

COORDINATION IN COMPOUNDING

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SUMMARY. This chapter deals with the expression of coordination relations in compounding. Two macro-types of compounds are identified, namely hyperonymic coordinating compounds (co-compounds), where the referent of the compound is in a superordinate relationship to the meaning of the parts, and hyponymic coordinate compounds, where the referent is in a subordinate relationship to the meaning of the parts. The chapter also argues that the distribution of these two macro-types is not random but, rather, areally skewed.

KEYWORDS. Dvandva, Co-Compound, coordination, natural coordination, *karmadhāraya* compound, class type, Standard Average European, East Asian *Sprachbund*.

COORDINATION IN COMPOUNDING

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This chapter deals with the expression of coordination relations in compounding. Two macro-types of compounds are identified, namely hyperonymic coordinating compounds (co-compounds), where the referent of the compound is in a superordinate relationship to the meaning of the parts (as Mandarin *dāo-qīāng* ‘sword+spear, weapons’), and hyponymic coordinate compounds, where the referent is in a subordinate relationship to the meaning of the parts (as English *actor-director*). The chapter also argues that the distribution of these two macro-types is not random but, rather, areally skewed: whereas co-compounds are common in the Eastern part of Eurasia, New Guinea and Mesoamerica, they seem to be absent in Standard Average European languages, where hyponymic coordinating compounds are formed quite freely. Moreover, while co-compounds may belong to different word classes, hyponymic coordinating compounds are (probably) never verbs.

1. *Introduction*

Coordination in compounding is typologically more diverse than commonly believed. Coordinating compounds have been given different names, the most time-honoured being Sanskrit *dvandva*, and several labels have been proposed to identify subclasses of them (see, among others, Ten Hacken 2000, Olsen 2001). Here a “coordinate compound” is understood as one in which two or more units share the same status (Eng. *bittersweet*), as opposed to the kind of relation in which the units have an asymmetrical relation, as in subordinating compounds (Germ. *Lippenstift* ‘lipstick’; see Haspelmath 2004:3). This is, admittedly, a very broad definition; unfortunately, the exact

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delimitation of coordination in morphology is even more difficult than in syntax¹.

We will argue here that there is a major dichotomy between hyperonymic coordinate compounds (such as Mandarin *dāo-qiāng* ‘sword + spear, weapons’, Wälchli’s 2005 *co-compounds*) and hyponymic coordinate compounds (such as Spanish *lanza-espada* ‘spear + sword, a spear with a blade, a spear which is a sword at the same time’). Both have a coordinate relationship between the parts of the compound, but while the former express superordinate-level concepts, the latter express subordinate-level concepts. The two types of coordinating compounds differ not only in their meaning, but exhibit different areal distributions. While the hyponymic ones are common in Standard Average European (SAE) languages, co-compounds are common especially in East and South East Asia.

This chapter is structured as follows. Section 2 gives a survey of the typology of co-compounds and argues that they constitute a phenomenon of their own from a typological point of view. Section 3 is devoted to the analysis of co-compounds in the languages of East and South East Asia. Section 4 concentrates on SAE languages where the hyponymic coordinating compounds dominate. Section 5 deals with the interaction of number marking and referential properties in Noun-Noun coordinating compounds. To conclude, we shall provide our areal generalizations on the distribution of semantic types of coordination and on the “division of labour” between morphology and syntax in the expression of coordination relations. Due to the limited space, we shall focus mainly on noun-noun constructions.

2. *The typological approach to co-compounds*

Following the Sanskrit grammarians, traditional morphology considers any compound whose syntactic paraphrase is a coordination (“*ca-arthé* ‘and-denoting’”) to be a coordinate or dvandva-compound, thus disregarding that coordination can be manifested in very different ways in compounds. Here it is argued that it is indispensable to consider the meaning of the whole compound in order to define compound types. While subordinate compounds (sub-compounds) typically denote subordinate-level concepts (Mari [Uralic] *kid-tup* ‘hand + back, back of the hand’), a wide-spread type of coordinate compounds is used for the expression of superordinate-level concepts (Mari *kid=jol* ‘hand + foot, hand and feet, limbs’), which has first been noted in the description of

¹ The precise definition of “coordination” is a debated issue in the literature on syntax (see Haspelmath 2004: 33-37) and, to our knowledge, there is no clear solution to the problem, especially as far as mismatches between semantic and structural coordination are concerned; “[I]t remains difficult to operationalize the basic undisputed intuition that coordination involves symmetry, while subordination involves asymmetry” (Haspelmath 2004:37).

coordinate compounds in American Sign Language (Klima & Bellugi 1979). Following Wälchli (2005), the term *co-compound* will be restricted here to such compounds denoting superordinate-level concepts and does not extend to compounds with a coordinate and appositional relationship between the parts which denote subordinate-level compounds, such as intermediate-denoting compounds (*southwest*), appositional compounds (French *wagon-restaurant*) and complex numerals (*twenty-three*). Such forms will be discussed in section 4. Co-compounds further have in common that they express *natural coordination* (rather than accidental coordination), the coordination of things or events that often occur together with characteristic lexical domains including pairs of relatives (Rural Tok Pisin *papa-mama* ‘father + mother, parents’, *brata-susa* brother + sister, siblings’), body parts (*han-lek* ‘hand + foot, limbs’) and clothes (*su-soken* ‘shoe + sock, footwear’ Mühlhäusler 1979:377).

It is hardly ever sufficient to consider the relationship between the parts of a co-compound without considering *the relationship between the parts and the whole*. This becomes particularly manifest in semantic subclassifications of co-compounds. A compound consisting of the parts ‘day’ and ‘night’ can be additive (> ‘24 hours’) or generalizing > ‘all the time’. In (1), a proverb from Komi, it has yet another contextual meaning ‘future’.

(1) Komi (Uralic; Finnic; Timušev 1971:37)

Myj	<i>lun=voj</i>	vaj-e,	ńinəm	on	teđ
what	<i>day=night</i>	bring-PRS3SG	nothing	NEG:2S	know

‘Nobody knows what the *future* will bring’

In synonymic co-compounds, where the parts and the whole all have very similar meanings, there is still a strong tendency to express superordinate-level meaning, even though this contradicts a narrow definition of synonymy. Synonymic compounds are typically used in generalizing and collective contexts. For instance, Vietnamese *bạn hũu* ‘friend + friend, friends’ is typically used in plural contexts, see Wälchli (2005:143-146 for more examples).

