effects of such verb-adjective (VA) structures are located within a newly created event-modification frame. Far from being simple verb modifiers in the sense of “manner” modification, the qualitative analysis shows that short adverbs also refer to other event features: e.g. instrument, source, goal, result, circumstance and the speaker’s attitude. In this way, the approach can be seen as a linguistic method for echo-sounding the semantic grounds of the event frame. The fact that approximately 18,000 examples are available in the corpus allows for the quantification of event features in terms of a general modification profile of VA structures (as opposed to the individual modification profiling in a single example). The results are used to discuss the relationship between structure and construction, the latter being a cognitive development of the former. In addition, the controversial hypothesis of syntax reduction is discussed with the hypothesis of semantic elaboration from baseline VA structure.

1. Introduction

The paper examines phrases such as *to drive slow* which combine a verb (V) with a modifier usually called a short adverb, which is morphologically identical to the adjective (A). These phrases will be referred to as VA structures. VA structures may be used with explicit arguments as in (1), with the intransitive verb *to sleep*, and in (2), with transitive *to wipe*:

(1) S/he sleeps deep.
(2) The windows were wiped clean. S/he wipes the windows clean.

While the verb-argument analysis is usually part of sentence based syntax, lexical approaches describe the same facts in terms of verb valency, (1) showing the syntactic properties of the monovalent verb *to sleep*, which only takes a subject, and (2) the properties of bivalent *to wipe*, which takes both a subject and a direct object.

Verbs such as *to drive* are monovalent or bivalent, i.e. intransitive or transitive. However, their combination with a short adverb entails a restriction to the detriment of transitivity, at least in terms of frequency. According to native speakers, (4) is completely unusual:

(3) S/he drives slow.
(4) *S/he drives slow her car. *She drives her car slow.

The tendency to reduce the overt argument structure in favor of a semantically implicit communicative relevance (‘inner object’) is a widespread property of using short adverbs. In (5) *spicy* refers to a property of the food, not to the way eating is realized, as in *to eat fast*. Yet the direct object is not overtly expressed:

(5) Mexicans eat spicy.

Crucially, *spicy* cannot be replaced by the manner adverb *spicily*, unlike in (3,4), where *slow* can be replaced by *slowly* since both refer to the way of executing the event (“manner”). The modification in (5) instead belongs to the adjectival type: the food is spicy. This means that *short adverb* is not an adequate term for cases such as (5). It may be argued that (2) and (5) are not short adverbs but secondary predicates, but this (heuristically useful) terminological distinction should not make us
of these properties. However, the underlying semantic unity of these properties suggests that they should be considered as a single, unified system. In this view, the processes of nominalization, adverbization, and the like can be seen as mechanisms for extending the range of possibilities available within the primary predicate structure. This perspective is consistent with the notion of a semantic continuum, where the different levels of language are not seen as distinct and isolated but rather as parts of a continuous spectrum of possibilities. For example, the process of nominalization can be seen as moving from a verb to a noun, but this move is not purely syntactic; it also involves changes at the semantic level, as the noun may carry additional information that is not present in the verb.

In sum, the study of adverbs and secondary predicates provides evidence for the idea of a semantic continuum, where the different levels of language are not seen as distinct and isolated but rather as parts of a continuous spectrum of possibilities. This perspective has implications for our understanding of the nature of language and its role in human cognition, suggesting that the processes of adverbization and nominalization are not simply syntactic but also have semantic implications that are not always immediately apparent.
pragmatic purpose. The ideal of ‘complete sentences’ is a dogma of normative teaching and idealistic syntax, to the point that we all have to learn in school how to speak and write whole sentences, for the simple reason that spontaneous oral syntax scarcely contains complete sentences, but rather chunks of discourse (Schiffrin 1987: 31).

Section 2 provides an outlook on the general linguistic background from a typological point of view. Section 3 describes the French corpus. Section 4 suggests a general event-modification frame for the analysis of the semantic effects of verb modification in the data. Section 5 provides a typology of these semantic effects. These data are used for a quantitative description of the event-modification profile in Section 6. Section 7 discusses some theoretical methodological consequences of the empirical results.

2. Typological and variationist background

So-called short adverbs are morphologically identical with the adjective (Valera Hernández 1996). In Indo-European languages, the adverb generally takes (one of) the neuter form(s) of the adjective (e.g. Old English hearde > Mod. Engl. hard (adj./adv.), Mod. Swedish roligt ‘funny’ with neuter –t ending) or the unmarked form (e.g. Sp. alto / Fr. haut ‘loud’ < Lat. altum (neuter)), the Modern English adjective being always morphologically unmarked, independently of its syntactic function as an adjective or as an adverb.

The categorical ambiguity of these modifiers with regard to their adjectival and adverbial functions can be situated in a broader typological perspective. According to Hengeveld (1992), languages belong to three types. Flexible languages use adjectives for both adjectival and adverbial functions (in this paper: Type A). This is the case for Germanic languages and Old English. Short adverbs conserve this type in Modern English (e.g. a good man (“adjective”); to feel good (“adverb”)). The traditional analysis of the former as an “adjective” and the latter as an “adverb”, not only in terms of syntactic function but also terms of word-class, conflicts with this typological insight. As a matter of fact, their adjectival or adverbial function is determined only by syntax. For the sake of clarity, I use quotation marks when I use the traditional word-class categorization “adjective” and “adverb” with regard to Type A, where the syntactic functions vary on the basis of only one word-class, the adjective. Rigid languages use other word-classes, e.g. prepositional phrases with a noun such as with care (Type C). Differentiated languages separate two word-classes at the morphological level, e.g. Engl. slow (adj.) and slowly (adv.), the latter being derived from the former by suffixation with –ly (Type B). Most Romance languages, e.g. Fr. lent (adj.) and lention (adv.), mark adverbial functions with the suffix -ment(e), while the adjectival functions include marks of gender and number used for agreement with the modified noun (un homme lent (m. sg.), des hommes lents (m. pl.), une femme lente (f. sg.) des femmes lentes (f. pl.)). However, short adverbs are used as well (Fr. Les ordinateurs affectés commencent à courir lent ‘The affected computers start running slow’).

Hengeveld’s analysis essentially matches that of Hummel (2000: 478-479), except for the crucial fact that English and French are not simply differentiated languages, but languages characterized by the coexistence and competition of Type A, B, and C (e.g. careful, carefully, with care) (see also Salazar 2007). To put it in other words, the typological approach tends to overlook or marginalize linguistic variation. It appears to be more adequate to describe Type A, B, and C as possible subcategorizations of a more general “verb + modifier structure” (VM structure).

According to Hummel (2014a), the variation of Type A and Type B in English and Romance can roughly be described as in Figure 1:
Modifying word-classes in modern English and Romance

<table>
<thead>
<tr>
<th>Monocategorical system</th>
<th>adjective</th>
<th>oral tradition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type A</td>
<td>Fr. <em>dur, dure, durs, dures</em></td>
<td>Engl. <em>direct</em></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bicategorical system</th>
<th>adjective</th>
<th>adverb</th>
<th>written tradition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type B</td>
<td>Fr. <em>dur, dure, durs, dures</em></td>
<td>durement</td>
<td>directly</td>
</tr>
<tr>
<td></td>
<td>Engl. <em>direct</em></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 1: The coexistence and competition of Type A and Type B in English and Romance

According to Fig. 1, the modifier in *drive slow* is not an adverb in the sense of a word-class but an adjective syntactically used in one of the functions traditionally called “adverbial”.

In both English and Romance, Type A is strongly tied to the oral tradition, which can be traced back to its Indo-European origins. By contrast, written Modern English and Romance prioritize Type B. In varieties that have been less affected by linguistic normalization (standardization), Type A is still more in use than in standard European. This is the case for all New World varieties of English and Romance, British English dialects, Louisiana French, the center-meridional dialects of Italy, Rumanian and Sardinian. Most of the so-called short adverbs in English belong to its old Germanic lexical fund, while loan words tend to be used with -ly only, except when these are assimilated in colloquial oral communication. In addition to the informal oral tradition, literary style and advertisement (*fly smart, eat healthy*) use the semantic potential of formula with reduced valency for suggesting new mental spaces (Hummel & Gazdik 2014). In both English and Romance, jargons, that is, the informal colloquial usage of a specialized language, use Type A as an economic device to replace a well-known context (e.g. *to test positive* in the context of doping; see § 5.8). The oral tradition of using Type A can also be related to the reduced valency tendency. Baseline VA structures are syntactically economic, which is acceptable when the implicated context is well known. This tends to be the case in informal oral communication, where inference generally plays a major role. By contrast, Type B is preferred in written texts, which tend to be explicit for the sake of objective (written code replacing prosody, communication over local and temporal distance) and normative reasons (‘Be clear!’, ‘Be explicit!’, ‘Use complete sentences!’) (Biber 1988, Maas 2010).

