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Conjunctive Markers in (Mandarin) Chinese and Indo-European Languages: an Interlinguistic Comparison*

1. *Introduction*

The aim of this work is an essentially historico-linguistic analysis of semantic and historico-linguistic paths presupposed by the realization of copulative coordination markers in two typologically and genetically different systems: (Mandarin) Chinese[1] and the system of Indo-European languages.

We owe to the works of Haspelmath (2004, 2007), of Ohori (2004), of Wälchli (2005) and of the French research group led by Rousseau, Begioni, Quayle and Roulland (2007) – which are in turn indebted to the Lang monograph (1984) – the renewed interest of the past few years in the analysis of coordinative structures in various languages of the world.

Works that directly reference Haspelmath include, among others: the important research of Mauri (2006 and 2007) dedicated to subjunctive and adversative conjunctions in European languages, the article of Viti (2006) devoted to the 'and'-markers in the early Indo-European languages; the dense essay by Mauri and Manzelli (2008) focused on the evolution of subjunctive and adversative strategies in Slavic languages; and, finally, the recent, excellent Mauri's monograph (2008) which, from a cross-linguistic perspective, deals with the question of coordination relations in the light of data from European and non-European languages.

This kind of research adopts an essentially typological focus, but also takes into account the semantic, syntactic, and, partially, historico-linguistic

[1] As our analysis is diachronic in nature, we will not be dealing only with Modern Mandarin Chinese, i.e. the standard language of the People's Republic of China and of the Republic of China (Taiwan); the term "Mandarin" is nowadays used in English to refer to the modern standard language, as opposed to other Sinitic languages of China (the so-called "Chinese Dialects"). We enclosed the term "Mandarin" between brackets as this term is not normally used to refer to the stages of Old and Middle Chinese (for an overview on the subject see NORMAN, 1988: 1-6).

levels. What emerges from the research on the strategies of coordination in the languages examined in the above-mentioned works is the fact that coordinative processes seem to develop along a continuum of choices arranged in scalar form: from the juxtaposition of forms by asyndeton, to the juxtaposition of forms with a copulative function, until one arrives, finally, at a true contraposition of forms with an adversative function.

The term 'form' should here be understood as a hyperonym that comprises both entities, properties and events which can of course be considered within an enunciation according to combination or contrast relations. Such relations generally appear to be coded by various morphosyntactic strategies such as, for example, the presence or absence of explicit markers that signal their relation, the semantic value of the markers used, and, lastly, the whole of relations of coordination for which single specific markers can be used.

Wälchli (2005), in particular, has drawn the attention to the typological distinction between natural and accidental coordination. Natural coordination involves a pair of words that represents a conceptual unit such as «earth and sky», «bow and arrow». Conversely, the conjuncts of accidental coordination occur within the same context without pertaining to the same basic category.

In this work, we will examine how, in the serial organization of linguistic forms – whether they are 'lexemes' or 'events' – the Indo-European and the Chinese systems make use of different semantic strategies. In the Chinese system, the serial organization of linguistic forms occurs by means of conjunctive markers predominantly belonging to the semantic field of 'agreement', of 'homogeneity' between the elements of the series.

Meanwhile, in Indo-European languages, the historically attested copulative coordination markers derive from roots that are distributed semantically along a continuum that ranges from the opposition of forms (in which single elements are gathered in a whole insofar as they are different from each other: this is the case of the outcomes of roots I.E. $*$ -$\mathring{n}$t and $*h_1$et(i) / $*h_1$at(i)), to the relation of forms (in which single elements are united in a whole insofar as they are related to one another: this is the case of the outcomes of the root I.E. $*$-k^we), to the presence of semantically ambiguous solutions (in which copulative conjunction markers derive from elements placed in a semantically intermediary position between the notions of opposition (distinctive) and relation: this is the case of the overextension in the use of the semantic values of $*h_1$et(i) / $*h_1$at(i).

1.1. *The marking of combination and contrast*

Croft (2003: 144-152) has shown that combination and contrast relations take place within a semantico-conceptual space. This notion, which is typically

scalar, as shown also in Mauri's research (2008), requires the individuation of different spatial segments which form a gradual conceptual continuum. More specifically, "combination" includes the following macro-relations:

– sequential combination
– simultaneous combination
– atemporal combination

as opposed to micro-relations of "contrast":

– oppositive contrast
– corrective contrast
– counterexpectative contrast.