Morphological work is often restricted to the analysis of complex lexemes or word-forms in isolation. For co-compounds *context matters* as can be seen in example (2) from Arapesh and (3) from Erza Mordvin. After Eastern Eurasia, New Guinea is the second large linguistic area with many languages with a moderate or high level of co-compounding. A characteristic co-compound in New Guinea is ‘pig + dog’ originally meaning ‘> (domestic) animals’, since pigs and dogs are the most prototypical domestic animals in this area. In example (2), however, the compound is used metaphorically to indicate people who can be treated like animals without objecting:

(2) Arapesh (Torricelli, Kombio-Arapesh; Conrad & Wogiga 1991:185)

...o	apak	<i>buwul nubat.</i>	m-a-kli	orait
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and we:PL pig dog 1PL-REAL-say OK
 ...and we “ordinary people”, we said “OK”...

Example (3) is from a context where somebody complains about the lack of medical treatment in a Mordvin village. This co-compound is a *hapax legomenon* (occurs only once in the text); ‘injection + powder’ does not generally mean ‘minor forms of medical treatment’, the use of the co-compound is triggered by the generalizing and emphatic context outside of which it cannot be interpreted correctly.

(3) Erža Mordvin (Uralic, Finnic; Doronin 1993:338)

...eřva	<i>ukol-ont'</i> = <i>poroška-nt'</i>	meřga
every	<i>injection.GEN:DEF-powder.GEN:DEF</i>	after
ard'tńe-k-a		Kačelaj-ev.
ride.FREQ.IMP2SG.EMPH		Katselay.LAT

‘(even) for every injection and powder one has to go to Katselay’.

In traditional morphology, dvandva compounds are tertiary categories defined by way of the primary category of word and the secondary category of compound. Below it will be argued that co-compounds are the primary notion, manifested as cross-linguistically recurrent class type, sharing identical form with other types of compounds only incidentally due to recurrent zero-marking. It is further argued that the notion of word as a strict delimitation is too narrow for co-compounds. Co-compounds in many languages have some phrasal properties even though they tend toward the tight pole of the word-phrase continuum. Thus, co-compounds are generally word-like, but not generally words (for a similar issue in incorporation see Mithun this volume). This becomes particularly manifest if prosodic phonology is considered. Only in very few languages, such as Modern Greek, co-compounds are phonological words (see 5 below). Co-compounds are only one of many phenomena between words and phrases exemplifying a fundamental non-isomorphism between form and function, among them compound types in many languages, clitics, suspended affixation, transpositional inflection (Haspelmath 2002:230). As a consequence we need two different approaches to compounds: a formal approach, focusing on particular formal properties of compounds, and a functional approach, considering functional class types such as co-compounds irrespective of their concrete formal manifestations. Due to non-isomorphism, co-compounds are not coextensive with any unit of prosodic phonology: they exhibit different prosodic phonology in different languages and there may even be different prosodic types within the same language (Wälchli 2007a:167).

A particularly clear instance of co-compounds which are not words are *discontinuous co-compounds*, as they are common in Hmong, Khasi, Karen, Chinantec, Mixe and many other languages. The Hmong Daw synonymic co-compound *teb chaws* ‘land + land, land’ is often interrupted by a repeated

element C according to the formula CACB or ACBC where C can be different things such as a classifier (*kuw lub teb lub chaw*² ‘I CL land CL land, my land’) or even a proper name (*Yawm Pus teb Yawm Pus chaw* ‘Yau Pu’s land’; Bisang 1988:36, 56, 37; Wälchli 2005:102). Like Germanic bare binomials (Lambrecht 1984) often contain non-analyzable parts, such as *kith and kin*, *to and fro*, many co-compounding languages have imitative co-compounds, where one part is restricted to co-compounds. (4) exemplifies a discontinuous imitative co-compounds from Khasi. Note the general abstract meaning of the verb and the iterative context, both favouring the use of co-compounds:

(4) Khasi (Austro-Asiatic, Khasian; Rabel 1961:149)

...kii	la	juu	wan	hiar		ša	ka	prthey
they	PST	HAB	go	descend	to	DEF:FEM		earth
ban		<i>rep</i>		ban	<i>rian</i>			
to		<i>cultivate</i>		to	<i>IMI</i>			

‘they used to go down to earth in order to cultivate’

Co-compounds share with other types of compounds a recurrent cross-linguistic tendency for zero-marking: in many languages there is no overt marker; the construction is characterized simply by mere juxtaposition of two elements. According to the isomorphism principle, made explicit by John Haiman and implicitly held by most linguists: “recurrent identity of form between different grammatical categories will always reflect some perceived similarity in communicative function” (Haiman 1985:19). Applied to compounds, this means: different types of compounds are recurrently formally identical in many languages which is why compounds are a general category with closely related meanings of all subtypes. However, even though there is recurrent identity in form, the shared form is not characteristic (zero) and zero marking of co-compounds is not arbitrary, the tight construction iconically reflects the tight semantic relationship of natural coordination. Isomorphism is therefore not sufficient to determine the nature of the category so that it is highly doubtful whether compounds are a uniform cross-linguistic category type at all. Interestingly, co-compounds tend to have different marking from other types of compounds if there are overt markers. While sub-compounds tend to have traces of dependent (genitive) and head marking (possessive affixes), co-compounds may contain traces of coordinators or often exhibit symmetric double marking which is iconic for coordination (Haiman 1985, Wälchli 2005:54). This can be manifested in different ways, by discontinuous co-compounds as in (4) or by double marking of inflection as in Mordvin in (3). Symmetric double marking is not characteristic of sub-compounds.

² Final “consonant” graphemes mark tones in Hmong orthography, the alternation of zero and *s* in *chaw(s)* is due to tone sandhi.

Interestingly, co-compounds are not only claimed to belong to compounds but also to other large vaguely defined phenomena for which zero marking is recurrent. Many scholars who discuss serial verbs list verbal co-compounds as a minor type of serial verbs (Bisang 1992:49, Durie 1997:337) since any V V construction lacking overt markers of coordination and subordination can qualify as a serial verb construction according to the traditional definition. According to Inkelas & Zoll's (2005) morphological doubling theory, co-compounds are, however, an instance of reduplication, and in the literature on parallelism, co-compounds are a form of parallelism (Nguyễn 1965:125 for Vietnamese, Lewy 1911 for Uralic). The basic mistake in all these accounts is that construction types cannot be sufficiently characterized only negatively, that is by features they lack.