However, the relation of Type A and Type B cannot be simply be analyzed in terms of variation according to speaking or writing. In fact, variation only matters where both structures compete, for example *drive slow* / *slowly* or *real* / *really good*, but not where the broader semantic and syntactic scope of Type A accounts for structures that exclude Type B, e.g. *eat spicy* / *spicily, think big* / *bigly* or produce different interpretations, as in *wash clean* / *wash cleanly*. The latter indeed provides evidence for the fact that morphological marks guide the interpretation in cases where either manner or argument oriented readings are possible. In other cases, Type B is excluded, e.g. *S/he died young* / *youngly*. At a strictly functional level, Type A includes Type B, but Type B does not include Type A; at least this is what follows from Hengeveld’s analysis. In this sense, Section 5 is a semantic test for the validity of Hengeveld’s typological analysis. Obviously, usage may be

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2 See all details for this and the following in Hummel (2013, 2014).
3 E.g. the loanword from classical Latin *direct* in *go direct*. Cf. the diachrony of *real good* < *really good* < (calk) late Lat. *realiter*, where the short adverb *real* modifies an adjective (cf. Coffey 2013).
responsible for secondary differentiations. When the written code accepts Type A, Type B may appear to be hypercorrect, e.g. to sing loud / loudly or first / firstly (used for structuring discourse), which was a major tendency in diachrony, where trendy Type B adverbs such as oftenly, soonly are attested (Hummel 2014a: 36). In more general terms, despite overlapping, Type A, B, and C tend to conceptually and functionally differentiate VM structure. In the case of Type C, the modification focus is closer to “instrument” (e.g. with care, in a loud voice).

3. Research context and corpus

This paper is part of the project Dictionnaire historique de l’adjectif-adverbe (Historical dictionary of French adjective-adverbs), which is one of the projects of the Research Group on the Adverb interface in Romance (http://sites.google.com/site/rsadjadv/). The framework of research involves a series of studies which apply different methodological concepts mainly to Romance languages in order to provide a complete picture of the adjective-adverb interface in diachrony, synchrony, variation and style (see publication list on the above mentioned homepage).

The database of the Dictionary sub-project contains approximately 13,000 quotations with French Type A “adverbs” covering the diachrony of French (11th - 21st centuries) (online access: http://languageserver.uni-graz.at/dicoadverbe/). The data was mainly retrieved in Frantext (286 million words, primarily literary texts; http://www.frantext.fr). In order to compensate the “good French” tendency of this corpus, some 5,000 quotations from colloquial Internet sources have been added. In sum, approximately 18,000 quotations were used for research. The Frantext data were tagged for relevant features. As VA structures include “adjectival” variants such as secondary predication or copula constructions, the domain of short adverbs has been delimited according to two criteria: (i) modification of the event with possible implicature of participants (semantic criterion of “manner”), (ii) at least one example occurs without inflection in a context allowing for agreement (morphological criterion). This allows for the description of secondary predicates as an emerging phenomenon (e.g. Fr. couper court / courts les cheveux ‘to cut the hair short’), excluding, however, ‘pure’ secondary predicates without manner implication (e.g. mourir jeune ‘to die young’).

In addition, a subcorpus corresponding to the letters B, C and D has been selected and tagged for 32 criteria according to the semantic and morphological requirements of this paper (BCD-corpus). The letters refer to the lemmatized VA-structures, e.g. chanter lent ‘to sing slow’ for letter C. Letter A has not been selected because the resultative prefix a- (e.g. abattre ‘to shoot / smash down’) would have biased the quantitative analysis. The BCD-subcorpus contains 451 VA-structures (types) attested by 3232 citations (tokens). For more details see Section 6.

The French examples are quoted without bibliographical reference. They can be retrieved in the above mentioned database, with the exception of the examples from the Internet which will be available in the dictionary. Examples older than the 20th century are dated.

4. The cognitive event-modification-frame

Traditional onomasiological approaches such as lexical field theory or structural semantics in general were rather unsuccessful in terms of descriptive and explanatory adequacy and operationality. To mention only one of the problems, the complex network of relations and entities involved in an event denoted by a verb could never be represented by a lexical field defined by a single concept, not even if the usual restriction of the field members to a single word-class were abandoned. With regard to structural linguistic approaches, cognitive frame analysis can be
considered a major area of progress in semantic theory. Frames reflect real life situations at different levels of abstraction and generalization, including dynamic aspects. Neither of these aspects could be represented by a lexical field or a simple matrix of features. More fundamentally, there is no principled contradiction between frame theory and lexical field theory, since a frame would naturally take the form of a lexical field or a feature matrix if these were an adequate representation in a given case.

For the purpose of this paper, frame theory allows for a dynamic scene-and-script type analysis of the effects syntactic verb modification (VA structure) have on semantic event modification. The description can be situated at the level of a single event or at more abstract levels. The following figure displays all relevant semantic effects of VA structures in a general event-modification-frame (§ 5 provides a detailed analysis of all observable effects):

![Figure 2: The event-modification frame of VA structure](image)

Unlike the lexical frames suggested for single verbs in cognitive semantics, the event-modification frame is located at the more abstract level of grammar, insofar as it displays systematic semantic effects produced by VA structures. The event-modification frame thus defines an abstract mental space covering the various scopes of verb modification. The thick blue arrow symbolizes the

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development in time of the event denoted by the verb. The change symbolized by the blue arrow will be called process (see more details in Section 6). If the modification only concerns the process, this means that participants, circumstances and the speaker’s attitude do not fall under its scope. Modification can also be analyzed for the syntactic functions on the uppermost line (“subject”, etc.), the corresponding extra-linguistic participants on the second line (“participant 1”, etc.), or the semantic roles on the third (“initiator”^6, etc.). The dotted lines symbolize the extension of a given feature. These three levels correspond to entities directly involved in the event. The two lines underneath the event arrow subcategorize the process. The first line states that the scope of modification can affect the source of an event, the change an event includes, the goal the event points to and the point where the event ends. “Direction” and “final location”, which are not mentioned in the Figure, are the local variants of goal and result. The line underneath suggests an analysis in terms of inchoative, durative, final and resultative aspect, representing perfective or imperfective perspectives of the event. The scope of modification can further include circumstantial features situated in a second frame symbolizing the near periphery or surroundings of the event. The third frame represents the speaker’s subjective intervention in discourse in terms of attitude, truth, perspective and discourse organization (cf. Fischer 2013).

5. The semantic effects of VA structures

Modifiers are traditionally and canonically seen as modifiers of nouns (“adjectives”) or verbs (“adverbs”). The overt syntactic structure “V + modifier” would therefore be canonical, or even prototypical, for “adverbs”, in contrast to “N + modifier” for “adjectives” (e.g. Hengeveld 1997).^7 However, according to the most generally accepted analysis, secondary predication (“S/he looks sad) and copula constructions (“S/he is sad) combine the verb with an “adjective” (= modifier of a noun), which is inflected in Romance. Therefore, modifiers referring to a quality of the process are only one variant of VM structure. Events denoted by verbs have complex structures involving participants and circumstances, as well as inherent aspectual features (“Aktionsart”). Therefore, modifiers do not always simply modify the same element in the event frame, that is, each event in the same way. Modifiers select (profile) specific features of the event according to their conceptual properties, or, given the case, by means of inflection. Modification may also include several features into its scope and thus allow for more than one interpretation. In the following, the semantic typology of modification aims at identifying possible interpretations of VA in order to define a complete event-modification frame displaying all possibilities. Such a frame can then be used to discuss the semantic effects of single VA structures. Since explicit arguments can in principle provide evidence for both the baseline-elaboration hypothesis and the argument-deletion hypothesis, the possibility of providing equivalent paraphrases for VA structures will be examined as well. If no equivalent paraphrase is available, the deletion hypothesis is less probable than the elaboration hypothesis including possible surface generalization effects.

5.1. Modifier referring to a quality of the process (manner)

When the modifier refers to the process, it denotes the way a change is realized. VA structures include this type of profiling:

(10) Il / elle court vite / rapide
     Il / elle chante lent
     S/he runs fast / quick
     S/he sings slow

^6 The terms for semantic roles are chosen for convenience. Other typologies of semantic roles may be used alternatively (see the overview by Almeida & Manouilidou 2015: 22).