Different languages 'carve out' the above-mentioned semantico-conceptual macro-space in an autonomous way, using precise markers, and it is often the case that the same marker can be utilized within one language to indicate both combination and contrast relations, something which is quite interesting from the perspective of the organization of paths of signification; there are, then, phenomena of overextension in the use of particular markers.

Thus, for example, in Italian – as has been demonstrated by Scorretti (1988: 227-270), among others – the marker *e/ed* can function as a (connective) marker that indicates a sequential combination (ex. *Lui è uscito dalla stanza e si è accorto che pioveva*), simultaneous (ex. *Mario legge il giornale e fuma una sigaretta*), atemporal combination (ex. *I leoni maschi hanno la criniera e le giraffe il collo lungo*), or oppositive contrast (ex. *I pavoni hanno code vistose e le pavonesse non le hanno*). Another Italian example is the marker *ma*, which can function as a marker indicating both corrective contrast (ex. *Il libro è molto interessante ma non è adatto a tutti*) and counterexpectative contrast (ex. *Antonio parla bene il giapponese ma non conosce molti kanji*). This contrasts with the Italian markers *mentre*, which indicates only oppositive contrast (ex. *Io conosco bene il Tedesco mentre lui non ne sa nulla*), *bensì*, which indicates only corrective contrast (ex. *Lui studia poco, bensì ama andare a spasso*), and *però*, which indicates only counterexpectative contrast (ex. *Il tuo amico è molto gentile, però è poco affidabile*). In German, just as in Italian, the marker *und* serves as an indicator of sequential, simultaneous, atemporal, and counterexpectative coordination (as Italian *e/ed*); meanwhile, *während* indicates only oppositive contrast, *sondern* only corrective contrast, and *aber* only counterexpectative contrast.

2. *The marking of coordination in (Mandarin) Chinese*

The ways of encoding coordination in Chinese, especially conjunctive coordination, have been the object of much diachronic and synchronic research: here we will rely, among others, on Wang L. (1958), Ohta (1987), Liu and Peyraube (1994), Peyraube (1996) and Wu Y. (2005). Some peculiarities in the expression of coordination relations in Chinese throughout the history of the language may be noted. Firstly, just as in some Ancient Indo-European languages (Latin, etc.), the simplest and most common way of encoding conjunctive coordination was the juxtaposition of coordinands at least until the 6th century (Early Medieval Period; Peyraube, 1996: 189). According to Chao Y., even in Modern Mandarin «the simplest and most frequent marker of coordination is zero» (1968: 262-263):

(1) 他 们 卖 桌 子 椅 子
     Tāmen mài zhuōzi yǐzi
     he-PL   sell table   chair
     "They sell tables and chairs"

(2) 杀 人 放 火 都 犯 罪
     Shārén   fànghuǒ dōu fànzuì
     kill-person set-fire all commit-crime
     "Murder and arson are both crimes"

One may find this claim acceptable or not; one fact is that, besides juxtaposition, the language has always had overt marking of coordination, at least from the period of the Confucian classical texts; some of those markers, like 而 *ér* and 與 *yǔ* were both comitative prepositions and conjunctions and thus were termed by Wang L. (1958: 335) as 聯結詞 *liánjiécí*, 'connectors'. Two more characteristics of the markers of coordination in Chinese are to be noted. There is a specialization in function between those markers, like 和 *hé* and 與 *yǔ*, which can connect coordinands having the referential function, and those like 而 *ér* and 并 *bìng*, which may connect coordinands having predicative function (see Wu Y., 2005). The specialization of usage was stronger before the 20th century, according to Wang L. (1958: 338); we shall get back to this point later on.

From the semantic point of view, it seems that, differently from what we will see below for Indo-European languages (sect. 3.), the original meanings of what evolved into the various coordinating conjunctions typically lie in the semantic field of RELATION, rather than in that of OPPOSITION: we shall see examples of conjunctions historically derived from verbs or other lexemes meaning "to give", "to mix", "to follow", etc. For the sake of brevity, here we shall mention just the most common markers of coordination.

In Peyraube (1996: 187-192) we find an excellent summary of the historical research done on the development of coordinating conjunctions. It had been proposed (e.g. in Wang L., 1958) that NP coordinating conjunctions derive from verbs, as mentioned before; Liu and Peyraube (1994) further argue that such elements follow a two-step grammaticalization process, deriving from comitative "with" prepositions which are themselves derived from verbs.