As shown above, the meaning of the whole is important to a category and neither sub-compounds nor serial verbs nor reduplication nor parallelism share with co-compounds the feature of expressing superordinate-level concepts and natural coordination. However, that all these are different phenomena becomes clear especially in a typological perspective, as they do not occur in the same languages or only to a very limited extent. Intrinsically related phenomena exhibit strong typological correlations. Different types of word order, such as verb-object and noun-adposition order, are well known to correlate cross-linguistically, but word order does not correlate with particular phonological features, to which they are not related. Co-compounds show a strongly areally determined distribution (eastern Eurasia, New Guinea, to a lesser extent Mesoamerica, Wälchli 2005, ch. 6), the other zero constructions do not cluster in the same areas (Wälchli 2005:176, 231; 2007). However, it can be shown that co-compounds correlate within themselves. The extent to which a language uses co-compounds in some contexts makes it more likely that it uses compounds also in other contexts. In a study based on parallel texts, Wälchli (2007a:157) shows that co-compounds are not distributed randomly across languages. Even though there are no strict hierarchies, co-compounding languages exhibit characteristic profiles depending on the frequency level of co-compounds. Languages with higher frequency of co-compounds have a higher proportion of synonymic co-compounds (Wälchli 2005:195). Typology is thus indispensable to establish co-compounds as a class type.

What makes it particularly difficult to establish a typology of co-compounds is their particular frequency distribution. Every typological feature has its characteristic typological frequency distribution. Word order, for instance, has a strongly bimodal distribution: most languages have almost only order XY or order YX and there are very few languages without a clear order preference. This makes it possible to characterize word order accurately for most languages in terms of dominant order (Wälchli 2009). In co-compounds, however, there is no characteristic cut-off point. Many languages have very few co-compounds which does not mean, however, that the pattern is non-existent or impossible and the languages with more than a few co-compounds

vary greatly in their frequency level of co-compounds. This is why the question “Does a language have co-compounds?” is pretty much useless in typology, the much more relevant question is “How many co-compounds does a language use?” and this can be investigated only on the basis of texts. Since there is also much intra-language variation across styles and registers it is important to keep the register constant which makes it even more difficult to investigate frequency levels of co-compounds (Wälchli 2005, ch. 6).

The zero-marking of co-compounds makes it also difficult to investigate the diachrony of the category. Even though there is evidence at least from some languages that co-compounds grammaticalize from phrasal coordination, it cannot be excluded that a simple juxtaposition construction develops spontaneously. This makes co-compounds particularly available as a contact phenomenon. Even though British and American English have no or very few co-compounds, Indian English can take over co-compounds characteristic of Indian languages more easily than other features of Indian languages (*‘However we can help our father-mother that is what it is for us to do’*; Rushdie 1981/1995:228). The title of Ang Lee’s famous film *Eat Drink Man Woman* consists of co-compounds even in English. Other features of Chinese grammar cannot be transferred to English so easily. There is thus no different parameter setting in European languages that causes a lack of co-compounds in West European languages, as it has sometimes been claimed (McCawley 1974:33; Fanselow 1985:303). The particular behavior of co-compounds is reflected in their typological frequency distribution. While it is easy for a language to acquire few co-compounds, it is more difficult to acquire a high frequency of co-compounds because in every context of use there is a local competition with other lexical means of expression. Co-compounds are a coherent phenomenon because the use of co-compounds helps co-compounds in other domains to win their local competition in the lexicon. However, co-compounds are not represented as a single coherent phenomenon in the mental lexicon. Some co-compounds are highly lexicalized and stored as chunks, while others, such as ‘injection-powder’ in (3), are occasional formations produced by a morphological rule.

Table 1 summarizes the arguments of this section for a typological approach to co-compounds as opposed to the traditional taxonomic approach.

	Traditional view	Typological approach to co-compounds
(a)	Dvandvas are defined by way of their syntactic paraphrase: the ‘and’-denoting	Co-compounds express natural coordination; they express superordinate level concepts but not subordinate level concepts
(b)	The meaning of a type of compounds is determined by the semantic relationship of the meanings of the parts	The meaning of a type of compounds is determined by the semantic relationship between the parts and the whole
(c)	Compounds can be studied in isolation	Compounds must be studied in their natural context (in texts)
(d)	Compounds are words	Many compounds are intermediate between word and phrase; compounds are

(e)	Top-down taxonomical definition of compounds	tight patterns (“word-like”) Bottom-up definition of class types with recurrent cross-linguistic behavior
(f)	Form and function are isomorphic	Form and function are not isomorphic; formal groups of compounds do not correspond directly to functional groups of compounds.
(g)	If two phenomena have the same form or the same construction in a language they are instances of the same category	Compounds are often zero-marked and zero-marking is not a reliable criterion for establishing a category
(h)	Co-compounds are compounds (Alternatively: Co-compounds are reduplication / Verbal co-compounds are verb serialization / Compounds are a form of parallelism)	Co-compounds are a category type of their own
(i)	A language has or lacks a particular type of compounds	Languages can be classified according to their frequency level of co-compounds
(j)	Co-compounds are impossible words in some languages due to particular parameter setting	Co-compounds can be built from scratch. What inhibits them from being used frequently in texts is local competition in lexical domains
(k)	Word formation patterns are represented as rules in competence	Co-compounds are an emergent phenomenon in texts; they cluster to groups because their members have a related fate in performance
(l)	Typology is not needed to define category types	Typology is indispensable to define category types

Table 1: Typological vs. taxonomical approaches to coordinating compounds

In what follows, we shall analyse both co-compounds and coordinating structures expressing subordinate notions, providing evidence for the areal bias in the distribution of such forms.

3. *Coordination in NN compounds in East and South-East Asia*

The region of East and continental South East Asia is an often-quoted example of *Sprachbund*, since it contains languages belonging to several different families (Sino-Tibetan, Hmong-Mien, Mon-Khmer, Tai-Kadai, Austronesian, Japanese and Korean) sharing many common features, such as obligatory noun classifiers, none or limited inflectional morphology, etc. (see Goddard 2005 for an overview). In Wälchli (2005), the frequency of co-compounds in a number of languages of Eurasia has been calculated in parallel texts (*The Universal Declaration of Human Rights* and *the Gospel according to Mark*) and languages have been arranged on a scale from 0 to 6, 6 being the highest frequency class for co-compounds. In the two top classes, 5 and 6, we find Mandarin, Vietnamese, White Hmong (a language spoken mainly in South-Western China and in Thailand), Tibetan, Lahu (a Lolo-Burmese language), Burmese, Thai, Khmer, Khalkha (i.e. Standard Mongolian of Mongolia) and Tuva, a Turkic language which has had intense contact with

Khalkha Mongolian. Besides, both Japanese and Korean fall in class four (or upper moderate level) and although many of the co-compounds in these languages are composed of lexemes borrowed from Chinese (e.g. Japanese *fū-fu* ‘husband and wife’), we have indeed several examples of co-compounds even in the native stratum of the lexicon, such as Korean *o-nwui* ‘brother and sister’ or *son-pal* ‘hand and foot’ (Sohn 1999:245).

