When Morphology 'Feeds' Syntax: Remarks on Noun > Adjective Conversion in Italian Appositive Compounds

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1. Interaction between morphology and syntax in compounding

Being an instance of word formation, compounding is usually conceived as a process involving combination of two or more words / lexemes to create a new lexical item, namely a word / lexeme: "a compound is a word which consists of two or more words" (Fabb 1998: 66). Thus, compounds are expected to show the property of morphological cohesion, which is one of the crucial parameters employed to define the notion of grammatical / morpho-syntactic 'word' in a typological perspective: "a grammatical word consists of a number of grammatical elements which […] always occur together, rather than scattered through the clause (the criterion of cohesiveness)" (Dixon & Aikhenvald 2002: 19).

Nevertheless, such a definition sketches just a partial picture of compounding, being "descriptively valid for the core of compounding processes" (Bisetto & Scalise 2005: 319), but neglecting that compounds can be productively formed also by means of linguistic items that do not correspond to words or, better, lexemes, such as stems and roots (cf. 1), or even phrases (cf. 2):

(1)   Ancient Greek
        ἀνθρωπό-νοος
        man-mind, intellect
        'clever' (lit. 'with a human intellect'; first constituent: a stem?)
        πατρ-άδελφος
        father-brother
        '(paternal) uncle' (lit. 'father's brother'; first constituent: a root?)
        (Grandi & Pompei to appear)

(2)   Italian
        L'attentatore ha collocato l'ordigno nel piccolo vano ... dove si trova il [porta[rotolo delle strisce di carta che si usano per coprire la tavoletta del wc]]
        'The bomber has placed the bomb in the little space where the [roll of paper strips that are used to cover the wc board] - holder is located'
        (Ricca 2008)

        scaldachiodi di sommergibile
        'submarine nail heater'
        (Arcodia *et al.* to appear)

        Dutch
        lach of ik schiet humor
        'laugh or I shoot humour'
        (Bisetto & Scalise 1999: 35)

Compound forms as those in (2) have been ignored by scholars for a long time. In the last few years, due both to a renewed interest towards the issue of Lexical Integrity (cf. Lieber & Scalise 2006), and to the emergence of constructionist approaches to word formation (cf. Booij 2005, 2007), scholars have more systematically surveyed the interaction between syntax and morphology in word formation, and,

more specifically, in compounding,[1] revealing that syntax can productively 'feed' morphology not only by means of lexicalization of syntactic constructions,[2] but also via the regular and systematic use of purely syntactically-built complex forms, that preserve their internal structure, and do not undergo any lexicalization process.

Recently, Gaeta & Ricca (to appear) have argued that "if compoundhood and lexicalization are independent notions, they should combine in all possible ways: namely, beside finding lexical units that are not compounds, but syntactic units, we should also find compounds (morphological units) which are not lexical units". They add that "if compounding is considered […] plainly as a class of morphological procedures, on a par with, say, affixation, we should expect to find non-lexeme-forming compounding, parallel to what we find in derivation: several derivational procedures may in fact have outputs whose lexeme status is at least doubtful". In this picture, the Italian data listed in (2) should not be considered lexemes, even though their compound status can hardly be disputed. On the contrary, multiword expressions as *ferro da stiro* 'iron' have a lexical status, even if they are not the effect of any morphological operation:

		lexical status	morphological operation
(3)	a. scaldachiodi di sommergibile	NO	YES
	b. ferro da stiro	YES	NO

The different status of the forms listed in (3) depends on the strategy adopted to mark the relationship between the constituents. In Grandi (2006: 43) I stated that a compound can be conceived as the union of two or more forms which have lexical autonomy and which have a relationship, either zero-marked or marked by morphological means.[3] Gaeta & Ricca (to appear) propose a similar view, asserting that "the compound must not be structured by means of any functional word which codifies inner grammatical relationships between its components". In (3b) the relationship between *ferro* 'iron' and *stiro* 'ironing' is marked by the functional word *di*, and this prevents us from classifying this form as a compound. Conversely, in (3a), the two constituents, *scalda* and *chiodi di sommergibile*, are linked by zero-marking and this allows us to count this form as a compound. The presence of the preposition *di* within the second constituent does not represent an obstacle to such an analysis, because it is embedded in the 'syntactic object' that fills the second slot in the compounding schema represented as $[[X]_V[X]_{N/NP}]_{N/A}$.

So, productive compound formation processes that include a syntactic construction are far from rare. But what is still ignored by most morphologists is that the opposite situation is also possible and productively attested: morphology can 'feed' syntax too. In other words, some compounds, which are the outcome of purely morphological operations and look like lexemes, can acquire a syntactic status, usually after a sort of semantic (and formal) reanalysis. It is the case, for example, of a set of formations that have always been classified as compounds without any relevant objection:

(4)   Italian
        riunione fiume
        meeting river
        'very long meeting'

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[1] Cf. Arcodia *et al.* (to appear) for a cross-linguistic survey of interaction between syntax and morphology in compound formation.