Let us analyse the proposed pathways of grammaticalization for 共 *gòng*, 和 *hé*, 同 *tóng* and 跟 *gēn* as described in Heine and Kuteva (2002: 81-82, quoting Peyraube, 1996: 189-191, unless otherwise stated; glosses altered from the original).

(3)   共 *gòng* "to share" > "together" > comitative preposition > NP-and conjunction.

(3a)   共多人眾坐于室中   (白喻經 *Bái Yù Jīng*, ca. 500 AD)
gòng duō   rén   zhòng zuò yú shì   zhōng
with many people crowd sit at room in
"(We) sat inside the room with a crowd of many people"

(3b) 吾。。。來救孫子，俺爹共袁達
                    (七國春秋平話 *Qī Guó Chūnqiú Pínghuà*, Song period)
wú lái   jiǔ Sūnzi ǎn diē   gòng Yuán Dá
I   come   help Sunzi I father   and Yuan Da
"I came to help Sunzi, my father and Yuan Da"

The original meaning of 共 *gòng* was "to share", attested already in the 論語 *Lùnyǔ* (Xu F., 2000). In (3a), 共 *gòng* is used as a comitative preposition and in (3b) as a conjunction, connecting two NPs. The marker 共 *gòng* continued to be used both as a prepostion and as a conjunction until the end of the Ming period (XVI century), when it was entirely replaced by 和 *hé* (Peyraube, 1996: 190).

(4)   和 *hé* "to mix" > "to stick together" > "included" > comitative preposition > NP-and conjunction.

(4a) 時挑野菜和根煮 (杜荀鶴 詩 *Dù Xún Hè shī*, IX century; Wang L., 1958: 337)
shí tiāo yěcài   hé   gēn zhǔ
often pick wild-herbs together   roots boil
"[Would] often pick wild herbs and boil them with roots"

(4b) 煙和魂共遠，春與人同老
                    (韓偓詩 *Hán Wò shī*, IX century; Liu and Peyraube, 1994)
yān   hé hún gòng yuán   chūn yǔ rén   tóng   lǎo
smoke with soul together far.away spring with people together become.old
"The smoke is moving away together with the soul, the spring is becoming old together with the people"

(4c) 山頭日日風和雨　　　(王建詩 *Wáng Jiàn shī*, VIII century; Liu J., 1989)
shān　　　tóu rì　rì　fēng hé　yǔ
mountain top day day wind and rain
"Everyday, in the mountains, there is wind and rain"

In (4a), 和 *hé* bears the meaning of "connected, together" (連帶 *liándài* 連在一起 *lián zài yīqǐ*), according to Wang Li's analysis, and could be substituted by 帶 *dài* or by the above mentioned 共 *gòng* (cf. exx. 3a-b). Wang Li claims that 和 *hé* would gradually grammaticalize into a conjunction only later; however, it could be used as a preposition already in the Tang period, as shown in the example (4b) (cf. Ōta, 1958, Liu and Peyraube, 1994), but apparently also as a conjunction, as in example (4c), proposed by Liu J. (1989):

(5)　同 *tóng* "to be the same as" > "to share with"; "to accompany" > comitative preposition > Np-and conjunction.

(5a) 白雲同鶴飛 (寒山詩 *Hán Shān shī*, VII century; Peyraube, 1996: 190).
bái　yún　tóng hè　fēi
white cloud with crane fly
"white clouds are flying away (together) with the crane"

(5b) 我同你呢，又不知是什么緣法，很要好的 (二十年目睹之怪現況 *Èrshí Nián Mùdǔ zhī Guài Zhuàngkuàng*, early XX cent.; Luo Z., 1993)
wǒ tóng nǐ　ne　yòu bù zhī　shì shénme yuánfǎ
I　and you PART again not know COP what　predestined.relationship
zhēn yàohǎo　　　de
really be.close.friends PART
"Me and you, I don't know if it's a predestined relationship, we're really close"

The lexeme 同 *tóng* was also originally a verb, meaning "to be the same as" and "to share with", "to accompany"; in the Tang dinasty, it had prepositional usage, as in the example (5a). However, such usages appear to have been restricted to poetry; Peyraube (1996: 202, note 38) claims that there is not a single occurrence of 同 *tóng* used as a preposition in texts such as the 敦煌變文集 *Dūnhuáng Biànwénjí* and the 祖堂集 *Zǔtángjí*, as well as in texts from the later dinasties Song and Yuan; the first prepositional 同 *tóng* is to be seen only in the 金瓶梅詞話 *Jīnpíngméi Cíhuà* (beginning of the XVII century). Also, it is claimed that 同 *tóng* did not grammaticalize into a conjunction until the XIX century; the example (5b) comes from prose of the early XX century.