^7 “Adverbs” secondarily include modifiers of adjectives (real good, awful quick), adverbs (full well) and sentences (More important,…).
Fr. *vite and Engl. *fast are prototypical modifiers of the way the event is realized. With the exception of Canadian French and metropolitan regional varieties, *vite has almost lost its former adjectival properties to the adverbial ones. Certain adjectives are metaphorically adapted in order to assume an adverbial function (11). The basic meanings of Fr. sec ‘dry’ and Engl. *heavy are rather appropriate for the modification of an argument than for the way an event is executed. Their usage as a modifier of the verb thus requires a metaphorical transposition. Metaphor is also responsible for the equivalence of the short adverbs Fr. sec and Engl. *heavy whose adjectival basis represents totally different conceptual domains. At the metaphorical level, both adjectives share the pragmatic feature of ‘intensity’. The corresponding Type B adverbs ending in Fr. -ment or Engl. -ly also select the manner-intensity-feature. Consequently, *heavily requires the same type of semantic adaptation in to sweat heavily. If the metaphorical adaption does not work, the adjective cannot assume this function, and the corresponding Type B adverb is odd: Engl. shine red and Fr. briller rouge are standard, but not Engl. ?shine redly or Fr. ?briller rougement. Poetic texts may exceptionally use such color adjectives as Type B adverbs (cf. Luján 1980: 156; Meier 1948: 107), but these stylistic effects are not usual in standard and colloquial language. In a very broad sense, we could imagine an ‘inner object’\(^8\) (see 5.4) interpretation in the case of to rain heavy since heavy could refer to the weight of the rain drops, but the scope of modification in It rains heavy is broader than the rather odd or unusual paraphrase It rains heavy drops would allow for. There are heavy rain drops falling down would be better, but not equivalent. The overt syntactic structure is too specific, and consequently ‘overspecified’ if used as a paraphrase for VA. Finally, the paraphrase does not work at all with to sweat heavy. Hence, the adjectival properties of heavy may occasionally activate the inner object interpretation or connotation (The rain falls heavy), but this is not systematically the case. Non-metaphorical Type A adverbs denoting process manner generally have equivalent Type B forms: slow / slowly, quick / quickly, and even fast / fastly. However, fastly is a hypercorrect variant ephemerally used in the history of English (Hummel 2014, Guz 2014). Hence, the restriction has a normative but not functional background. The fact that manner modification is considered the core function of adverbs probably explains why grammars and linguistic studies foreground the equivalence of Type A with its derived Type B form, up to the point that Engl. -ly, Fr. -ment, etc. are vividly discussed not as suffixes but as inflectional adverbial morphemes (e.g. Hasepmlath 1996, for general aspects, Giegerich 2012, for English, Dal 2007, for French).

5.2. Modifier referring to a quality of the (inner) subject argument

In the following example, modification yields exclusively a quality of the subject during the event denoted by the verb:

(12) Fr. Il/elle ne veut pas mourir jeune ‘S/he does not want to die young’
(13) Fr. *Il/elle ne veut pas mourir jeunement ‘*S/he does not want to die youngly’

Syntactically explicit constructions as in (12) are generally named subject oriented (depictive) secondary predicates (see Schultze-Berndt & Himmelmann 2004). In fact, the Type B alternatives denoting manner are almost\(^9\) universally excluded (13). However, there are cases with both subject orientation and manner interpretation, providing evidence for the fact that Type A covers a functional continuum:

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\(^8\) See e.g. Goughenb (1964) and Regula (1957) for French.
\(^9\) I therefore use * not in the sense of ‘not possible’, but for a very strong marginalization of the variant. To drink youngly is a similar case: “Already in January we fill the first wines which should be drunk freshly and youngly, and also those which have gone out!” (Linguee, 1.8.2015). In these cases, one could use the term object-oriented adverbs (see fn. 11).
The modification scope is broader in (14), since it can mean both ‘to die being free’ and ‘to die in liberty’. In *mourir libre* / *die freely* the Type B adverb only fits because it receives a circumstantial interpretation: ‘to die as a consequence of a free decision / in liberty’. While ‘in liberty’ would be a possible interpretation in (14), ‘as a consequence of a free decision’ would be rather exceptional, whereas this interpretation is favored by (15). Hence, (14) and (15) do not cover exactly the same range of modifications, at least in terms of prototypicality. The fact that the adjectival lecture as a secondary predicate is possible in (14) seems to act against full equivalence as in *drive slow / slowly*, where process manner is focused in both cases. Note that modifiers denoting a rather permanent adjectival quality (Fr. *sec*, Engl. *heavy*) are metaphorically adapted to manner interpretation in (11).

The fact that some Type A modifiers conceptually license the inclusion of both the event and the subject argument into the scope of modification explains the vacillating usage of inflection in French, which is the counterpart of the vacillating usage of Fr. –*ment* and Engl. –*ly* (see above *libre* / *librement* and *free* / *freely*):

(16) Une cascade, un peu loin, *bruissait frais* comme le vent dans les feuilles
‘A bit far off, a cascade rustles fresh as wind in the leaves’

(17) J’entends *chanter joyeuse* ta voix de l’autre côté
‘I hear your voice singing joyfully on the other side’

(20) Elle *commence beau* cette nouvelle année c’est chouette
‘The new year starts lovely, it’s great’

(21) La journée *a commencé douce et belle*
‘The day has started sweet and fine’

In (16), the modifier does not agree with the feminine subject *la cascade*, which is instead the case in (17), where *joyeuse* (feminine form of the adjective) agrees with *la voix* (feminine noun). Following the same schema, *beau* (masculine) does not agree with the subject in (20), which is however the case in (21).

5.3. Modifier referring to an initial or final quality of the (inner) subject argument
Verbs such as Fr. *commencer* ‘to start’ focus on an initial state of the subject at the source of the event (“initiator”), and verbs such as Fr. *devenir* ‘to become, get’ or *finir* ‘to end’ direct the modification to a final state or result.

(22) Les 5 entreprises qui ont *commencé petit* pour *devenir très grand*
‘The 5 companies have started off small and become big’

(23) Fred DeLuca fondateur de Subway ou l’art de *commencer petit et finir gros*
‘Fred DeLuc, the founder of Subway or the art of starting off small and ending big’

The conceptual meaning of the verb is decisive since it denotes a beginning or an end. In this sense, we can analyze the adjectives as secondary predicates oriented to the subject. English has a similar usage of *to start (out of) small*. Since the scope of secondary predicates is limited by VP, to which they syntactically belong, they automatically denote an initial quality of the subject: ‘something is small at the moment the event happens’. Nevertheless, the adjective in the first example does not undergo agreement, which is generally required for secondary predicates (*Les entreprises ont commencé petites pour devenir très grandes*). This reflects the analysis of VA as a relatively autonomous, valency reduced unit which enters the sentence as such. Semantically, manner interpretation is possible: How did the companies start or end? The examples show again that the
transition from secondary predication to Type A adverbs is a gradient phenomenon. In addition, examples such as *to begin slow / slowly show that the modifier can have a manner focus with verbs denoting a beginning. Hence, the profiling of the initial state in *to begin small results from both the verb and the modifier according to their conceptual meanings.

5.4. Modifier referring to a quality of the (inner) object argument
The scope of modification can also be directed to the direct object argument (“patient”), as in Fr. manger froid ‘eat cold’ and boire chaud ‘drink hot’ in (24), and the English example Mexicans eat spicy in (5).

(24) Manger froid, boire chaud, dormir couché, debout;
    Un garçon comme moi s'accommode de tout.10

The slogan Eat light! also denotes a quality of the food. By contrast, the subject-oriented type of modification directly involves an event executed or undergone by the subject participant. Therefore the physical or mental disposition of the participant referred to by the subject shapes the way the event is realized, more precisely to the extent the concepts involved allow for it. In these cases, both manner adverb and secondary predicate display inferential implicatures of the subject participant’s disposition and manner (e.g. S/he speaks nervous / nervously). This is the reason why subject-orientation and manner modification often go hand in hand.11 By contrast, the denotation of a property of the affected object participant does not directly concern the way the event is realized, but rather its effects. In this case the relation of cause to effect is inverted. Therefore Type B adverbs focusing on manner fit less easily. ?Mexicans eat spicily would be rather odd since it would denote the way of eating, not to speak of virtual options such as *to eat coldly / hotly. This functional restriction favors the conservation of VA structures with inner or overt direct objects to the detriment of Type B. Contrariwise, the usage of Type B is less restricted when replacing subject oriented VA structures. This is an interesting difference that should be taken into account for the diachrony of the English adverb system, which started with Type A in Old English, and was progressively superposed by Type B from Middle English on (cf. Company Company (forthc.) on Spanish).

It should be noted, however, that manner interpretation is possible at the more abstract level of event type. In terms of general behavior, Mexicans eat spicy can be interpreted as denoting the way Mexicans eat, that is a general type of behavior. This interpretation fits with the tendency of using VA without explicit arguments, that is, with inner subjects or inner objects. The absence of a referentially specified argument includes semantic generalization, as in (24). Moreover, reduced syntactic valency favors lexicalization. As shown in the previous sections, the occasional absence of logically necessary agreement for gender and number in VA seems to be a consequence of perceiving VA structures as complex verbs depending more on their internal semantic relations than on their government by subject or object. This is the functional basis for the widespread lexicalization tendency.