[2] It is the case, for example, of multi-word expressions such as *camera da letto* 'bedroom' or *ferro da stiro* 'iron', sometimes classed as compounds (cf. Dardano 1978; Scalise 1994: 142 labels them as "composti sintagmatici" – phrasal compounds). These syntactic formations shift towards the status of word, losing all internal boundaries, and are the outcome of largely exceptional processes, not of a morphological operation.

[3] "Un composto è l'unione di due o più forme a cui i parlanti nativi attribuiscono autonomia lessicale e tra i quali vige una relazione […] che è marcata mediante zero o mediante strategie puramente morfologiche".

French
voyage-éclair
journey lightning
'very quick journey'

English
key word

These forms reveal, upon deeper analysis, quite an unexpected behaviour.

2. Appositive compounds such as Italian *riunione fiume*

Compounds like Italian *riunione fiume* are usually classified in the literature as appositive, endocentric (left-headed in Italian and French, right-headed in English) NN compounds (cf. the classification of compounds by Bisetto & Scalise 2005, revised in Bisetto & Scalise 2009). But, in a typological perspective, they actually exhibit some properties that are unusual for compounds and that allows us to question the validity of such a classification.

Probably the oddest property of compounds like *riunione fiume* is that the second constituent belongs to a closed class of nouns[4] whose occurrence is strictly restricted to the non head position of these appositive compounds. But it is well known that in Romance languages there are no constraints on the position of a word within a compound:

(5) Italian
ingegnere <u>capo</u>   vs.   <u>capo</u>ufficio
'head engineer'   'head clerk'
Trova<u>casa</u>   vs.   <u>casa</u> albergo
find.house   house hotel
[name of a newspaper   'block of service flats, apartment hotel'
of real estate announcements]

This is true even of the so-called affixoids (or semi-words), that is constituents of 'learned (or neoclassical) compounds', which can occur both in initial and final position: <u>filo</u>sofo 'philosopher' / biblio<u>filo</u> 'bibliophile' (cf. also the pair *antropofilo* 'anthropophilic' / fil<u>antropo</u> 'philanthropist'). In a wide typological perspective, a rigidly fixed position within a linguistic complex form is typically an affixal property.

Moreover, a word, when occurring in a compound, usually retains its meaning. But in these problematic compounds the meaning of non head constituents is different from the one they have when used as autonomous words. A *decisione bomba* does not concern a bomb, but is a sensational decision; an *intervista bomba* is an interview in which some sensational and unexpected announcements are made, not an interview in which somebody speaks of a bomb. In the same way, an *interrogatorio fiume*, a *processo fiume* have nothing to do with a river, but designate a long examination and a long lawsuit respectively. An *argomento principe* does not refer to a prince, but indicates the main topic of a discussion, etc. In all these forms the non-head constituent is metaphorically re-interpreted. According to Bisetto & Scalise (2005, 2009), this metaphorical reinterpretation is the most peculiar feature of appositive compounds. Actually, it is considered the defining feature of this subclass of compounds: Bisetto and Scalise characterize appositive compounds as formations "where the non-head very often is used somehow metaphorically, expressing an attribute of the head" (Bisetto & Scalise 2005: 327).[5] They add that "metaphoricity is the factor that enables us to make a distinction between, e.g.,

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[4] *Chiave* 'key', *fiume* 'river', *bomba* 'bomb', *principe* 'prince', *mosca* 'fly', *lampo* lightning', etc.; and such loanwords as *tabù / taboo, boom, shock / choc, killer, baby, record* etc.
[5] "In appositives […] the noun plays an attributive role and is often to be interpreted metaphorically" (Bisetto & Scalise 2009: 52).

mushroom soup (a subordinate ground compound) and *mushroom cloud*, where *mushroom* is not interpreted in its literal sense but is rather construed as a 'representation of the mushroom entity'" (Bisetto & Scalise 2009: 52). However, it is worth mentioning that in some frequently attested appositive compounds, usually quoted as prototypical instances of appositive compounds in the literature, such as *pesce spada / swordfish*, the metaphorical (re)interpretation of the non head is very weak. In other words, there is a clear difference between the semantic shift of *fiume* 'river' in *riunione fiume* ('very long meeting') and that of *spada* 'sword' in *pesce spada* 'sword fish'. When the word *fiume* occurs in a compound as *riunione fiume*, only the feature 'long' plays a role in the composition of the whole meaning; the other features are lost. On the contrary, in a compound like *pesce spada / sword fish* the non head retains most of its body (in Lieber's 2004 terms).[6] Actually, in the former case the meaning of the non head constituent seems to have undergone a process of semantic bleaching, which is often a symptom of isolating abstraction. Isolating abstraction "separates one particular property or feature that is not necessarily the "core" or "nucleus characteristic" of that concept" (Heine *et al.* 1991: 43). Thus, the metaphorical (re)interpretation of these words in a compound construction 'fossilizes' in such a way that it becomes their standard interpretation whenever they occur in any compound as non head constituent. So, what distinguishes compounds such as *riunione fiume* from other appositive compounds such as *pesce spada* is that not only the position of words fitting the non head slot becomes fixed, but also their meaning: that is to say, these words always occur in the second position, always expressing the same metaphorical meaning. In this sense, each of them gives rise to a family or series of words (a 'word formation paradigm' in Booij's 2006 terms), which is quite unusual in compounding but frequent in derivation:

(6) $[[X]_N$ *fiume* 'river'$]_N$ X = *riunione* 'meeting', *interrogatorio* 'examination', *processo* 'trial, lawsuit', *discorso* 'speech', *discussione* 'discussion', etc.