From the semantic point of view, the coordinate constructions which we find in languages from this area are indeed rich and varied. In what follows we will not provide an exhaustive exemplification but, rather, we will describe briefly the types of co-compounds which are most interesting for our comparison, which mostly seem to be also the most basic and widespread types, according to Wälchli (2005).

One quite widespread type of co-compound is called *additive*, where the meaning of the compound as a whole is simply the sum of the meaning of the parts, such as the above mentioned Japanese example *fū-fu* ‘husband and wife’ or the Korean word *son-pal* ‘hand and foot’, representative of the *paring* subtype, which may be either related to the same person, as in Khmer *ʔwɔpuk mədaaj* ‘father + mather, parents’ (Antelme 2004:163) or have a converse reference, such as in Japanese *oya-ko* ‘father and son’.

Wälchli’s *non-pairing* type includes “collection complexes which are exclusively listed by the parts” (2005:139), such as Chinese *dāo-chā* ‘knife and fork’. If a compound designates a collection complex which rather is not exclusively listed by the parts, then it falls into the class of *collective* co-compounds, fairly common in languages of this area: examples of this class might be Vietnamese *bàn ghé* (table + chair) or Khmer *tok tuu* (table + closet), both for ‘furniture’, where two instances of the category are made metonymically representative of the set as a whole.

In Chinese, compounds belonging to the latter subtype may have a specific, determined referent, such as *Gǎng-Ào* ‘Hong Kong and Macao’, which is simply the juxtaposition of the abbreviated names of the two Special Administrative Regions of China (note the hyperonymic component and the natural coordination in *Gǎng-Ào*). They have something in common with the *Australian-American relationship* type (example quoted from Bauer 2001:700), termed *relational compounds* by Wälchli, which usually act as determiners of an attributive compounds, as it often happens with the *Gǎng-Ào* ‘Hong Kong and Macao’ type, but relationships are not restricted to natural coordination. The interpretation of the relationship between the members of the compound may be ‘between...and’, as it actually is in the English example given above, for constructions such as *Zhōng-Rì guānxì* ‘Sino-Japanese relationship’ (see also Olsen 2001 on this topic) or may also be simply conjunctive (logical operator AND), such as in *Gǎng-Ào-Tái-qū* ‘The Hong Kong-Macao-Taiwan area’, somehow similar to the *Alsace-Lorraine* type. A feature of these constructions in Chinese is that a disjunctive interpretation seems to be also possible, as in *Gǎng-Ào-Tái hùzhào* ‘Hong Kong, Macao or Taiwan

passport(s)³: the existence of a disjunctive relationship in compounding is far from being an exception in the languages of East and South-East Asia, and it seems to be a feature common also to some languages of India with co-compounds, as we will see below (but cf. section 4.).

Indeed, one of the categories which have been proposed by Wälchli is that of *alternative co-compounds* which, as the name suggests, are based on a disjunctive relationship. In Mandarin Chinese, we have compound forms such as *shèng-fù* ‘victory or defeat’, ‘success or failure’ where only one of the alternatives may be true (akin to *exclusive* disjunction; see Dik 1968):

(5) Mandarin Chinese (Sino-Tibetan; Sinitic)

<i>zhè</i>	<i>chǎng</i>	<i>zhànzhēng</i>	<i>de</i>	<i>shèng-fù</i>	<i>juédìng-zhe</i>
this	CL	war	POSS	victory–defeat	decide-PROG
<i>guójiā</i>	<i>de</i>	<i>mìngyùn</i>			
country	POSS	destiny			

‘the outcome (<victory or defeat) of this war will decide the country’s destiny’

In this kind of co-compounds, the function of disjunction is to blur the contrast; in an ‘either A or B’ compound, the meaning of the whole is more general than the meaning of the parts. A possible context for the development of this kind of construction are indirect questions: for *shèng-fù*, it could be something like ‘whether there is victory or defeat’. However, compounds belonging to this type may also, sometimes and in certain contexts, be interpreted as additive (i.e. ‘victory and defeat’).

Lastly, we will briefly discuss *scalar co-compounds*, which typically have as a referent some scalar property such as height, weight and the like. Their constituent lexemes are the two adjectives which signify the extreme poles of the scale: an ordinary expression for ‘length’ in Chinese, for instance, is *cháng-duǎn*, lit. ‘long+short’. The constituents of scalar compounds are in a disjunctive relationship as for the alternative type; here, however, they seem to follow an exocentric pattern, the output being systematically a noun: [*cháng*]_{ADJ} [*duǎn*]_{ADJ} > [*chángduǎn*]_N (for exocentric compounds, see Bauer this volume). Scalar co-compounds evolve in contexts where there is the question of a choice: ‘the question of A or B / the choice of A or B’, which is, in a way, a set of A and B. A likely source for *scalar co-compounds* are the above mentioned *alternative co-compounds* employed in direct and indirect questions (Wälchli 2005:153-4).

³ This point might be controversial and deserves further clarification. A compound such as *Gǎng-Ào-Tái hùzhào* is normally seen at the passport check counter of a Chinese (P.R.C.) airport: the interpretation, therefore, could be ‘those bearing either Hong Kong or Macao or Taiwan passports’ (disjunctive) or ‘all those bearing Hong Kong, Macao and Taiwan passports’ (conjunctive). We believe that, although the “AND” interpretation is possible, the “OR” interpretation is in no way excluded.

Let us now turn to the examination of coordinating structures in languages of the SAE area, taking into account both “prototypical” compound words and other word-like constructions (such as e.g. binomials).