Fr. brûler vif ‘to burn alive’ denotes a conventionalized type of behavior. As such, it tends to be lexicalized as a complex verb. It may be used with an inner or overt object. As in the previous subsections, agreement appears to be optional, even with overt direct subjects:

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10 ‘Eating cold, drinking hot, sleeping lying down or standing a guy like me adapts to everything’

11 This is also the reason why adverbs have been discussed for their capacity of inferentially producing subject or object oriented modification, that is, adjectival interpretation, as in to sing happily, to wash cleanly. See Valera Hernández 1998, for English, Guimer 1991, for French, and Broccias (2011) for a broader cognitive approach to event modification with Type B adverbs.
(25) Voilà 10 minutes que des créatures essayent de la brûler vif.
‘10 minutes ago some creatures tried to burn her alive’

(26) Que vous avez-t-elle fait, cette Fleur d’Épine, pour la brûler toute vive?
‘What had she done to you, that Fleur d’Épine, to make you burn her alive?’

According to the conceptual meaning of the modifier, some verbs allow for both an inner subject (e.g. cuisiner malin ‘to cook smart’) and an inner object reading (cuisiner sain ‘to cook healthy’), with additional circumstantial modification (see 5.8). Both examples are used as slogans, that is VA structures reduced to their internal semantics, which broadens their semantic-inferential interpretation and makes them highly suggestive, especially when used as imperatives (cf. subject-oriented Fly smart!).

Interestingly, intransitive verbs do not exclude an inner argument interpretation. Fr. causer ‘to chat’ and parler ‘to talk’ usually do not take a complement, but causer juste and parler juste can be read as ‘what is said is right and fair’. In this case, the inner object cannot be overtly realized as an argument of the verb. This fact causes problems for both the elaboration and the deletion hypothesis, yet more for the latter because elaboration is an optional development of the empirically attested baseline VA, whereas the deletion hypothesis obligatorily requires the possibility of explicitly using an argument in order to explain the existence of VA. Even if cases similar to ?causer quelque chose ‘to chat something’ were detected in some corpus, these would be too marginal for providing an intuitively acceptable explanation for their deletion being the origin of the inner object interpretation of causer juste. This is exactly why VA structures are appreciated for slogans and poetry. This means that there are rather rich possibilities for semantic-inferential interpretation of VA structure, on the one hand, while on the other the possibilities of overt syntactic expression are more restricted and certainly not acceptable in a generative sense. At any rate, both hypotheses cannot be strictly tied to argument structure only, but must include more flexible constituents of the utterance, e.g. circumstances (see 5.8) or instrument (see 5.10). In this sense, an explicit elaboration of parler juste would be to talk about something in a spirit of justice or to talk about something saying true and correct things. It is needless to say that these overt elaborations are unlikely to underlie VA in a genetic sense. Searching for equivalent paraphrases often produces rather odd or unusual results.

Rather exceptionally, a noun may be used as a modifier of an inner object:

(27) Bien qu'on puisse la boire sucrée (sucrée ou miel), on préfèrera peut-être la boire nature. L'infusion se mariera cependant parfaitement avec une petite goutte de lait.¹²

The example provides two parallel phrases, the first one with an adjective (participle), boire sucrée ‘to drink sth. with sugar’, the second one with a noun, boire nature ‘to drink without sugar, neat (lit. to drink it nature)’. Although the sentence has an overt direct object la ‘it’, I maintain the inner object analysis because this argument does not cause agreement, as it would be required for a secondary predicate (la boire sucrée). Hence, boire sucré is used as a complex verb whose semantic network is internally defined.

To conclude, we witness a series of emerging interpretations. Although the modification of the direct object logically excludes the implicature of the event itself, manner interpretation is possible at the more abstract level of general behavior, which is a frequent correlate of valency reduction. Consequently, inflection appears to be a variable feature. This blurs the well-established borderlines

¹² ‘Even if you can drink it sweet (sugar or honey), one would probably prefer to drink it natural (drink it neat). The tea will instead be fine with a bit of milk.’
of short adverbs and object oriented secondary predication in grammars. The respective constructions gradually and dynamically (productively) emerge from baseline VA structure.

5.5. Modifier referring to a resultative quality of the (inner) object argument
In symmetry to the modification of the initial or final state of an overt or inner subject argument in 5.3, modifiers may denote a quality of the inner object as a result of the event, especially in English, but also in French (see Troberg & Burnett 2014):

(28) Fr. couper court(s) les cheveux ‘to cut the hair short’
    abattre mort ‘to shoot / to shoot down’
    creuser profond ‘to dig deep’

However, object modifying VA structures do not allow for a complementary modification of the initial state. This is only possible when the verb is replaced, that is, when its inherent Aktionsart changes from resultative to inchoative, and from object orientation to subject orientation, as in starting small, ending big. In English, preposition-adverbs such as down are commonly used. In Romance, adjective-adverbs such as Fr. bas, haut take on the same function:

(29) Les fléaux battent bas les vigueurs de mon corps
    ‘The scourges strike down my physical strength’

Hence, French (and Romance in general) does not really lack resultative VA constructions, as is often assumed (Feihl 2009), since they use words whose functions cover the three word-classes of adjective, adverb and preposition: une table basse ‘a low table’, parler bas ‘to speak low’, battre bas ‘smash down’. The prefix a- may also assume the resultative role of the English preposition-adverbs. In (29) the resultative VA battre bas could be replaced by abattre, the only problem being that abattre is almost lexicalized for killing, which is not so much the case for battre bas.

Type B adverbs denote manner, that is, the way of doing something, even with inchoative or resultative verbs:

(30) commencer / terminer tranquillement ‘to start / finish calmly’
(31) abattre méchamment ‘to meanly shoot down’

Unlike these examples, which denote a manner type quality of the process, Type A refers to an initial or final state of the (inner) object.

(32) commencer / terminer tranquille ‘to start / finish calm’
(33) abattre mort ‘to shoot dead’

In other words, the adjectival nature of Type A clearly appears with inchoative or resultative verbs, in striking contrast with Type B, which maintains manner interpretation.

5.6. Modifier referring to both the event (verb) and the participant (argument):
As we have already seen in the previous sections, VA structures allow the adjective to modify both an (inner) argument and the event:

(34) Fr. Mais qui pense pis pense souvent juste (1839) ‘Who thinks worse often thinks right’
    Jouez gai ! ‘Play cheerfully!’

Penser juste has the readings ‘to think correctly’, ‘to think with an attitude of justice’ and even ‘the thing thought is right’. Similarly jouer gai can be read ‘to play cheerfully’ or ‘to play with a
disposition of inner luckiness’. In the written code (inflection is not realized in the oral code), morphology may reinforce the subject oriented interpretation (Elles jouent gaiés), while Type B would reinforce the manner variant in the oral and written code (Elles jouent gaiement).

5.7. Modifier referring to an (inner) indirect object
To my knowledge, no authentic example for the modification of a third participant (‘beneficiary’) has been attested. However, the following case was suggested for Spanish, which can be analogically translated to French (Hummel 2000: 164-166), while the equivalent in English is not acceptable:

(35) Sp. Le robaron la cartera dormido (dormida)
(36) Fr. On lui a volé son portemonnaie endormi (endormie)
(37) Engl. *They stole her / him the wallet asleep

With a feminine indirect object, the modifier would be inflected for gender in French and Spanish. No Type B or Type C adverb could replace the adjective in these examples. Note that Engl. asleep is a good conceptual equivalent, but its usage as an adjective is restricted, e.g. fall asleep, but not *the asleep child, as opposed to Fr. l’enfant endormi(e), Sp. el niño dormido, la niña dormida.

5.8. Modifier referring to a circumstantial feature
Contrôler positif ‘to test positive’ was used in the context of the Tour de France 2007 in order to refer to the result of a doping test. Analogous cases are attested for English and Spanish:

(38) Fr. Il [Rasmussen] n’a jamais été contrôlé positif
(39) Engl. He has never been tested positive (for doping) 13
(40) Sp. La vallista da positivo por cuarta vez (El Mundo, 23.11.15, p. 33)

Since the result of a control or a test cannot be expressed as an argument of the verbs to control / to test, the adjective necessarily modifies a circumstantial feature or something more peripheral in the event frame. The relation is somehow closer in the English equivalent to test positive because a test is meant to have a result. The Spanish equivalent in (40) is more inferential, approaching a copula construction (lit. ‘The hurdler has given positive for the fourth time’). We might argue that these examples are resultative, which is right, but there remains an inferential interpretation which yields beyond the argument structure. All three examples illustrate the tendency of developing VA structures for economic communication in jargons, the context being known insiders.