 $[[X]_N$ *bomba* 'bomb'$]_N$ X = *notizia* 'piece of news', *intervista* 'interview', *rivelazione* 'revelation', etc.

 $[[X]_N$ *lampo* 'lightning'$]_N$ X = *processo* 'trial, lawsuit', *guerra* 'war', *viaggio* 'journey', *operazione* 'operation, action', etc.

 $[[X]_N$ *chiave* 'key'$]_N$ X = *parola* 'word', *ruolo* 'role', *concetto* 'concept', *elemento* 'element', *posizione* 'position', etc.

 $[[X]_N$ *ombra* 'shadow'$]_N$ X = *governo* 'government', *ministro* 'minister', *senatore* 'senator', *presidente* 'president', *cancelliere* 'chancellor', etc.[7]

 …

(7)   literal meaning   metaphorical extension

fiume	'river'	'long'
bomba	'bomb'	'sensational'
lampo	'lightning'	'quick'
chiave	'key'	'crucial'
mosca	'fly'	'small'
principe	'prince'	'principal'
fantasma	'ghost'	'evident, but not seen'
ombra	'shade'	'parallel, alternative'
…		

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[6] In *pesce spada / sword fish*, *spada / sword* retains its referential meaning: we can define a *pesce spada / sword fish* as a sea fish with an extremely long thin pointed upper jaw, so having a sort of sword on its head. On the contrary, as stated above, a *riunione fiume* has nothing to do with a river.

[7] No similar situation is attested for *spada* — that is, no family of complex words with *spada* in final position is attested.

2.1. The grammaticalization hypothesis

On the basis of such behaviour (that is, fixed position and recurrent meaning), some scholars have described these data as instances of a move from compounding to derivation, supporting an alleged affixal nature of items as *fiume, chiave, principe*, etc. Among them, Dardano (1978: 184) referring to Italian: "quando si formano delle intere serie con lo stesso Dnte [determinante], quest'ultimo tende a perdere ulteriormente la sua specificità semantica e a comportarsi quasi come un elemento suffissale"; and Bauer (2005: 98) in a more general perspective:

> [T]he histories of many of the familiar and well-studied European languages give us a number of cases of compounds at one period of history becoming derivatives at a later period. […]. We find a particular word being used more and more frequently as a compound-element, perhaps to the extent that its use as a compound element is more frequent than its use as an independent word. In some of these cases the meaning which is observed in the compound instances is also distinct from the meaning which pertains when the word is used independently. I have two sets of examples of this stage, one from French, one from English.
> The French example set is the use of particular words in compounds, especially in journalistic styles. Specific instances are *idée* 'idea' used as head element and *choc* 'shock' or *clef* 'key' used as modifying element […]: *prix-choc* 'shock price', *idée cuisine* 'cooking idea', *mot clef* 'key word'.

The transformation of a lexeme into a derivational affix is a cross-linguistically quite frequent and widely described phenomenon. We can mention, for example, the well-known case of Germanic languages (i.e. English suffix *-dom*, cf. Bongetta 2003; cf. also Dalton-Puffer & Plag 2000) or of Chinese, recently described by Arcodia (2008), who points out that one of the conditions a form must satisfy in order to be considered an affix, apart from fixed position, is to have a more generic (or less specific) meaning than the one the same form displays when used as an autonomous word. Moreover, this meaning must be constant in all such constructions.[8] The hypothesis that forms like *fiume, chiave, choc / shock* are on the way to affixation seemingly meets all these requirements.
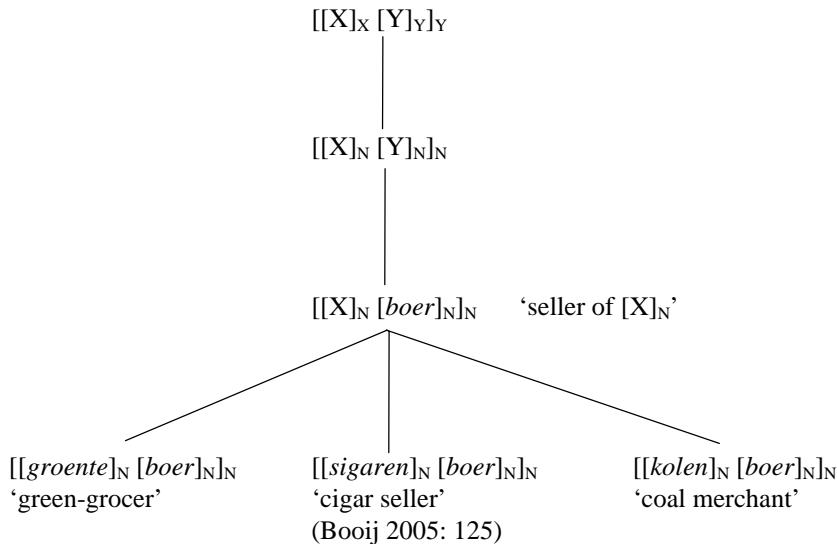
Therefore, if this hypothesis were true, we would be dealing with a process of grammaticalization. All the more so because, as illustrated by Heine *et al.* (1991: 43), semantic bleaching and isolating abstraction, mentioned above, often correlate with grammaticalization:

> Both generalizing and isolating abstraction also appear to be present when grammaticalization is analyzed in terms of bleaching […]: lexemes become more "abstract" by losing their semantic specificities and by being increasingly reduced to their respective core meaning (generalizing abstraction) or to one particular part of their meaning (isolating abstraction). Abstraction of both types implies that its output is necessarily part of its input; that is, what happens in the course of grammaticalization is that concepts are merely reduced in their intensional content while their extension is increased.

So, we can assume that in NN compounds as *riunione fiume* a grammaticalization process is at work and that non head constituents are on the way to becoming suffixes (and this would explain their fixed position). In this sense, they would be similar to complex forms that Booij, in his recent works on construction morphology, labels as 'constructional idioms', that is word formation templates with a variable and a concrete linguistic item, not always corresponding to an actual word.

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[8] "Le proprietà che una parola / morfema, o un'accezione di una parola / morfema, deve avere per essere considerata di natura affissale sono, oltre alla rigidità posizionale, un significato più generico (o perlomeno non più specifico) di suoi eventuali usi liberi, che deve ripetersi stabile nelle sue diverse istanze" (Arcodia 2008: 46).

(8)
$$[[X]_X [Y]_Y]_Y$$

$$[[X]_N [Y]_N]_N$$

$$[[X]_N [boer]_N]_N \quad \text{'seller of } [X]_N\text{'}$$

$[[groente]_N [boer]_N]_N$
'green-grocer'

$[[sigaren]_N [boer]_N]_N$
'cigar seller'
(Booij 2005: 125)

$[[kolen]_N [boer]_N]_N$
'coal merchant'

The meaning of *boer* as an autonomous word is 'a person who operates a farm, a country person' (cf. also Booij 2007).

But this hypothesis has some disadvantages that challenge its validity. At first, it has always been asserted that in the morphology of the Romance languages, which by far favours the right side of words in word formation rules, suffixes are heads with respect to the syntactic category and other formal features, that percolate to the upper node, that is become part of the subcategorization frame of the derived word. But in compounding the unmarked position of head is the first slot; in other words, in Romance languages, most endocentric compounds are left-headed. So, in this case, we would have to suppose that a non head constituent of a compound becomes the formal head of a derived word. This mismatch makes it implausible for an unmarked endocentric compound to develop into a suffixed word. This situation fits into a more general typological tendency: unlike Germanic languages, in Romance languages it is very unlikely to derive derivational suffixes from lexemes. A well-known exception is that of Italian and Spanish *-mente*, and French *-ment* (which form adverbs from adjectives): but it does not derive from a compound, but from a Latin head final noun phrase in the ablative case.

Moreover, quite surprisingly, this alleged grammaticalization process does not go along with the expected and usual phonological reduction (with the possible exception of reduction of the stress).

But the strongest argument against the hypothesis that the non head constituents of compounds such as *riunione fiume* are developing into suffixes is that, in this case, we would expect an increase in their internal cohesion. Lehmann (1995[2]) singles out a grid of parameters in order to establish the degree of grammaticalization of a linguistic item, and includes bondedness among them:

	PARADIGMATIC	SYNTAGMATIC
WEIGHT	integrity	structural scope
COHESION	paradigmaticity	bondedness
VARIABILITY	paradigmatic variability	syntagmatic variability

Table 1. Grammaticalization parameters

In the model of Hopper & Traugott (2003[2]) too, the development of a previous independent word into an affix is described as a 'compacting' process labelled as 'morphologization'. The two authors add that "the beginnings of morphologization must be sought in repeated use of syntactic constructions" (Hopper & Traugott 2003[2]: 141). This process always entails an intermediate clitic stage:

(9)   lexical item in a specific syntactic context > clitic > affix.

So, bondedness is frequently, even if not always, a symptom of grammaticalization. Moreover, in the typological literature, as stated above, cohesion (or cohesiveness) is one of the strongest parameters used to define the notion of grammatical / morpho-syntactic 'word' (cf. Dixon & Aikhenvald 2002). As to this issue, it has often been claimed that compounds are less prototypical words than derived forms or, so to speak, they have a lower degree of 'wordhood' (for example, the criteria to define grammatical words and phonological words match more often for derived words than for compounds; cf. once again Dixon & Aikhenvald 2002, and Ramat 2005). So, as for data under examination, if we were dealing with a process of grammaticalization or, more specifically, of morphologization, we would expect an increase in the degree of 'wordhood' and, as a consequence, of internal cohesion. Hence, a compound as *riunione fiume* should be closer to prototypical words than *pesce spada*. And, as a consequence, internal cohesiveness of *riunione fiume* should be higher than that of *pesce spada*.