4. *Hyponymic coordinating compounds and the SAE area*

As stated in the introduction, co-compounds are not the only kind of coordinating compounds. As it is well known, if syntax is taken into account coordination is not limited to the expression of a natural tie between the coordinands. Many other coordinate constructions are attested, expressing different semantic relations, and displaying various formal patterns.⁴ Therefore, it is not surprising that also in morphology the range of coordinate constructions is wider than that suggested in the previous paragraphs. In this section, we will focus on coordinate compounds expressing subordinate-level concepts, cursorily mentioned above, in particular compounds with the structure [N N]_N:

(6) Standard Average European coordinate compounds

English

[*singer*]_N [*actor*]_N > [*singer actor*]_N

Italian

[*studente*]_N [*lavoratore*]_N > [*studente lavoratore*]_N

‘student + worker, student worker’

French

[*chanteur*]_N [*auteur*]_N > [*chanteur auteur*]_N

‘singer + author, singer author’

This compounding scheme, labelled ‘coordinate endocentric’ by Bisetto & Scalise (2005 and 2009), seems to be cross-linguistically quite uncommon and its distribution appears to be areally restricted mainly to Western and Central Europe, the so called Standard Average European linguistic area (cf. Haspelmath 2001 for a general survey).⁵

In § 2, we argued in favour of a typological approach to co-compounds. As for the pattern of coordinate compounding exemplified by English *singer actor*, further research is needed before a similar approach may be applied to it as well; the literature on this issue does not offer as much typological perspective as that on co-compounds. Also, the fact that hyponymic coordinating

⁴ Cf. Haspelmath (2004) and (2007) for a general picture.

⁵ It is also very common, however, in Standard Russian (and standard languages in Eastern Europe influenced by Russian) due to influence from French, but it is less common in Russian dialects, where co-compounds occur.

compounds could be a phenomenon mostly limited to the SAE area makes a large-scale typological approach (arguably) less desirable.

As shown in the previous paragraphs, as far as conjunction is concerned, no significant difference should be expected between syntactic constructions and morphological ones: a conjunctive coordinate construction including two or more nouns should designate an entity which is the the “arithmetical sum” of the meanings of the constituents. As far as syntax is concerned, all the examples discussed by Haspelmath (2004) and (2005) support this claim:

(7) Iraqw (Afro-Asiatic, Southern Cushitic)

Kwermuhl, nee Tlawi, nee Dongobesh, nee Haydom nee Daudi

Kwermuhl and Tlawi and Dongobesh and Haydom and Daudi

‘Kwermuhl, Tlawi, Dongobesh, Haydom, and Daudi [place names]’

The coordinate construction indicates the addition of all the single places designated by the coordinands.

Moving to morphology, a similar behaviour characterizes co-compounds, discussed above. But, perhaps unexpectedly, in SAE languages a compound pattern as the one underlying co-compounds as Khmer *ʔwɔpuk mədaaj* ‘father + mather, parents’ (cf. § 3) is unproductive in nominal compounding. On the contrary, a different compounding schema with a high degree of productivity is widely attested, for which we gave some examples in (6). The interpretation of these compounds is quite “anti-iconic”: they do not designate a pair of people (thus they are not the result of the addition of coordinands), but a single person sharing features designated by both coordinands. In this case, the relation of modification is bidirectional: a *singer actor* is both a kind of singer and a kind of actor. Hence, the compound designates a subordinate concept with respect to the meaning of its constituents; in other words, it is a hyponym of its members. So, “hyponymic coordinate compounds” express subordinate-level concepts, just as subordinate or attributive-appositive compounds and are thus opposed to co-compounds. This peculiarity gives reason of the fact that in hyponymic coordinate compounds, the only semantic type attested with a high degree of productivity is conjunction. As for disjunction, a slight difference between co-compounds and hyponymic coordinate compounds is attested. As it is well known, a disjunctive binary construction is true only if one of the two alternatives is true: if a coordinate compound designates a superordinate concept which includes both alternatives (as in the case of co-compounds; cf. 5), this interpretation is possible; however, it is hardly compatible with a construction in which the coordinands express two simultaneous properties of a single referent. It is quite unpalatable for two properties perceived as alternative to be predicated of the same referent. Adversative coordination is never expressed in coordinating compounds. As for co-compounds, this is rather predictable, since adversative coordination presupposes contrast, which does not go together with tight constructions. For hyperonymic coordinating

compounds, the very notion of adversative coordination clashes with the basic function of a noun, which is reference: you just do not have a label meaning ‘A but not B’ (Caterina Mauri, p.c). In a compound such as *gentleman thief* there is some sort of contrast implied, but only at a pragmatic level: usually a gentleman is not supposed to be stealing, but this does not concern the structural and semantic levels (‘gentleman AND thief’). So, it must be overtly stated that the label ‘hyponymic coordinate compound’ implicitly means ‘conjunctive compound’.

As to the formal features, it is worth mentioning that in co-compounds constituent order usually displays a high degree of internal cohesion and is often constrained by socio-cultural variables; therefore, it can hardly be inverted. On the contrary, the order of the constituents in most “hyponymic” conjunctive compounds is usually a matter of pragmatics. As a consequence, their internal order is quite free and can be inverted without significantly affecting their referential meaning. For instance, a web search reveals that in Italian the compound *studente lavoratore* ‘student worker’ is found in educational environments, whereas the inverted sequence *lavoratore studente* ‘worker student’ is more likely to appear in work- or market-related contexts. Example (8) is particularly thrusting. Two compounds made up by the same constituents occur in the same sentence with two different internal structures, revealing that the first slot is filled up by the constituent that is perceived as more relevant in the extra-linguistic context:

(8) Italian (newspaper *La Repubblica*, 23/12/2008)

<i>La Fortezza [...]</i>	<i>deve</i>	<i>prendere</i>	<i>rimbalzi,</i>	<i>recuperare palloni</i>
LF	must	get	rebounds,	steals
<i>e</i>	<i>avere in</i>	<i>Boykins</i>	<i>una</i>	<i>guardia-play,</i>
and	use	B. as	a	point guard – play maker
<i>non un</i>	<i>play-guardia</i>		<i>che</i>	<i>inizia e</i>
not as	a	play maker – pointguard	who	just starts and
<i>finisce il</i>	<i>gioco</i>			
concludes	the	game		

‘La Fortezza [a basketball team] must get rebounds, steals and use Boykins as a pointguard–playmaker, not as a playmaker–pointguard who just starts and concludes the game.’