The high inferential potential of VA structures licenses subjects with sharply contrasting semantic roles. In the following examples, Fr. chaussé étroit ‘to wear tight shoes’ appears with the subject modèle ‘floor sample (shoe)’ in (41), and with the subject les hommes ‘the men’ in (42) 14:

(41) Le monsieur m’a expliqué que certains modèle chaussaient plus large que d’autres et que Valetta chaussait étroit. J’ai également commandé le modèle Talamore qui a priori chaussés plus large.

‘The man explained me that certain samples were narrower than others, Valeta being narrow. I also asked for the Talamore sample, which is a priori wider.’

(42) Surtout quand t’es comme moi que tu chaussas du 37 et que tu n’aimes que les hommes qui chaussent larges.

13 “a particular product would definitively / might definitively not lead to a sportsman or woman testing positive in an anti-doping test (European Parliament)” (Linguee, 2.8.2015).
14 The non-orthographic spelling of some words in these quotations stems from the original Internet source.
‘Especially if you are like me and wear size 37, and you don’t like men with wide widths’

Despite the subject having a plural form in both examples, the modifier only agrees with the subject in the second one. From a rational point of view, the inflection in (42) is ‘illogical’, as it would be called in the French grammaticographic tradition, because the shoes may be large, but not the men wearing them.

According to Hummel (2015), this type of inflection (also called “adverb agreement”; Ledgeway 2001) can be related with different oral and written traditions. The written tradition imposes the rationalistic norm of modifier and modified matching logically, which implies that the inflection in the second example is ungrammatical. By contrast, the informal oral tradition uses inflection as a cohesive device in the stream of discourse in order to mark thematic coherence (see here 7.2). Moreover, informal texts rely more on agreement ad sensum than on grammatical relations, as in the following example with the masculine singular subject on denoting plural ‘nous’, which in turn licenses the plural -s in tranquilles:

(43) On ne peut même pas crever tranquilles.  ‘One cannot even die in peace’

Similar cases are Sp. para ir directos al grano ‘to get straight to the point’ or para ser exactos ‘to be exact’ where the plural subject is not expressed and, which is more, the plural is not even marked by the infinitive of the verb.

In (44) the modification also concerns a circumstantial feature. We would only have an inner subject if the explicit subject were not les yeux ‘the eyes’ but les larmes ‘the tears’:

(44) Les yeux commencent à couler "épais", signe de début d'infection  
‘The eyes start flowing out ‘thick’, a sign of incipient infection’

In the jargon of fashion, Fr. coiffer droit means to wear a hat in a vertical position (and profund ‘deep’ means that the head enters deep into the hat):

(45) Chapeaux coiffant profund et droit  ‘Deep and upright hats’

The condensation of circumstantial information by VA structures is a typical device for economic communication in oral jargons:

(46) chercher grand ‘to purchase a big apartment’ jargon of real estate agents
(47) chevaucher bas ‘ride a small horse’ equitation
    chevaucher étroit ‘to ride close to each other’ equitation
    chevaucher rangé ‘to ride in ranks, in a given order’ equitation

The nominal VA structure boire nature in (27) is also an economic device in the jargon of nutrition. Both the general preference of slang for VA structures and the possibility of implicitly alluding to taboo topics favor their usage in the domain of sexual behavior (see ex. (52)).

Circumstantial modification is particularly salient when nouns are used in place of the modifier:

(48) parler politique  ‘to talk politics’
(49) parler affaires  ‘to talk business’
(50) voter socialiste  ‘to vote socialist’
A fully explicit paraphrase would have to use a preposition: *to talk on/about politics, to talk about business, to vote (for) the socialist party*. The examples show that VA structures are functionally contiguous to similar constructions, e.g. nouns (VN), as here, or prepositions, as in *shoot down* (VPp). Just as with many VA structures, the VN structures in (48) to (50) belong to informal jargon. VN structures may hurt rationalistic imperatives of explicitness in the written code, the same as highly inferential *chausser étroit*. This attitude of the educated is reflected by the frequent usage of quotations marks or italics when such phrases are used in written texts, e.g. in (44), which is one of the many examples documented in our dictionary corpus.

5.9. **Modifier referring to the finality of the event**

Fr. *voter utile* ‘to make a useful vote (not by conviction)’ refers to the finality of voting:

(51) Fr. 
Nous maintenons notre candidature pour permettre de *voter utile*  
‘We maintain our candidature in order to facilitate a useful vote’

*Utile* neither modifies the subject nor an object argument or the process itself. The construction has also been blended to sexual behavior:

(52) Fr. 
*Mais non, voyons, je baise utile.*

In slang, *baiser utile* means ‘to have sexual relations in order to obtain something else’. The goal of the event is to be utile for the actor. The understanding of these examples requires the inference of contextual knowledge, e.g. the implicated opposition with voting by conviction in (51) or sentimental love in (52). It could therefore be classified as a subtype of circumstantial modification.

Poetry and advertisement often use the suggestive potential of VA-structure for opening a window to an inferential world. Final VA structures are particularly appreciated as advertisement slogans for selling something which is suggested to help in obtaining a goal. This type of text also explains their international character, e.g. Fr. *cuisiner sain* with the English equivalent *to cook healthy*. *Healthy* may point to a property of the cooked food as an inner object, but the reference to the finality or result of a way of cooking is more salient. The slogan *Fly smart* could be interpreted as oriented to the inner subject, that is, an attitude of the one who uses the aircraft. However, slogans are created as a formula: *Fly smart!* If we use them in a finite sentence, the result can be odd: *?S/he flies smart.* *?S/he flies smart to New York.* If we accept them, we would have to interpret them in a circumstantial and somehow intertextual way: *?S/he uses the “SmartFare” option offered by the airline*. We could possibly also say that there is a relational semantics, as in *to vote socialist*, where the noun / adjective relates to a political party, or *to speak English* ‘the English language’. The behavior of relational adjectives would be an interesting research issue. As noted above, nominals prevail in this domain (Fr. *parler affaires*, Engl. *to talk politics, to vote Tory*), but we might quote Fr. *rêver tricolore* ‘to dream in the national colors of France’ as an example for a real relational adjective.

It is noteworthy that *result* (5.3, 5.5) and *finality* point into the same direction. They are indeed the perfective or imperfective side of the same coin.

5.10. **Modifier referring to an instrumental feature**

In (53) the modifier refers to the green top of the absinthe bottle (‘a green crowned bottle’):

(53) collier Absinthe style Art Nouveau avec représentation de la fée Verte fiole *couronnée verte*  
‘Absinthe collar style Art Nouveau with the representation of the green crowned fairy Green flask’
In a syntactically explicit version, the verb couronner ‘to crown’ requires the prepositions de or avec, which both suggest instrumental reading ‘crowned with something’.

(54) chanter haut ‘to sing loud’

Fr. chanter haut and its English equivalent to sing loud refer to both, the manner of crying and a property of the voice. The voice is not a participant but the instrument of singing. It cannot be expressed by an overt argument, but rather only paraphrased as Fr. à voix haute or Engl. in / with a high / loud voice’.

5.11. Modifier referring to a place or a direction
The modifier can specify where an event takes place…

(55) Fr. L’incendie couvait bas commencer haut to start high

… or what direction it takes:

(56) Fr. Cela nous conduit droit au ciel This takes us direct to heaven
    bouler droit to bowl straight ahead
    creuser profond to dig deep

In conduire / bouler droit ‘to bowl straight ahead’, the adjective denotes a quality of the direction the event takes. According to the further context, the adjective in creuser profond ‘to dig deep’ denotes either the direction or the local result of the event.

5.12. Modifier referring to time or frequency
Modifiers may also denote the time an event lasts…

(57) Il m’a dit bref qu’il avait été surpris dans un bordel ‘He shortly told me that he had been taken by surprise in a brothel’
(58) Enfin bref! ‘Finally!’

… or frequency:

(59) Haussant et baissant les mains dru et menu sur ses cuisses ‘Tapping the thighs hard and quick’

5.13. Modifier referring to the speaker’s point of view
In (60), Fr. facile denotes a subjective estimation by the speaker:

(60) Fr. Il pèse deux cents kilos facile ‘He weighs 200 kilos, easy’

Both the French original and the English paraphrase have to be read as “Looking at him, I would guess he weighs at least two hundred kilos“. Other examples are:

(61) Curieux, il n’est pas venu ‘Strange, he has not come’
(62) L’Espagnol cogne plus dur, normal, je grandis, je deviens plus coriace ‘Spanish is harder to learn, which is normal, since I become more thick-skinned’
(63) Ok bon il veut se la faire clair et net ‘It is clear that he wants to sleep with her’
(64) On les confond facile(s) ‘One easily confuses them’
(65) Venez urgent! ‘Come urgently!’
These examples admit the usual test-paraphrase for sentential adverbs *It is MODIFIER that*... (e.g. *It is strange that*...). Example (63) presupposes the knowledge of the usual collocation *c’est clair et net*\(^{15}\) ‘that’s crystal clear’. The examples are borderline cases insofar as the modifier generally leaves VP in order to assume discourse functions, either via syntactic dislocation (60), via parenthetical prosody (62) or both (61). However, prosodic integration into VP is possible as well (63, 64, 65). Even if we assume that dislocation or parenthesis are necessary first steps to develop sentential functions, according the “local context” hypothesis in grammaticalization theory, sentential adverbs have to be taken into account here because grammaticalization theory usually claims the cline “manner adverb > grammaticalization as sentential adverb”\(^{16}\). Hence, the event-modification-frame in Section 4 has to include the speaker’s presentation of propositional contents in order to provide an adequate account of synchronic and diachronic grammaticalization.