2.2. Unexpected behaviour of appositive compounds such as riunione fiume

Nevertheless, contrary to what we would expect, in compounds such as *riunione fiume* there is a decrease in the degree of internal cohesion, as the following data reveal:

(10)[9]   Alcune vitamine svolgono **ruoli molto chiave** nell'equilibrio ormonale.
        'Some vitamins play **very crucial roles** (lit. roles very key) in hormonal equilibrium'

        I Magic hanno pagato molta inesperienza, mi aspettavo un **ruolo più chiave** di Dwight Howard.
        'Magic paid for lack of experience; I would have expected Dwight Holland to play **a more crucial role** (lit. role more key)'

        Un **processo più fiume** di ogni precedente, data la mole dei documenti e la massa che mobilita di figuranti e comparse.
        'A **far longer trial** (lit. lawsuit more river) than any previous one, due to the great amount of documents and extras involved'

        Hai fatto una **riunione talmente lampo** che hai fatto tutto da solo!
        'You've held **such a short meeting** (lit. meeting so lightning) that you've done everything yourself'

These data lead us to doubt that a grammaticalization or morphologization process is really underway. If our doubts were well-founded, it would mean that the analysis which is prevalent in the literature goes in the wrong direction and we would have to find an alternative explanation.

Coming back to the data in (10), we observe that the alleged compounds under examination sometimes occur with common adjectival modifiers in between. Moreover, they occasionally occur in the superlative form:

(11)   Dopo una operazione lampo ed un **recupero lampissimo**, Baresi torna in campo per la partita più importante.
        'After a quick operation and **a very quick rehabilitation** (lit. a rehabilitation lightning:SUP), Baresi has taken the field for his most important match'

        Notizia bombissima! Priest Holmes si ritira?
        '**Sensational breaking news** (but lit. news bomb:SUP)! Is Priest Holmes withdrawing [from the National Football League]?'

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[9] Most of the data discussed in this paragraph are taken from the CORIS / CODIS (cf. Rossini Favretti 2000) and *la Repubblica* (cf. Baroni *et al.* 2004) corpora. Data have been occasionally integrated through Google searches.

Like adjectives, they can agree in number with the head noun:

(12)   Quello che vede impegnato Van Nistelrooy è uno dei **duelli chiavi** della partita
         'Van Nistelrooy is involved in one of the **crucial duels** (lit. duels keys) of the match'

         Quante **parole chiavi** usano gli utenti nelle ricerche?
         'How many **key words** (lit. words keys) do users use in their queries?'

         Ci sono sempre in mezzo i giochi politici, le "**notizie bombe**"
         'Political tricks, **sensational news** (lit. news bombs) are always involved'

         Crollano Parigi, Londra, Berlino, Milano, Wall Street, sospese le quotazioni delle maggiori
         aziende, **riunioni fiumi** di governi e consigli di amministrazione
         'Fall on the stock exchanges in Paris, London, Berlin, Milan, Wall Street; stock quotations
         have been interrupted; long governments and boards meetings (lit. meetings rivers)'

In *parole chiavi* ('key words'), *notizie bombe* ('sensational news'), and *duelli chiavi* ('crucial duels'),
etc. the plural is marked on both constituents although in Italian appositive compounds plural is usually
marked just on the head noun (i.e. *pesce spada* 'sword fish' > *pesci spada* 'sword fishes'; **pesci
spade*). In this respect, Dixon & Aikhenvald (2002 : 22) point out that "in languages with a single
inflectional system on each class of words, there is a further criterion for grammatical word, concerning
the distribution of inflections: there will be just one inflectional affix per word", that is to say, each
inflectional category tends not to be marked more than once in a word. So, if *duello chiave* were a
single word such as *pesce spada*, we would expect plural to be marked once, not twice.
     Coming back to the data, we can add that in some forms we have even a co-occurrence of both
superlative and gender agreement:

(13)   Ho sottolineato in tre colori (giallo punti esegetici importanti, arancio **parole chiavissime**,
         rosa le opere) tutte le 16 pagine che l'Abbagnano-Fornero, vecchia edizione, dedica a Galilei.
         'I underlined with three colours (yellow for important exegetic points, orange for **the most
         important words** (lit. words keys: SUP), pink for the works) all 16 pages that Abbagnano-
         Fornero, in the old edition, devotes to Galilei'

         Telefonata fiume fiumissima... ah, sapeste!!
         'A **long**, **very long phone call** (lit. phone call river river: SUP)… ah, if only you knew!!'