(6)　跟 *gēn* "to follow" > comitative preposition > Np-and conjunction.

(6a) 你昨日跟了你爹去
　　　　　　(金瓶梅詞話 *Jīnpíngméi Cíhuà*, beginning of the XVII century)
nǐ　zuòrì　　gēn　le　nǐ　diē　qù
you yesterday follow ASP you father go
"Yesterday, you followed your father"

(6b) 秋菱收拾了東西跟我來   (紅樓夢 *Hóngloú Mèng*, XVIII century)
    Qiū Líng shōushi le   dōngxi gēn   wǒ lái
    Qiu Ling prepare ASP thing   with me come
    "Qiu Ling, prepare [your] things and come with me"

A similar pathway of grammaticalization characterized 跟 *gēn*, another common NP-and conjunction in Modern Mandarin Chinese, a verb meaning "to follow" which grammaticalized into a preposition in the XVIII century and into a conjunction only in the contemporary language, in the XIX century (Peyraube, 1996: 190); the relevant examples are (6a) and (6b).

To sum up, in the literature one may find conclusive evidence of the fact that NP-and conjunctions all go through two processes of grammaticalization, from verb into comitative preposition and from that to conjunction. From the semantic point of view, the typical meanings of the original verbs all fall in the domain of 'AGREEMENT' and 'RELATION': verbs like "to share", "to mix", "to stick together", "to be the same as", "to accompany", "to follow". As far as the distinction between preposition (i.e. comitative) and conjunction status for such forms is concerned, we have already pointed out that Wang Li speaks of 'connectors', lumping together, in a sense, the comitative and conjunctive meaning, although he still accepts the distinction between prepositions and conjunctions.

Following Stassen (2000; cf. Haspelmath, 2004: 14 ff.), a distinction has been made between the so-called 'AND-languages', i.e. languages where comitative and conjunctive coordination are expressed by different markers like English, and 'WITH-languages', where there is no distinction between comitative and conjunctive, i.e. no distinction analogous to that between English "with" and "and". According to Stassen (2000), Mandarin Chinese is to be classified as a 'WITH-language'. Haspelmath (2004: 15) proposed that such formal identity could be regarded, for some languages at least, as the effect of diachrony, since comitative markers are a common source for conjunctive coordinators: this is the case also for Chinese, as shown before. We shall not deal any further with this issue, as it falls beyond the aims of this article, and we shall limit ourselves to remarking that, in our perspective, the word-class distinction between comitative prepositions and coordinating conjunctions is of little interest, since we are primarily concerned with the semantic features of markers of coordination[2].

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[2]   Incidentally, we shall remark how not everybody agrees on the lack of distinction between conjunctive and comitative coordination in Mandarin Chinese. PARIS (2008), for instance, provides convincing evidence that 跟 *gēn* in the Chinese lexicon exists both as a preposition and as a conjunction, certainly deriving from the same verb (cf. the discussion above); the two 跟 *gēn* have a different distribution and different semantic properties (see PARIS, 2008 for further details).

2.1. *Functional distinctions in the marking of coordination*

Let us now turn to the examination of functional distinctions in markers of coordination in Chinese. As mentioned briefly before, Mandarin Chinese appears to use different markers for NP coordination and VP coordination. It has been pointed out by Haspelmath (2004:10-12) that about half of the World's languages employ different strategies for encoding nominal conjunction and verbal/clausal conjunction; Chinese falls in this category, whereas most European languages typically use the same marker, as e.g. English *and,* to conjoin NPs, VPs and clauses (Haspelmath, 2005). Wang L. (1958: 337-338) claimed that the distinction between the conjunctions 與 *yǔ* and 而 *ér* once was that the former was employed to connect "things" (事物 *shìwù*), i.e. nouns, whereas the latter was used to connect "actions" or "qualities" (行為或性質 *xíngwèi huò xìngzhì*), i.e. verbs and adjectives (/ stative verbs). However, due to the influence of "Western languages" (西洋語言 *xīyáng yǔyán*), where these two meanings are encoded by the same conjunction, the two conjunctions tended to be used to expresses all of the above, after the May Fourth Movement. According to Wu Y. (2005), the distinction is that between reference and predication: whereas 和 *hé* and 與 *yǔ* can connect coordinands having the referential function, 而 *ér* and 并 *bìng* are used to connect coordinands having predicative function (from Wu Y., 2005: 15):