It must be pointed out, incidentally, that this situation prevents us from identifying a semantic head on the basis of positional criteria, that is, we cannot identify the head of such a compound with its first constituent simply recalling that Italian is a head initial language⁶. This example, like many other similar

⁶ Note, however, that in example (8) the different order of constituents, *guardia-play* vs. *play-guardia*, triggers a different gender in the indefinite article (*una* vs. *un*), suggesting an analysis

constructions, reveals that in “hyponymic” conjunctive compounds pragmatic constraints are stronger than formal ones. Possibly, forms as that in (8) weaken even the opportunity of identifying a head within a coordinate compound. As it is well known, the notion of head was, originally, purely syntactic: “the intuition to be captured with the notion of head is that in certain syntactic constructs one constituent in some sense ‘characterizes’ or ‘dominates’ the whole” (Zwicky 1985:2). So, it holds only for linguistic constructions that are hierarchically organized. This necessary precondition seems to contradict the definition of coordinate construction, whose members, according to Haspelmath (2004), must have the same status and can be insensitive to their reciprocal positions. Not by chance, reversibility of internal order is strictly forbidden in hierarchical compounds, that is in compounds in which the identification of a head is uncontroversial.⁷

The different degree of “internal stability” of coordinate compounds is a possible consequence of the semantic relations they encode. In a general perspective, the closer the semantic connection between two (or more) elements, the more cohesive the linguistic construction that expresses it. The labels “tight coordination” and “loose coordination” can be employed to describe different levels of internal cohesion of coordinate constructions. On the semantic ground, loose and tight coordination seem to be preferably associated to natural and accidental coordination respectively. In the tight/natural case, the coordinands form a conceptual unit; in the loose/accidental, the coordinands are thought of as separate units (cf. Wälchli 2005, ch. 3).

As shown above, co-compounds usually express natural coordination and, as a consequence, are expected to be often more cohesive than conjunctive coordinate compounds encoding a hyponymic relation, as English *singer actor*, which typically encode accidental coordination. Therefore, co-compounds can be defined as tight coordinate constructions expressing a natural tie between coordinands. Hence, they usually display a rigid order of constituents. On the contrary, conjunctive compounds in (6) are instances of morphological loose coordinate constructions, expressing an accidental connection between coordinands. So, their internal structure is far more flexible and their reciprocal order can be inverted. Morphological tight coordinate constructions (co-compounds) and morphological loose coordinate constructions of SAE languages as *singer actor* correspond to exocentric and endocentric coordinate compounds, respectively, in Bisetto & Scalise (2005, 2009) terminology.

Difference and similarities between the two compounding patterns analysed so far are summarized in Table 2.

of the left-hand constituent as a categorial head. For a general picture on the notion of head in compounding, cf. Scalise and Fábregas (this volume).

⁷ Constituent order reversibility constitutes a valuable test to disambiguate unclear cases such as *woman doctor*, the interpretation of which can be both coordinative and appositive. If constituent order is reversible, then the compound is certainly coordinate.

	Co-compounds (Hyperonymic coordinating compounds)	Hyponymic coordinating compounds
Overt / covert marking of coordination relation	Various patterns	Zero is predominant
Part-whole relationship	Referent of the compound is in a superordinate relationship to the meaning of the parts	Referent is in a subordinate relationship to the meaning of the parts
Semantic sub-type of coordination	Conjunction and, occasionally, disjunction	Conjunction
Semantic sub-type of conjunction	They express natural coordination (they form a conceptual unit)	They express accidental coordination (they are separate units)
Coordinands' word class	The constituents of a coordinate compound usually belong to the same word class Any word-class	Nouns or adjectives (?)
Constituent order	Mostly irreversible	Reversible

Table 2: *Differences and similarities between co-compounds and hyponymic coordinating compounds*

What is really puzzling about these kinds of constructions is that, often, they do not co-exist in a language. In other words, what distinguishes coordinate compounds from subordinate and attributive / appositive ones is that in coordinate compounds endocentric and exocentric forms tend to be mutually exclusive. In languages in which compounds productively express natural coordination,⁸ accidental coordination is usually expressed by binomials⁹ or other structural types further from the prototype of word than compounds. But SAE languages behave contrarily to this tendency: natural coordination seems a prerogative of binomial constructions (which are usually irreversible), whereas coordinative compounds express accidental coordination (and are reversible):

(9) Italian

a. Coordinate compounds

$[studente]_N [lavoratore]_N > [studente\ lavoratore]_N$

'student + worker, student worker'

$[lavoratore]_N [studente]_N > [lavoratore\ studente]_N$

'worker + student, worker student'

b. Binomials (from Masini 2006)

⁸ That is, in languages in which co-compounds have a plain productivity: eastern Eurasia, New Guinea, Mesoamerica, above all.

⁹ "Binomial constructions are generally defined as constructions that consist of two (or sometimes more) coordinated items that belong to the same lexical category, are linked by a conjunction and display a certain degree of conventionality and fixity" (Masini 2006: 2).

<i>punto e virgola</i>	<i>su e giù</i>	<i>anima e corpo</i>
‘full stop and comma, semicolon’	‘up and down	‘soul and body’
* <i>virgola e punto</i>	* <i>giù e su</i>	* <i>corpo e anima</i>

Thus, in a cross-linguistic perspective, in encoding accidental and natural coordination syntax and morphology seem to be in complementary distribution: if accidental coordination is expressed through morphological strategies, then natural coordination is encoded by syntactic means (and *vice versa*).

Moreover, the distribution of these two compounding patterns among the World’s languages seems highly conditioned by strong areal biases. Whereas in languages of the core SAE area the productive model is the hyponymic type (cf. *singer-actor*), in languages outside it coordinating compounds typically designate a superordinate level concept. The situation can be summarized as follows:

	SAE pattern	Cross-linguistic trend
Hyperonymic	Looser	Tighter
Hyponymic	Tighter	Looser

Table 3: *Some correlations between types of coordination and marking patterns.*

Note, however, that this is to be understood as a trend, rather than as an absolute universal. In fact, many languages of Russia with co-compounds have occasional instances of hyponymic coordinative compounds, borrowed from standard Russian (cf. footnote 5). The correlation could also be historically motivated, as hyponymic coordinative compounds are largely restricted to Europe.

The distribution of coordinate compounds productively formed by means of the hyponymic pattern exhibits many similarities with that of features that usually identify the SAE linguistic area. More specifically, this pattern of compounding shows the highest degree of productivity in languages placed in the core area of the SAE *Sprachbund*: Italian, French, English, Dutch, German, etc. Moving away from it, these compounds scatter: both their frequency and productivity decrease. Maltese has just few of them in some hybrid construction such as *student-haddiem* (student worker) in which Italian influence is evident. Basque has mostly compounds designating superordinate level concepts.