So, some promising similarities between non head constituents of alleged compounds such as *riunione
fiume* and adjectives do emerge. These similarities seem to be supported also by the fact that these
constituents occupy the syntactic slot usually assigned to adjectives in an unmarked noun phrase, Italian
being a head initial language; moreover, they do not have a referential, but a generic meaning, or, more
accurately, a descriptive function, as seen before (cf. also Noailly 1990 and Mauri 2003). Therefore, we
can wonder whether complex forms such as *riunione fiume* shouldn't be more properly classified as
phrases than as compounds. In this case, we would be dealing with an instance of conversion (or
transcategorization) of non head constituents. This issue has been cursorily tackled by Thornton (2004),
who gives a negative answer to this question. The conclusion reached by Thornton is based on the
application to words like *fiume, chiave,* etc. of a set of criteria aimed at measuring the degree of
'adjectivehood' of a word occupying the modifier position in a complex construction:

(14)   Number agreement with the head noun
         Gender agreement with the head noun
         Comparative form
         Superlative form
         Adverb formation with *-mente*
         Occurrence in prenominal position

According to Thornton (2004: 528), "il tipo risponde male a tutti i test, compreso quello dell'accordo". But the data presented so far do not fully confirm such a conclusion and show that only the last two tests (that is adverb formation with *-mente* and occurrence in prenominal position) are rigidly blocked,[10] while the forms we are examining can occasionally pass the other tests. Incidentally, it is worth mentioning that also adjectives expressing concepts that Dixon (1977) considers to be 'core types', such as dimension, age, value, and colour,[11] display a problematic behaviour as to the last two tests:

(15)[12]	adverb formation	prenominal position
Dimension adjectives	grande-mente	uomo grande / grande uomo
	big-Adv	man big / big man
	*piccola-mente	uomo piccolo / piccolo uomo
	small-Adv	man small / small man[13]
Age adjectives	*giovane-mente	uomo giovane / giovane uomo
	young-Adv	man young / young man
	*vecchia-mente	uomo vecchio / *vecchio uomo*
	old-Adv	man old / old man
Colour adjectives	*rossa-mente	vestito rosso / *rosso vestito
	red-Adv	dress red / red dress
	*verde-mente	vestito verde / *verde vestito
	green-Adv	dress green / green dress[14]

Therefore, Thornton's claim is probably too strong,[15] since it does not explain why the non head constituents of alleged appositive compounds like *riunione fiume* can agree in number with the head noun, can occasionally agree in gender with the head noun, can occur in comparative and superlative form, occupy the syntactic slot usually assigned to adjectives, and do not have a referential, but a descriptive function.

2.3. The adjective hypothesis

Do the data presented in the previous section allow us to assert that the non head constituents of alleged compounds such as *riunione fiume* behave like adjectives?

Of course, before answering this question, we should tackle the issue of delimiting different parts of speech, which is far beyond the aims of this article. So, I shall confine myself to referring to the framework known as 'typological theory of markedness', proposed, among others, by William Croft.

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[10] Forms as *chiavemente* and *fiumemente* are unacceptable. Also, the inversion of constituents in alleged compounds as *riunione fiume* or *parola chiave* is rigidly blocked (*fiume riunione*, *chiave parola*). The prenominal position of the modifier noun is possibly admitted only in sentences as *il ruolo più chiave è quello di…* 'the most crucial role is that of…'

[11] For a cross-linguistic survey of 'adjective' cf. also Dixon & Aikhenvald (2004).

[12] In (15), * indicates that a form has no occurrences in the CORIS / CODIS corpus. As for the prenominal use of colour adjectives, the examples are representative of a general situation: all the occurrences of *rosso* 'red' and *verde* 'green' have been checked.

[13] It must be pointed out that prenominal use of dimension adjectives often triggers a semantic shift towards the value class. So, *piccolo uomo* could mean both 'small man' and 'ordinary, mediocre man'. In postnominal position, the literal meaning is largely preferred.

[14] A colour adjective can be productively followed by a noun only if the noun is not the head of the noun phrase, but if it modifies the meaning of the adjective. So, while *vino rosso* means 'red wine', *rosso vino* means 'red as wine'.

[15] All the more so because even the most prototypical adjectives fail some of the tests she employs.

His premise is that "noun, verb and adjective are not categories of particular languages", but are "language universals – that is, there are typological prototypes […] which should be called noun, verb and adjective" (Croft 2000: 65). In this picture, "syntactic categories, including those commonly labelled as parts of speech, are derivative from constructions that define them" (Croft 2000: 85). In other words, actual constructions are the primitive elements of syntactic representation and categories are derived from them: it is a sample of different constructions with a common function that define the boundaries of a category or of a part of speech. Functions are cross-linguistically universal or, at least, recurrent. Single constructions are language-specific. So, typological comparison will sketch a pattern of variation and every single language will fit somewhere in this pattern of variation.