(7a) 阿克莫拉冬季漫长而寒冷
   Ākèmòlā dōngjí màncháng ér   hánlěng
   Akmola   winter endless   and cold

(7b) * 阿克莫拉冬季漫长和寒冷
   Ākèmòlā dōngjí màncháng hé   hánlěng
   Akmola   winter endless   and cold
   "In Akmola, winters are endless and cold"

(8a) 东非大草原的神奇和壮丽
   Dōngfēi   dàcǎoyuán de   shénqí hé zhuànglì
   East-Africa Great-Plains PART mystery and majesty

(8b) * 东非大草原的神奇而壮丽
   Dōngfēi   dàcǎoyuán de   shénqí ér zhuànglì
   East-Africa Great-Plains PART mystery and majesty
   "The mystery and majesty Great Plains of East Africa"

In (7a-b), two adjectives / predications are being connected and, therefore, only 而 *ér* and not 和 *hé* may be used, as proved by the ungrammaticality of (7b); in (8a-b), two properties, treated as referential, are being connected: only 和 *hé*, rather than 而 *ér*, may be employed here; (8b) is therefore ungrammatical.

However, one may well connect two adjectives by 和 *hé* under certain conditions, namely that the adjectives be disyllabic and that a modifier (such as 十分 *shífēn* 'very') precede the first coordinand (Lü S., 1980: 181):

(9) 天安门广场十分雄伟和壮丽
    Tiān'ānmén guǎngchǎng shífēn xióngwěi   hé   zhuànglì
    Tian'anmen square   very magnificent and majestic
    "Tian'anmen square is really magnificent and majestic"

Therefore, it is probably more appropriate to say that 而 *ér* and 并 *bìng* may *always* connect two coordinands having predicative function, whereas 和 *hé* may do so only under certain conditions.

In the light of what was said above on the origin and pathways of grammaticalization of NP-and conjunctions, it will be interesting to give but a few remarks on the history of 而 *ér*. Differently from 共 *gòng*, 和 *hé*, 同 *tóng* and 跟 *gēn* seen above (exx. 3a-6b), 而 *ér* did not evolve from a (prototypical) verb, but rather from an adverb meaning "like" or possibly a stative verb "to be like", as one may see in ex. 10a:

(10a) 彼都人士、垂帶而厲   (詩經 小雅 *Shījīng Xiǎoyǎ*)
     bǐ   dū   rénshì chúi   dài   ér   lì
     those capital officer hang-down girdle like dropping.part.of.belt
     "Those officers of the capital, letting their belts hang down like *lì*s"[3]
     "Those officers of the [old] capital, with their girdles hanging elegantly down"[4]

Also, 而 *ér* has always been used as a conjunction, rather than as a preposition. Its usage as a conjunction expressing conjunctive coordination (AND coordination) has been attested since the 5th century BC:

(10b) 夫達也者，質直而好義，察言而觀色
                    (論語 顏淵 *Lùnyǔ Yán Yuān*, from CHINESE TEXT PROJECT)
     fū   dá   yě zhě   zhì zhí   ér hào yì   chá   yán
     man distinction PART person nature straight and love righteousness examine word
     ér   guān sé
     and watch countenance
     "Now the man of distinction is solid and straightforward, and loves righteousness. He examines people's words, and looks at their countenances"

In Contemporary Chinese, 而 *ér* is used to connect VPs, ADJPs and clauses. Just as seen above (1.1) for Italian *e/ed*, 而 *ér* covers the functional space of sequential combination (10c ex. *Lui è uscito dalla stanza e si è accorto che*

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[3]   My (literal) translation.
[4]   Translation by James Legge (CHINESE TEXT PROJECT).

pioveva), atemporal combination (10d ex. *I leoni maschi hanno la criniera e le giraffe il collo lungo*), or oppositive contrast (10e ex. *I pavoni hanno code vistose e le pavonesse non le hanno*; examples from SINICA CORPUS and the web):