Therefore, we can put forward the hypothesis that the formation of coordinate compounds through hyponymic patterns is an areal feature of SAE languages. This hypothesis seems supported by the fact that when a SAE language comes out of this linguistic area, it usually loses this feature. For example, even though English is a language in which hyponym conjunctive compounds display a high productivity, in Indian English the pattern expressing superordinate level concepts is attested, as the *father-mother* example given at the end of § 2 reveals. Moreover, also in English-lexified

pidgins and creoles co-compounds seem to be the default pattern, as confirmed by the Tok Pisin data discussed above. The case of contact languages is very interesting, since they are usually included in the situations “where the complexity of modern languages is disrupted or impaired” and where “elements of the protolanguage still emerge” (Jackendoff 2009).¹⁰ So, if Jackendoff is true in asserting that contact languages can be to some extent compared to the protolanguage, the emerging of co-compounds in their formation, independently of the type of coordinate compounds of the lexifier language is not meaningless. It probably indicates that compounds expressing superordinate level concepts have some sort of cognitive prominence over hyponymic ones.

Let us now have a closer look to the referential properties both of hyponymic and hyperonymic coordinating compounds (i.e. co-compounds), comparing them to the kinds of coordinating compound attested in some languages of India (both Indo-Aryan and Dravidic), in “peripheral languages” of Europe, such as Basque or Armenian, and in Western European SAE languages.

5. Reference and number in NN coordinating compounds

As we have said in the preceding section, coordinating compounds in the languages of Western Europe seem to belong to the hyponymic type, where the entity designated by the compound as a whole is, in a sense, more specific than its constituents: *singer-actor* is a more specific notion than those of *singer* and *actor* themselves, bringing thus these compounds closer to attributive compounds.

Under the label *karmadhāraya* compound, “made up of two nouns, each of which independently refers to some aspect of the entity denoted by the compound as a whole” (Bauer 2001:698-9) are thus included compounds that actually seem to be attributive or, at least, closer to the attributive type, such as *woman doctor*, which is usually understood as ‘a doctor belonging to the female sex’ (note that the word *doctor* has no feminine form in English; compare Italian *dottoressa*), rather than ‘someone who is both a woman and a doctor’, although this statement would not be false (cf. footnote 8). The same may be said about a complex word such as Spanish *hombre rana* (man+frog) ‘diver’, corresponding to English *frogman*, which is indeed a man (see Olsen 2001): note also that the constituent meaning “man” is located in the standard head position for both languages (and the same goes for the the Italian and French equivalent compounds, and for *doctor* in *woman doctor*). We think that

¹⁰ Here Jackendoff uses the term “protolanguage” in the sense assigned to it in Bickerton (1990): the “protolanguage” should be an evolutionary stage of the language capacity earlier to the language, with no syntax or morphology.

these examples are analogous to “classical” attributive compounds such as *snail mail*, where the feature “slow” is the only relevant one in the attributive function of the *snail* constituent (Scalise, Bisetto & Guevara 2005:142¹¹): similarly, in *frogman* only the semantic feature “amphibian” of the frog is relevant for the characterization of *man*. This does not seem to be the case with compounds such as *singer-actor* or *washer-drier*, where the semantic representation of the constituents (the *body*, in Lieber’s framework; cf. footnote 12) is the same to a great extent: this means that we are designating an entity which is actually both “A” and “B”. As mentioned earlier (cf. 4), such compounds may have a reversible order of the constituents: e.g. Hungarian *nadrágszoknya* (trousers+skirt) ‘culottes’ is also attested as *szoknyanadrág* (Gouesse 2004:137), just as for Modern Greek χιονόβροχο *chionó-vrocho* ‘snow+rain, sleet’, the reverse order of constituents βροχόχιονο is also attested (Ralli 1992).

We have already mentioned the Khmer additive compound *ǀwɔpuk mədaaj* ‘parents’ in section 3 above, which is made up of the two semantic constituents of the entity designed by the compound as a whole, qualifying thus for the definition of “hyponymic” compound. In Chinese, a language with no morphological marker for number in nouns and adjectives but with obligatory nominal classifiers, such compounds may refer to one individualized member of the pair, such as e.g. *yí-ge jiě-mèi* ‘one sister’, where the co-compound *jiěmèi* is made of the constituents ‘elder sister’ and ‘younger sister’ (a typical pattern for languages where the age distinctions among members of a family are codified in the lexicon). If reference is made to, for instance, both parents in a family, then the classifier would have to be *duì* ‘pair’ as in *yí-duì fùmǔ*. The constituents of these compounds may be “visible” for syntactic reference, individually, a feature which has been pointed out in the literature for Japanese co-compounds (i.e. by McCawley 1974): in this language, we find sentences such as *kyōdai wa otagai tatakau koto* ‘the fact that (the) brothers fought with each other’. This seems to be impossible for hyponymic compounds, since reference is made to a single entity with two identities (as for singer-actor); in co-compounds as well reference is made to a single entity, but its constituent parts are, in a sense, separable.

Note, however, that most languages of the East Asian area are classifier languages with no count nouns and no morphological marking of number (cf. 3). There are some languages located between Western Europe and East Asia which have both hyponymic compounds and number marking, such as Pāli. In Pāli, a coordinative compound is marked for the plural and takes the gender and declension of its last member if the constituents of the compound are considered separately, such as *samaṇabrāhmanā* ‘samanas and brahmins’ or *candimasuriyā*, ‘the sun and the moon’. If a compound takes the form of a neuter singular, whatever the number of its members, it becomes a collective,

¹¹ Here reference is made to Lieber’s *Lexical Semantics*; see Lieber 2003.

like *kusalākusalam* ‘good and evil’; however, even this kind of collectives may take a plural marker and, in fact, the grammarians regards those which go only in the neuter singular and those which may be marked also for plural as two separate classes (respectively, *samāhāra* and *vikappasamāhāra*) and only the former are always considered collectively (Duroiselle 1997:130). We see here how number (singular vs. plural) plays a role in the interpretation of a coordinating compound: plural marking matches best an additive interpretation, something like ‘the As and the Bs, considered separately’, whereas the singular marking triggers the collective interpretation, ‘the set of A(s) and B(s)’. In Basque, co-compounds such as *errege-erreginak* ‘king and queen’ are always plural, with reference to a single couple of monarchs, whereas a few compounds such as *ur-ardoa* ‘water with wine’ are marked for singular, as their referent is a mass entity (Hualde & Ortiz de Urbina 2003). A similar situation is also that of Marathi, where co-compounds behave as a plural phrase (Pandharipande 1997). In Malayalam, the humble plural marker *-maar* is obligatorily marked on co-compounds, as in *acchanammamaar* ‘father and mother’, but it is optional if a non-humble equivalent is chosen (Asher & Kumari 1997). The positive correlation between singular number and collective interpretation, on one side, and that between plural number and additive interpretation, on the other, however, is far from being a rule. In many Uralic languages, for instance, both constituents of a co-compound are normally marked for dual (or for plural, in those languages which have lost the dual as a category) in natural coordination, ignoring the distinction between additive and generalizing (Wälchli 2005:51-52).