In the following example, the predominant manner interpretation ‘fluently’ in (66) smoothly changes to a rather sentential one ‘it is easy to defeat the OM club’ in (67):

(66)  La conversation *coulait facile*. ‘The conversation flowed easily’
(67)  I'OM est tellement fragile en ce moment qu'on peut le *couler facile*. ‘The OM soccer team is so fragile in this moment that it is easy to sink it’

In English, the lexicalization of *sure* as an epistemic discourse marker licenses prosodic integration, as in (78):

(68)  Engl. Sure, he’ll come. He’ll come sure.

Neither Fr. *peser facile* nor Eng. *come sure* permit the syntactic dislocation of VA as a syntactic constituent. *Coming sure is what he likes*. As a matter of fact, the autonomy or lexicalization of the VA-construction conflicts with the idea of a speaker’s point of view to be modified. This point of view is necessarily external to the proposition. Syntax and prosody reflect this condition. Subsequently, frequency and lexicalization can reduce the necessity of formally marking the discourse function. To conclude, sentential modification gets in touch with VA, but only as a peripheral phenomenon.

### 5.14. Metaphor, metonymy, and blending

This subsection points out some concomitant processes that can be observed for the types of modification listed in this section. From the point of view of elaboration, VA structures are particularly stimulating for the creation of mental spaces, especially without overt syntactic realization of arguments and circumstances. Many of them require a metaphorical interpretation. As we have seen, the adjectives Engl. *heavy*, Fr. *sec* ‘dry’, Fr. *terrible* are metaphorically used in Engl. *sweat heavy*, Fr. *suer sec* and Fr. *chauffer terrible*. Fr. *rire jaune* means ‘to laugh on the wrong side of one’s mouth’ (lit. *to laugh yellow*). The common dimension-time metaphor is used in *dire court* ‘to talk shortly’. This is a consequence of the semantic adaptation of modifiers to the modified. VA structures can also undergo metaphorization as a whole. Thus Fr. *couper court* ‘interrupt, cut short’ has a specific meaning that cannot be directly derived from its components. Valency reduction is the functional basis for the frequent lexicalization of VA with a metaphorical meaning:

(69)  Fr. *couper court* *voir grand* ‘to interrupt, to cut short’
     ‘to think big’

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\(^{15}\) English has an analogous series: *cut and dry* (dried), *loud and clear, plain and simple.*

\(^{16}\) On the grammaticalization of sentential adjective-adverbs see Hummel (2012: 329-404).
Metonymy is relatively rare, but the following literary example may be mentioned, where the metonymical goal of modification, the smoke, remains implicit:

(70) Fr. Les cheminées fument bleu ‘The chimneys smoke blue’

In more general terms, the previous subsections have provided evidence for the functional relevance of contiguity in the event frame, e.g. participants, circumstances, the speaker’s subjectivity. A good example is chaussier large / étroit in 5.8, which admits the person wearing the shoes and the shoes themselves as its subject argument. We may analyze this case in terms of metonymy, but it is hard to decide if the starting point is the human subject or the shoes. Hence, the semantic analysis of VA structures benefits more from contiguity in general than more specifically from metonymy, which includes a directional and motivated process with a starting and an end point.

6. Quantitative analysis: from profiling to profile

The quantitative analysis of the BCD-subcorpus (see § 3) provides a more objective account of the profilings identified in the event-modification frame (Fig. 2) in terms of their relative communicative relevance. Terminologically, I distinguish individual profilings corresponding to single utterances from the general VA structure profile as it shall appear in terms of frequency. The BCD-subcorpus contains 451 VA structures (types) documented with 3232 examples. It has been tagged for 32 features, including morphology, argument structure, semantics and pragmatic features. For the purpose of the present paper, 21 features concerning event types and subtypes are taken into account. It is important to bear in mind that the corpus only contains VA structures including process modification, that is, excluding ‘pure’ secondary predication and copula constructions (see § 3). Table 1 shows all the event-modification types according to main types and subtypes:

Table 1: Event-modification frequencies of VA structures

<table>
<thead>
<tr>
<th>Event Modification Main Type</th>
<th>Event Modification Subtype</th>
<th>Absolute frequency</th>
<th>Relative frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>process</td>
<td>manner</td>
<td>527</td>
<td></td>
</tr>
<tr>
<td></td>
<td>intensification</td>
<td>485</td>
<td></td>
</tr>
<tr>
<td></td>
<td>quantification</td>
<td>101</td>
<td></td>
</tr>
<tr>
<td></td>
<td>subtotal</td>
<td>1113</td>
<td>34.5 %</td>
</tr>
<tr>
<td>process + subject</td>
<td>overt</td>
<td>323</td>
<td></td>
</tr>
<tr>
<td></td>
<td>inner subject</td>
<td>42</td>
<td></td>
</tr>
<tr>
<td></td>
<td>subtotal</td>
<td>365</td>
<td>11 %</td>
</tr>
<tr>
<td>process + object</td>
<td>overt</td>
<td>265</td>
<td></td>
</tr>
<tr>
<td></td>
<td>inner object</td>
<td>330</td>
<td></td>
</tr>
<tr>
<td></td>
<td>subtotal</td>
<td>595</td>
<td>18.5 %</td>
</tr>
<tr>
<td>circumstance</td>
<td>not specified</td>
<td>430</td>
<td></td>
</tr>
<tr>
<td></td>
<td>instrument</td>
<td>309</td>
<td></td>
</tr>
<tr>
<td></td>
<td>direction</td>
<td>251</td>
<td></td>
</tr>
<tr>
<td></td>
<td>goal (finality)</td>
<td>55</td>
<td></td>
</tr>
<tr>
<td></td>
<td>place</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td></td>
<td>frequency</td>
<td>29</td>
<td></td>
</tr>
<tr>
<td></td>
<td>discourse</td>
<td>27</td>
<td></td>
</tr>
<tr>
<td></td>
<td>time</td>
<td>18</td>
<td></td>
</tr>
</tbody>
</table>
Events being complex in nature, the table distinguishes several main types, in the column on the left, and a series of subtypes in the adjacent column. As “manner” is a rather vague notion in the case of verb modification, the corresponding main type has been called process modification, that is, event modification excluding the modification of participants or circumstances. The term process is meant to cover voluntary and involuntary changes (actions and involuntary processes). With regard to the traditional distinction of state, process and action verbs, one might miss the term state for state verbs, but the fact that copula constructions (e.g. S/he is big) and secondary prediction (S/he dies old) have been excluded justifies this option.

In the data, process modification, that is, adjectives denoting a quality of the process, covers just over a third of the event-modification types (34.5%). More than a half of these cases mainly intensify or quantify. Process modification can include a participant of the event in overt syntax or as an inner argument. In the case of the subject argument, overt realization (323 tokens) is by far more frequent than the implicature of an inner subject (42). By contrast, inner objects (330) are more frequently used than overt objects (265). The remaining third of the examples have been classified as circumstantial modification (36%). Apart from circumstances in general (“not specified”), instrument and direction are the most frequent circumstantial modifications, followed by goal and place. If pure process modification is considered the prototypical case of verb modification, as most grammars suggest, we may say that this only corresponds to approximately one third of the cases, while each process-participant modification and circumstantial modification provide another third of the cases. Obviously, the distinction between place and direction is gradient and subject to interpretation (e.g. to place high, to dig deep). The same holds for direction and frequency, which can also affect manner (to go direct and ex. (59)). As a matter of fact, the VA structures have variable and multiple modification scopes. It should therefore be born in mind that Section 5 has identified possible scopes of modification. The classification followed the main modification focus in the event-modification frame in order to establish the event-modification structure in Fig. 2. On this basis, the quantification in this section provides a profile with three equally distributed main event-modification types: process modification, process-participant modification and circumstantial modification, the latter being the most differentiated category. In the case of process-participant modification, source and result are relevant secondary features that do not figure in Table 1. In 33 cases, the source is an overt or inner subject, in 11 cases an overt or inner object. The result only concerns overt or inner objects (160 cases).