(10c) 不要把科學民主人格化、偶像化而盲目得崇拜
     bù yào bǎ   kēxué mínzhǔ   réngéhuà ǒuxiànghuà ér   mángmù
     not must PART science democracy personify idolise   and   blind
     de   chóngbài
     PART worship
     "One should not personify, idolize and blindly worship scientific democracy"

(10d) 我是學生而她是老師
     wǒ shì xuéshēng ér   tā   shì lǎoshì
     I   COP student   and she COP teacher
     "I am a student and she is a teacher"

(10e) 那時候我很窮，而他家卻很富有
     nà shíhòu wǒ hěn qióng ér   tā jiā   què hěn fùyǒu
     that time I   very poor and she house but very wealthy
     "At that time I was poor, and her family was very wealthy"

The example (10d) may be ambiguous between atemporal combination and opposition (Mauri, 2008: 86). The conjunction 而 *ér*, therefore, appears functionally and semantically rather different from Chinese NP-and conjunctions. Nevertheless, it still appears to be located in the semantic area of RELATION and COMPARISON, and so it is no exception in this respect. The semantic space covered by 而 *ér* is similar to that of Italian *e/ed*, with the exception of simultaneous combination. Chinese, just as any other language, 'carves out' the in an autonomous way the semantico-conceptual macro-space of combination and contrast.

3. *The marking of coordination in Indo-European languages*

As shown in the preceding section, Liu and Peyraube (1994) have demonstrated that Chinese coordinative conjunctions joining two or more NPs do not derive directly from verbs, but rather from prepositions that are, in turn, derived from verbs. In other words, there have been two processes of grammaticalization: one that has transformed a verb into a preposition and another that has transformed the preposition into a conjunction. Thus, in Chinese, conjunctions are more grammaticalized than prepositions.

The situation appears different in the Indo-European environment, where logical connectives meaning "and" vs. "but" do not derive from verbs but rather from elements conveying spatial and temporal deixis (Traugott, 1986).

In the Indo-European languages, three main types of conjunctive markers are attested, each not deriving from processes of grammaticalization of verb forms – as it is typically the case in Chinese – but, rather, from the overextension of forms indicating, at their origin, values connected to 'spatial' or, more generally, 'deictic' meaning. These forms thus seem to be born out of contexts in which pragmatico-discursive needs dominate. Going into further detail, one can individuate the following types of conjunctive markers:

(a)   Conjunctive markers "by OPPOSITION" of "people", "things", or "events": this type is represented by continuations of the root I.E. *n̥t-;

(b)   Conjunctive markers "by RELATION" of "people", "things", or "events": this type is represented by continuations of the root I.E. *-kʷe;

(c)   Semantically ambiguous conjunctive markers, located at the halfway point of the logico-semantic path: this type is represented by continuations of forms I.E. *h₁et / *h₁et(i) and their relation with the form I.E. *h₁at / *h₁at(i). This type is connected to the subtype I.E. *h₁at(i)-kʷe that, structurally, conjoins type b) with type c).

3.1. *Deictic markers and coordination*

The most evident case of overextension of deictic markers, tied to the pragmatico-discursive level and indicating 'OPPOSITION' of 'people', 'things', and 'events', is provided by continuations – well attested in the Germanic languages – of the I.E. base *n̥t- as it appears realized, typically, in the German *und* and in the English *and* (cf. Old High Germ. *unti*; Germ. *und* "darauf").

At the base of these forms is the base I.E. *n̥t-i (with *i*, a typical deictic expansion) that is found elsewhere in the Indo-European environment, in ancient locatival forms: cf. Sanskrit *ánti* (adverb) "opposed to, instead of", in the Greek ἀντί (preposition + genitive) "in place of, in the face of, close to", in the Latin *ante* (preposition + accusative) "ahead of" / *antea* (adverb) "before", in the Oscan *ant* (preposition + adverb) "ahead of, until", in the Armenian *ənd* (preposition + accusative) "entlang, gegen", in the Lithuanian *añt* (preposition + genitive) "nach -hin, auf, während, für" (cf. Ernout and Meillet, 1985: 36-37; Boisacq, 1938: *s.v.*; Chantraine, 1990: *s.v.*).