As for parts of speech, the 'pattern of variation' is sketched by Croft (1991: 67) as follows, combining three semantic classes and three pragmatic functions:

	REFERENCE	MODIFICATION	PREDICATION
OBJECTS	**unmarked nouns**	genitive, PPs on nouns, adjectivalisations	predicate nominals, copulas
PROPERTIES	deadjectival nouns	**unmarked adjectives**	predicate adjectives, copulas
ACTIONS	action nominals, complements, infinitives, gerunds	participles, relative clauses	**unmarked verbs**

Table 2: Prototypical nouns, adjectives, and verbs

What fills the cells represents a generalization about how single languages encode the corresponding pragmatic function and semantic class. So, in a wide cross-linguistic perspective, every linguistic item that refers to an object can be labelled as a noun; every linguistic item that performs a modification by property can be labelled as an adjective; and every linguistic item that predicates an action can be labelled as a verb. Moving to the formal level, cross-linguistically we can expect to observe non homogeneous behaviours, since each single language will devote different formal means to the expression of these prototypical functions.[16] Therefore, in such a theoretical framework, both cases of multiple class membership and occasional occurrence of linguistic items or constructions in atypical roles cannot be excluded.

In alleged compounds as *riunione fiume* the second constituent, a noun, fulfils a modification function, emphasising a property of the head noun. So, we have a typical adjectival function (that is, modification by property) formally expressed by a noun. Hence, we are dealing with a marked construction. According to Croft (1991, 2000), what can be easily predicted from this theoretical framework is that marked members of a category can have the same inflectional (or – more generally – combinatorial) possibilities as marked members, or less inflectional (or – more generally – combinatorial) possibilities than unmarked members. In other words, the marked members of a category will exhibit a 'defective' behaviour with respect to the inflectional (or – more generally – combinatorial) possibilities of unmarked members. Therefore, nothing prevents a linguistic item with a prototypically nominal function, i.e. occurring as the head of a noun phrase designating an object, from being used with an adjectival function, thus filling the modifier position within a noun phrase and modifying the meaning of another noun. But, in this case, it can show defective behaviour with respect to the division of typical adjectives into inflectional classes; in other words, some of the inflectional classes usually realized on typical adjectives can remain unexpressed.

This is exactly what the data presented so far reveal. So, does this 'defective' behaviour with regard to the canonical parameters of 'adjectivehood' suffice to deny the adjectival character of the

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[16] On this issue, cf. a recent article by Mark Post (2008) on adjectives in Thai, a language usually described as lacking them. Post demonstrates that if the pragmatic function 'modification by property' is assumed as the starting point, this position can be denied. In Thai, one can single out a sample of constructions fulfilling this function and having some specific and peculiar properties on formal grounds.

second members of alleged compounds as *riunione fiume*? In my opinion it doesn't, provided a theoretical framework in which categories allow different degrees of membership. In this case, "the theory defines universal prototypes for the three major parts of speech, but does not define boundaries for these categories. Boundaries are aspects of language-particular grammatical categories, determined by distributional analysis" (Croft 2000: 91). Moreover, "it is quite common cross-linguistically to find a lexical item used in more than one pragmatic function without overt derivation but with a significant and often systematic semantic shift […]. The relevant cross-linguistic universal is that these shifts are always towards the semantic class prototypically associated with the pragmatic function" (Croft 2000: 96). Once again, it is just what we would expect in analysing the data presented above: a noun encoding the pragmatic function of modification by property will naturally shift towards the class of unmarked adjectives, that is it will tend to acquire the inflectional or combinatorial possibilities of unmarked adjectives. Then, a set of intra-systemic constraints comes into play, in order to establish to what extent this shift will push ahead. For example, the lack of ordinary gender and number agreement between head noun and modifier noun in constructions such as *riunione fiume* or *parola chiave* largely depends on the different distribution of gender and number within the parts of speech involved: in Italian, gender is an inherent property, thus a property of lexemes, for nouns, but it is a contextual property, thus a property of inflected forms, for adjectives. As a consequence, it can be easily predicted that number agreement is far more frequent than gender agreement, since a noun used with an adjectival function changes its lexical meaning, but cannot lose its inherent grammatical features, changing its inflectional class. Not by chance, gender agreement is easier if a superlative suffix is added, because it can resolve this mismatch between genders:

(16)   riunione   fiume
         meeting:F   river:M

         riunione   fium-issima
         meeting:F   river:M-Sᴜᴘ:F

         ??riunione   fium-issimo
         meeting:F   river:M-Sᴜᴘ:M

Of course, number agreement is far more frequent if the head noun and the modifier noun belong to the same inflectional class (*notizia bomba > notizie bombe*).

A wide and corpus based survey of nouns that tend to specialize as modifiers reveals that most of them are borrowings (so, invariable for number: *baby, shock / choc*, *boom, record,* etc.) or members of the third class of Italian nominal inflection (sing *-e* / plur *-i*, *fiume, chiave, principe*, etc.), which is compatible with both genders (i.e. M *fiore* 'flower' vs. F *volpe* 'fox'). This state of affairs suggests that Italian speakers feel that agreement between two nouns is quite unusual, all the more so if these nouns have different genders and the modifier noun belongs to an inflectional class exclusively associated with a specific gender (sing. *-o* / plur. *-i* for masculine and sing *-a* / plur. *-e* for feminine). The perception of this oddness is probably slighter if the modifier noun is invariable or if it does not belong to an inflectional class exclusively connected to a specific gender.