Number marking may influence the interpretation of a coordinate construction even in English: as Wälchli (2005:77-78) points out, a phrase such as *my relatives and friends* would by default be understood as ‘all the people that are my relatives or my friends’ (additive interpretation), but if the number were singular, as in *my relative and friend*, there can be only a single referent¹². As in *singer-actor*: the additive interpretation is normally excluded. In Chinese, a construction such as *xuésheng gōngrén*, the juxtaposition of the words for ‘student’ and ‘worker’, will normally be understood as ‘student(s) and worker(s)’, with the number depending on the context (and even an attributive reading is possible), whereas an explicit conjunctive marker *jiān* is required if the ‘student-worker’ interpretation is expected (*xuésheng jiān gōngrén*).

In Modern Greek, where both hyponymic and hyperonymic compounds are attested, we see again different structural patterns for the two types of coordinative constructions: co-compounds such as *γυναίχόπεδα ginaichó-peda* ‘women and children’ or the often quoted example *ανδρόγυνο andró-gyno* ‘married couple’, lit. ‘man+woman’ are undoubtedly compound words (note the unexpected neuter gender of the compound); hyponymic constructions such

¹² See Wälchli (2005:77-78) on the distinction between *overlapping* and *non-overlapping* coordination.

as ηθοποιός τραγουδιστής *ithopoiós tragoudistís* ‘actor singer’ may receive internal inflectional markers and are two phonological words, but behave as syntactic atoms and cannot have an independent syntactic reference, thus lying somewhere between words and phrases, but further from morphology than co-compounds are (Ralli 1992).

Curiously, Ancient Greek did not distinguish structurally these two kinds of coordinative constructions, i.e. the hyponymic and the hyperonymic ones: a hyponymic coordinating compound such as ιατρόμαντις *iatró-mantis* ‘physician-diviner’ seems to qualify as a word (Grandi & Pompei, forthcoming). Also, in Armenian we have a compound form such as *goyavazak* ‘pickpocket-bandit’ which, according to Donabédian (2004:12-13)’s account, could also be interpreted as a hyperonym (“la catégorie des voleurs et des brigandes pris ensemble”). However, such forms are rare in the language. These are the only exceptions which we have found in our sample to the tendency represented in table 2. Note, however, that for hyponymic coordinating compounds we collected mostly areally-biased data; so, the fact that languages employ some strategy to distinguish formally hyponymic and hyperonymic coordinating compounds should be taken as a tendency, rather than as a universal.

6. Conclusion

To sum up, we find a great variety of constructions between “pure” morphology and syntax which fall in the domain of coordinating compounds (in the broadest sense of the word).

In section 2, we focussed on co-compounds only, arguing for the advantages of a typological approach to them, as opposed to the traditional one (see table 1).

The suggestion stated in section 4, namely that hyperonymic coordinating compounds (co-compounds) are the more “basic” type of coordinating compounds is consistent with the data surveyed, since all of the languages outside the SAE area which we have tested seem to have co-compounds with no marker or a morphological marker for coordination, whereas hyponymic coordination normally requires a heavier form, mostly closer to syntax.¹³ However, it must be noted that our survey of hyponymic coordinating compounds was essentially limited to languages of the SAE and East and South-East Asian *Sprachbünde* and to a number of languages of Europe and India, (both Indo-European and non-Indo-European). Our proposal that co-

¹³ Bauer (2001) claims, on the basis of a 36-languages sample, evenly divided between 6 major geographical areas, that there is no areal bias in the presence or absence of *karmadhāraya*-type coordinating compounds: however, his data and ours are not readily comparable, since the category of *karmadhāraya* includes many compounds which are, in our perspective, rather attributive compounds, as we said before (5). Also, Bauer considers all word classes, whereas we focussed only on noun-noun compounds.

compounds represent the basic type here can be proved only areally; a proper typological sample should be investigated to verify this claim.

What the data has shown is that languages actually tend to choose either the hyponymic or the hyperonymic relationship as the one with the tightest (i.e. morphological) marking: a case in point is Modern Greek which, as we have seen (paragraph 5), has co-compounds which are clearly words, whereas hyponymic compounds are syntactic atoms but do not show morphological and phonological cohesion. The borderline between the two semantic types of coordination, i.e. hyperonym and hyponym, may be blurred in syntax and might be influenced by number, as it has been shown with the English example *my relatives and friends* but, usually, it is unambiguous in morphology: a potential exception is the Armenian example *goyavazak* ‘pickpocket-bandit’, where both a hyponymic and a hyperonymic readings may be possible, but the model should not be productive and frequent in the language. In languages with no morphological marking of number, there is usually no ambiguity between the hyperonymic and hyponymic reading in syntactic coordination (see the Chinese ‘student(s)-worker(s)’ example, 5).

The marking patterns for number are various. In some languages with co-compounds and number marking (as e.g. some languages of India and Basque), we see a tendency to inflect compounds for plural, when they designate a sort of union between two separate entities (as in the Basque *senar-emazteak* ‘husband and wife’ example) and for the singular / neuter when the union of the constituents builds up a unitary notion or substance (as in Pāli *jarāmaṇam* ‘old age and death’ or Basque *ur-ardoa* ‘water with wine’, which we already quoted before). In other languages, such as Marathi, co-compounds always behave as plurals; in some Uralic languages (e.g. Mansi, Khanty), a dual marker is added to both coordinands in natural coordination.

As for referentiality, it is interesting to note how in additive co-compounds such as the Japanese *oyako* ‘father and son’ separate reference may be made to each constituent, although the marking pattern of coordination is clearly morphological (and, indeed, other kinds of coordination are marked by syntactical means: *jochū-ken-ryōrijin* ‘maid and cook’; cf. Kageyama 2009:514). The question seems to be non-existent for hyponymic compounds, since here a single entity is designated.

As expected, we have found no examples of adversative coordination expressed in compounds in our sample, since the contrast inherent in such kind of coordination does not allow tight constructions. “or-type” compounds seem to be rarer than “and-type” compounds; also, the latter are richer in semantic subtypes than the former.

Our survey concerned mainly nominal hyponymic compounds while in the discussion of co-compounds, instances of V-V could be easily included. In fact, hyponymic coordinating compounds do not extend to verbs in any of the languages considered which suggests that this is a further difference between hyponymic vs. hyperonymic types of coordinating compounds. While the

former do not easily go together with verbs, the latter do not exhibit equally strong word class restrictions.

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