In English and French, the flexible word-class system coexists with a differentiated system, where the function of Type B adverbs is opposed to the function of “adjectives” in the narrow sense of noun modifiers. Future research could therefore contrast the event-modification profile of Type A adverbs with analogous profiles for Type B and Type C adverbs. Roughly speaking, a hypothesis could claim that the profiles corresponding to Type A (e.g. short (adj./adv.)), Type B (shortly), and Type C (in short) will differ, which does not exclude overlaps. To give an example, Type C with care may be basically instrumental, but it easily adapts to a more manner-type interpretation in handle with care, which is close to carefully.

7. Theoretical and methodological consequences

7.1. Semantic echo-sounding
VA structures provide a useful tool for the semantic analysis of the event-frame in general. Instead of simply introspecting the semantics of a verb, its combination with modifiers introduces a functional linguistic component that clearly selects one or more elements of the event, thus
permitting an echo-sounding of the event-frame. The method has shown that modification by VA structure cannot be reduced to a simple verb-argument or event-participant structure. A complex variety of circumstances and other event-related features can be modified as well. The set of profilings realized by single VA can be interpreted at different levels of abstraction, e.g. in terms of verb aspect (see Fig. 2). As shown in Section 6, the data may be explored for a quantitative profile in terms of center(s) and periphery. I hypothesize that the profile of VA (to die free) will clearly differ from Type B adverbs, with stronger manner focus (to die freely), or Type C, possibly with instrumental and circumstantial focus (die in liberty). Consequently, VA could be used for the contrastive analysis of all VM structures.

7.2. Adjective or adverb?
In accordance with typological insights, Figure 1 claims that the modifier A in VA structures belongs to the word-class of adjectives, which is used for both nominal modification (“adjective” in the Western grammaticographic tradition) and verb modification (“adverb”). A long grammaticographic and normative tradition has made an effort to separate this continuum into short adverbs, on the one hand, and secondary predicates or copula verb constructions, that is, adjectives, on the other (Hummel 2014). This process was rather successful in the linguistic conscience of the educated who would say that slow in drive slow is an adverb, not an adjective used for an adverbial function determined by syntax. In Romance, invariability is the most used positive criterion for defining adverbs, also in a dogmatic normative way. As a consequence, standard French avoids the inflection of Type A when VA has an adverbial function. However, the examples in Section 5 provide evidence for adverb agreement. Moreover, many VA structures modify inner arguments. Hence, both morphological agreement and semantic modification provide evidence for the persistence of adjectival features. Crucially, the possibilities of replacing Type A by Type B are restricted when the former modifies an inner argument (eat spicy, *eat spicily, eat hot, *eat hotly). The echo-sounding method therefore provides evidence for Hengeveld’s typological approach. If I had included the VA constructions named secondary predication and copula verb constructions, inflected Type A modifiers would be paramount. From the point of view of underlying VA structure, the notion of short adverb artificially cuts a continuum where both inflected and uninflected variants are used.

Interestingly, the dogma of uninflected short adverbs in the French standard of writing is the necessary condition for the description of secondary predication as a clearly distinct construction operating with ‘true adjectives’. If adverb agreement is commonly used, which is a generalized fact in center-meridional dialects of Italy (Ledgeway 2011), the delimitation of secondary predicates and short adverbs becomes blurred (see also Hummel 2008). In normative writing, however, agreement is only accepted when the secondary predicate is a modifier of the subject or object argument, which undergoes agreement in Romance. This norm gives rise to secondary predication as a construction clearly distinct from short adverbs. Ironically, standardization diachronically imposes a principle, which linguists now use as an allegedly descriptive rule for constructions such as secondary predication.

7.3. Underspecification or elaboration?
Traditional terms of syntax such as underspecification, argument reduction or deletion, valency reduction or deletion, ellipsis, transformation (from underlying explicit structures) suggest that complete sentences or constructions are the generative basis for ‘economic’ reductions such as VA without overt arguments. The opposite hypothesis, favored by cognitive linguistics, would argue instead that VA is a syntactic baseline structure that allows for further development in syntax (see Langacker, conference paper). The discussion of these hypotheses can be situated at the semantic, the syntactic and the morphological level.
As shown in Section 5, only the semantic event-modification frame can account for the entire range of modifications reached by VA structures. Overt verb-argument structures only partially match the types of modification in Section 5. Paraphrases can be suggested in some cases, but they tend to be too clumsy and unusual for being accepted as underlying structures generating VA. It appears to be more reasonable to take VA as a syntactic baseline structure that can be syntactically elaborated according to the corresponding event-modification frame. However, not all semantic effects in VA structure can be adequately explicated. Obviously, this conflicts with the autonomy principle of syntax (see Langacker 2008: 5). In terms of linguistic tests, explicit paraphrases should rather be qualified as ‘overspecified’ with regard to VA (in terms of real communication, they are simply more elaborated). There are indeed cases in which more than one paraphrase has to be used in order to cover the range of interpretations in a given VA structure. The paraphrases to sing sweetly, to sing with a sweet voice or to sing with sweet feelings are all more specific than to sing sweet. It is highly improbable that sing sweet can be explained in terms of deletion from Type B or paraphrases. Think big (Fr. voir grand) is not underspecified since it represents the degree of explicitness the speaker wants to realize when he uses it in a given utterance.

Elaboration is not restricted to syntax. Morphology also plays a role, since morphological agreement can direct the focus of modification. Inflected and uninflected usages are variants that often occur in a similar context. The speaker may use agreement with a noun in order to guide modification in a participant-oriented sense. Similar instruments for orienting the focus of modification are the suffixes Engl. –ly and Fr. –ment. Crucially, French short adverbs have repeatedly been explained as the deletion of –ment, e.g. facile (adv.) < facilement (Moignet 1981: 52). However, this process would produce feminine forms with lentement > *lente (adv.), which is not acceptable. The English language provides striking evidence against the hypothesis of explaining slow (adv.) by suffix deletion from slowly, because the adverbial suffix –ly is younger than Type A adverbs, which were standard in Old English. The same happens with Romance, since Latin employed Type A adverbs, but not the adverbial suffix –mente (Hummel 2013). In the above mentioned case of agreement for gender and number, it is counterintuitive to explain the unmarked form (masculine singular) as a reduction of the marked forms for feminine or plural. In sum, there are only two acceptable hypotheses, (i) morphological elaboration in order to actively orient modification, (ii) grammatical morphemes as formal markers for established semantic relations, which is the traditional analysis conveyed by the terms agreement or government.

If we leave the strictly functional level of analysis, established usage obligates us to suggest a more differentiated analysis. The terms argument / valency reduction can be adequately used for the description of usage, that is, a specific diachronic result. To give an example, the verb to eat may usually occur with a subject and a direct object, while VA structures are often restricted to inner argument modification (Eat fresh!). Still more striking is the French verb dire ‘to say’, which is almost never used as an intransitive verb, but VA structures combining dire with the adjectives bel, beau, clair, court, faux, franc, gros, juste and vrai are largely documented without direct object argument in the Dictionnaire historique de l’adjectif-adverbe. From the point of view of overt syntax in use, valency reduction or argument reduction are accurate terms. However, it is the implicit relevance of the inner argument that allows argument reduction. To put it differently, the semantic event-modification frame conserves the argument so that there is no need to express it in overt syntax.

Baseline VA structures are often used in jargons where the broader context is well known. As shown in 5.8, VA structures often progressively emerge in jargons or other colloquial varieties as condensations of a well-known context. Hence, they presuppose further knowledge, and their usage essentially aims at economically replacing context information. Fr. contrôler positif ‘to test positive’ emerges in the micro-diachrony of journalists writing and talking over a period of weeks about doping. Journalists use the baseline VA as an economic device for reducing overt syntactic
and textual complexity. In this case, arguments and circumstances are indeed semantically integrated. Consequently, if there are cases of syntactic elaboration starting with VA, there are also developments starting from complex contexts that are condensed by VA. The person who newly reads or hears contrôler positif has to use his imagination in order to reconstruct the mental space which fits with the context. Hence, the speaker-hearer dynamics of communication repeatedly activates the cognitive process starting at baseline VA. Jargons constantly add new VAs which condensate common knowledge and obligate the one who newly hears them to reconstruct the missing elements in the event-modification-frame. Witness the following productive example for Fr. deviser bas:

(71) En gros, j’me dis qu’il est tout à fait possible que la réalisation de tout ceci pour 3000 euros soit rentable, à condition de faire simple et de bosser vite […] On peut très bien bosser comme ça (et du coup deviser bas) mais il faut en avoir conscience…

‘Roughly speaking, I think it is perfectly possible to profitably make it for 3000 euros, provided that we make it simple and work fast […]. One can indeed work like this (and consequently provide a low estimate), but you have to be aware of it…’

Deviser bas usually means ‘to talk low’, but in the example it is related to the expression faire un devis avantageux, which means ‘to offer a low estimate’ for executing a job, that is, to offer a low price for a contract. (71) also contains a striking case of usage based valency reduction: Faire ‘to make’ is strongly transitive verb. The jargon VA structure faire simple ‘to execute work with a minimum of effort, using the easiest solutions’ is used as an infinitive without any argument for a generalizing statement.