3. Conclusions

We can suppose that the highly fusional character of the Italian morphological system and the tendency towards an overt and redundant marking of inflection play a crucial role in (re)interpreting non head constituents of some appositive compounds as adjectives and in transforming these compounds into constructions very close to noun phrases. English data would probably lead to different conclusions, since English displays neither morphological gender nor number agreement between nouns and adjectives. This explains why in English the compounding nature of complex forms as *key word* can hardly be questioned. This observation gives us a hint for some general, concluding remarks.

First, if we compare different languages, we should also take into account the general typological

outline of each language. Generally speaking, we can expect that in an appositive compound the shift towards adjective of the non head constituent is more evident in languages with a sharp fusional character and with a wide overt marking of inflectional categories. As we have seen, in Italian these two conditions play a crucial role in triggering conversion of *fiume, chiave,* etc. In Italian, a noun which occupies the slot usually assigned to an adjective and encodes the function usually encoded by an adjective, will tend to inherit other adjectival features, beginning with agreement. In English the formal conditions for such a process are not met.

Secondly, contrary to what has often been claimed in the literature, in contemporary Italian constructions like *riunione fiume* are always closer to phrases than to typical compounds. Undoubtedly, they are not derived forms at all. This observation makes the grammaticalization hypothesis, and the cline compound > constructional idiom > suffix, quite implausible; but suggests an alternative cline: compound > constructional idiom > phrase that leads us to reassess the idea that in Italian conversion from noun to adjective is unproductive. It is more productive than one might think, but it is condemned to form marked adjectives. Moreover, this cline denies what is often claimed in the literature about compounding, that is that only syntax can feed morphology, both via lexicalization of phrases[17] or, as stated in 1, through compound formation processes that systematically include purely syntactic constructions. The data presented so far demonstrate that the reverse path is also attested: morphology can feed syntax. In this case, the more fixed and stable the structure of the compound is, and the more distant the meaning of the recurrent modifier constituent is from the one it has when used as an autonomous word, the greater the possibility that this compound shifts towards a phrasal structure.

Third, as we have seen, a primary prerequisite for a shift of an appositive compound to phrasal status is the metaphorical re-interpretation of the non head constituent. As already noted by Bisetto & Scalise (2005, 2009), metaphorical reinterpretation seems a peculiarity of attributive / appositive compounds, whilst is quite rare both in coordinate compounds and subordinate compounds. But, as we stated above, not all appositive compounds display an equal metaphorical (re)interpretation of the non head noun. In this picture, we can assert that the more consistent the reinterpretation of the modifier noun is, then the higher is the possibility that it acquires a plain adjectival character.

In a wider perspective, a shift such as that observed for Italian *riunione fiume* is not paralleled by coordinate and subordinate compounds. This observation is further strengthened by the fact that attributive and appositive compounds are the most problematic class in classifying compounds, that is the class displaying most unexpected behaviours.

Finally, as for metaphorical (re)interpretation, another hypothesis can be put forward in order to be developed in a further research project. A comparison between Italian and English, a language in which formation of compounds is more pervasive,[18] seems to suggest that a very high number of semantic classes systematically expressed, on the formal level, by compounds probably prevents the metaphorical reinterpretation of a compound constituent and, then, the spread of the kind of shift described in this article. In English, a locative relation can be conveyed by a compound (i.e. *river boat*). So, if we literally translate in English a compound such as *riunione fiume*, we obtain a form, *river meeting*, which will probably sound strange to most native speakers. But if these native speakers were requested to give it a meaning, they would probably answer saying that a river meeting is a meeting which takes place on a river, on board a ship.

If we search for 'river meeting' with Google, most of the occurrences have just this interpretation:

(17)   A typical meeting in the river: generally, a river meeting requires about three hours. A typical river meeting starting at 7:00 PM would look something like this

More generally, many Italian compounds cannot be translated in English at all, just because the necessary metaphorical extension of the literal meaning is blocked. This situation supports the idea that large diffusion of complex forms such as *riunione fiume* can hardly be traced back to English influence

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[17] In the formation of multi word expressions such as *ferro da stiro* 'iron'*, camera da letto* 'bedroom'*, fucile da caccia* 'shotgun'.
[18] Cf. Johnston & Busa (1996).

(contrary to what has often been claimed; cf. Dardano *et al.* 2005).[19] What is more, we cannot exclude that such forms originally entered the Italian lexicon as calques of English compounds, but their subsequent increase must be explained in terms of intra-systemic constraints.

Abbreviations

ADV   adverb
F   feminine
M   masculine
N   noun
plur   plural
sing   singular
SUP   superlative

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[19] According to De Mauro (1970²: 223), these complex forms represent a quite recent innovation within Italian morphology, appearing in the last part of the 19th century (more or less in the period of Italian Unification).

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