7.4. Structure and construction

In order to adequately tackle all the variants of VA in terms of gradience and merging, the cognitive linguistic starting point of analysis has to be structure, not construction. As a matter of fact, the latter already presupposes functional analysis and, in most cases, conventionalization (e.g. secondary predication, short adverbs, copula constructions, etc.). Witness Goldberg (1995), who starts from well-known constructions, while Goldberg & Jackendoff (2004) later discover a range of constructions tied by family resemblance. It comes as no surprise that Taylor (2012: 126) somehow misses “generative rules” in the discussion on constructions. Where do they stem from, how are they construed? Structure is more basic than construction from the cognitive point of view because the hearer only receives sensory information such as sound, picture, etc. Just as with concepts, functions are not directly transmitted from the speaker to the hearer. The hearer instead (re)constructs them on the basis of the sensory stimuli received by her / his ears and eyes. S/he starts a new functional and conceptual analysis each time s/he sensorily perceives a structure. This explains the dynamics of VA structure as it appears in Section 5 where many VAs allow for more than one interpretation. In most, but not in all cases, the hearer recognizes conventionalized constructions, e.g. to drive slow vs. to drive someone crazy17, where we identify a short adverb in the former and a resultative copula verb construction in the latter. The introduction of structure as the cognitive starting point or baseline for the construal of constructions introduces a dynamic dialectic principle. It is dialectic insofar as we have, on the one hand, simple VA structure, with possible further syntactic or morphological elaboration, and the sense of the utterance on the other. If both poles match, function is identified. This process converts VA structure into a construction, which could thus be defined as a functional interpretation of a syntactic structure. Obviously, one may define construction in the widest sense as any analyzable structure, which is one of the definitions listed by Taylor (2012: 124), but if the term covers the whole development from baseline

17 Boas & Gonzálvez-García (2014) discuss constructions such as He found the girl discreet and sensible in the framework of construction grammar.
structure to functionally defined constructions, it is no longer useful for the analysis of dynamic cognitive construals. Baseline structure vs. construction provides an adequate terminological instrument for this purpose.

As pointed out in Section 5, the emerging and profiling of constructions based on VA are motivated by the underlying event-modification frame, that is, the conceptual synthesis of verb and modifying adjective. VA structure contains a minimum of functional information to the extent that V and A can be associated with word-classes. There is also minimal syntactic information in terms of word order, which permits, for instance, to read the noun in Fr. boire nature ‘to drink neat; lit. to drink nature’ as a modifier. The discussion on short adverbs being ‘light complements’ of the verb (Abeillé & Godard 2004, Abeillé & Mouret 2010) shows that the slot after the verb also licenses the interpretation as a direct object, at least to a certain degree. This is obviously the case for copula constructions, e.g. S/he is good or She is a mother = She is it. A ‘light complement’ variant would be to eat light / fresh, where the adjective can be interpreted as ‘something light / fresh’, without ruling out the reading as process-participant modifying construction. The dynamic perspective of gradient elaboration processes based on frame semantics is a useful counterweight to linguists’ inclination to clearly separate linguistic phenomena.

This analysis calls into question Goldberg’s (1995: 1) definition of construction as form-meaning correspondence carrying meaning independently of the words in the sentence. Her analysis holds for conventionalized constructions, but it needs the additional analysis of constructions themselves being construed on the basis of structure. Since VA structure provides a series of constructions, it is problematic to affirm that constructions are form-meaning pairs independent from the involved words. It is more adequate to assume that VA structures admit several functional analyses leading to constructions which for their part may achieve various degrees of abstraction, generalization and conventionalization. This point of view matches with Goldberg’s concept of surface generalization (Goldberg 2006), which to some extent conflicts with her general assumption of given conventionalized constructions (plus learned idiosyncratic cases18). Consequently, she redefines constructions as not fully predictable functions of patterns and stresses the role of specific word semantics (2006: 5). The term structure is needed in order to cognitively explain productivity, that is, as the prior step to local or conventionalized constructions as form-meaning pairs. As shown in this paper, VA structure does not include a rule that allows for predicting a form-meaning pair, e.g. a resultative construction. VA provides instead a structural frame that constrains the range of possible interpretations without definitively selecting them. It depends on the concepts used if a resultative interpretation is possible or not. In sum, my corpus approach shows that profiling is less ‘determined’ by lexical and constructional properties than Goldberg (1995: e.g. 44) assumes, essentially because the baseline VA structure is neither fully determined as a construction nor are the slots of the structure filled with specific words. The wide range of concepts possibly referred to by all verbs and adjectives in VA structures are a melting pot from which many different constructions can emerge. In this sense, Goldberg & Jackendoff (2004) confirm that resultatives are a heterogeneous and partially idiosyncratic family of constructions.

It should be added that baseline structure represents the hearer’s perspective. This perspective corresponds to the one a researcher adopts for the analysis of linguistic data. The term structure has therefore been chosen at the beginning of this paper: the linguist finds structures and s/he wants to know what they mean and how they function. However, if we look at the speaker, the development changes to a function first principle, simply because the speaker knows first what s/he wants to express and then chooses an adequate construction for conveying this information. As the hearer is also a speaker, this includes the hearer’s assumption of structures having meaning or structures

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18 Traugott & Trousdale (2013: 11) provide good reasons for excluding idiosyncrasy and frequency from the definition of construction.
**being constructions.** Hence linguistic structures stimulate a cognitive process of sense construction. From the point of view of innovation, the basic assumption is not necessarily the one of *structures having meaning,* if we take *meaning* in its usual definition of a conventionalized content, but that of *structures meant for conveying relevant information.* This is what the hearer has to find out, via recognition of conventional constructions or via productive reconstruction guided by the principle of relevance.

8. Conclusion

The analysis of the modification effects realized by VA structures provides evidence for the existence of specific features related with the event denoted by the verb. The selected features are not restricted to the verb-argument structure and the corresponding extra-linguistic event-participant structure. They also include circumstantial features and attitudinal features belonging to the speaker’s subjective perspective. It clearly emerges that the semantic event-modification frame is fundamental for syntactic and morphological elaboration. Overt paraphrases for the modifications observed are often clumsy and unlikely to be used for hypothesis using syntax deletion. The complementary hypothesis that considers overt syntax an optional elaboration of semantic relations in the event-modification frame is more likely to provide an adequate explanation. However, not all semantic effects created by baseline VA structures can be syntactically expressed. The analysis of all semantic effects caused by VA in the general event-modification frame (Fig. 2) provides an interesting method for echo-sounding the elements of this frame, not only with regard to the *profiling* in single utterances, but also in order for the more abstract definition of the frame in terms of a general *profile* corresponding to grammatical categories such as syntactic functions, semantic roles, and aspect. The general profile of VA structure consists of three equally distributed semantic domains: process modification, process-participant modification, and circumstantial modification. This means that VA modifying events do not confirm the traditional view of “manner adverbs” denoting “the way a process is realized”. The effects of modification are almost as complex as the event itself.

Linguists are ‘naturally’ inclined to clearly separate the phenomena analyzed in Section 5, e.g. secondary predication (with depictive and resultative subtypes), adverbs of manner, circumstantial, etc. This is a legitimate grammaticographic procedure. However, all of these cases are possible developments of VA structure. In other words, the baseline VA-structure opens a window to a series of constructions. From the dynamic point of view of baseline elaboration, borderline cases, ambiguity, etc. do not cause any explanatory problems, as is instead the case for classificatory approaches. It is natural and unavoidable that *to speak loud* may refer to both the way of speaking and the volume of voice while speaking, and that speakers may guide modification via inflection when several features are available for modification in the event-frame (e.g. Fr. *Elle chante doux/* *douce*). Standardization efforts typically tend to favor a single option. Attempts to clearly separate secondary predication from manner adverbs in general terms are pointless; this is only possible in terms of gradual prototypicality or center-periphery. The innovative approach in this paper aims at integrating all possible elaborations of the VA structure. Crucially, *structure* is taken as the cognitive starting point for both the construal of complex concepts with VA (e.g. *to think big*) and the construal of *constructions.* In the context of such a large grammaticographic and linguistic tradition of classification, a dynamic approach starting from what the hearer perceives, that is, *structure,* and leaving open the question of functional specification as a *construction,* counterbalances analyses biased by linguistic prejudice. It further opens a window to diachrony and future development.

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