We may reconnect to the same semantic sphere other Germanic forms derived from a I.E. base *anta-: Gothic *and- / ant-* (in verbal compounds, like *and-bind-an* "auflösen"), Old High Germ., Ags. *ant-, int-*, Germ. *ant- / ent-* "vorher"), Ags. *end* "vorher" and, naturally, forms belonging to the same semantic area, with specific internal evolution, derived from a base I.E. *ant-jó-, such as the Gothic *andeis* "end", Ags. *ende,* Old High Germ. *enti, enti,* Germ. *Ende* "end", which can be compared to the Sanskrit *ánta-ḥ* "end; boundary",

even though it has a different final vocalism and a different accent position.

Equally connected to the diachronic evolution of pragmatico-discursive strategies tied to the 'RELATION' between elements and in which a probable deictico-spatial value is recognizable, is the series of coordinative markers derived from a I.E. base *-kʷe: these forms are connected to the roots of the relative and indefinite pronouns, attested – such as enclitic forms – in the Latin -*que,* the Sanskrit -*ca,* the Greek -τε, and, lastly, the Gothic -*h* (cf. the Gothic negation *ni-h,* corresponding to the Latin *neque*), as shown by Shimomiya (1973: 227) which has analyzed, in a comparative way, the evolution of relative and indefinite pronouns in the Caucasian and the Indo-European languages. As regards Indo-Iranian languages, one can observe that in Sanskrit, -*ca* is normally used only as a marker for the coordination of two nouns: cf. *śatam ekam ca* "one hundred and one".

From the diachronic point of view, it is interesting to observe how Greek -τε appears, as an enclitic conjunctive marker, already in the Mycenaean -*qe* (a conjunctive marker utilized for nouns referring to 'people' and 'objects', whereas the coordination of 'events' in Mycenaean is marked by *de*). Greek -τε has exactly the same functions which, elsewhere in the Greek environment, are covered by καί (never attested, after all, in Mycenaean), a generic coordination marker. As Gonda (1954) has demonstrated, there is a construction of the Homeric language, which is also found in Iranian languages, in which -τε connects two nouns, the first of which inflected for the vocative case, the second for the nominative; cf. Il. 3, 276-277 Ζεῦ πάτερ ...Ἥλιος τε "O father Zeus and Helios". Viti (2006: 132) has demonstrated that Skr. -*ca,* Greek -τε, and Latin -*que* are older than *utá,* τε, and *et,* respectively. While the former are inherited from the most ancient stratum of the Indo-European tradition, the latter are language-specific. Furthermore, Skr. -*ca,* Greek -τε, and Latin -*que* from the syntactic point of view are postposed conjunctions, and therefore are harmonic with the SOV major constituent order, which in the Indo-European environment is considered to be older than SVO.

Regarding the origin of καί, we cannot rule out the possibility that the emphatic particle, which then became a conjunctive marker, traces back to the same base of the the I.E.: relative marker *kʷə + i (deictic) > *ka-i (cf. οὗτοσ-ί, ποσ-ί). The outcome of */kʷ/ > [k] is dialectal, typical of the Ionian area (cf. Schwyzer, 1950: vol. I, 55, 70, 298; Gamkrelidze and Ivanov, 1995: 412). The first value of the Greek καί, attested already in Homer and then continued in the entire Ionian-Attic tradition, is "more, precisely, equally" and, later, "in the same way > as > and", just like Latin *ceu* "as" < *kʷə + i + ue "as also" (with -*ue* "or", as in the Latin *nēve, neu* "nor", Sanskrit *vā,* Greek ἤ "or", as observed by Frisk, 1973: *s.v.* and by Baldi, 1999: 361). It is also interesting to observe how, in a different linguistic sphere and diachronic stage, the same semantic

process is attested in the outcome of Latin SĪC > Romanian și (cf. Schwyzer, 1950: vol. II, 555-556; and, for a discussion of the etymon, cf. *ibid.* 567-568).

Besides these uses, -τε is also attested in Homer and in the Homeric tradition as a conjunctive marker that, tendentially, highlights a permanent fact, as pointed out by Chantraine (1990: 1098). The data are not completely clear, however; the greatest number of examples are observed with the relative ὅς τε, from which, secondarily, the forms δέ τε, γάρ τε, καί τε, ἀλλά τε, etc. would be derived. This appears to be, in all likelihood, an archaism. In the later Greek tradition, -τε rarely functions as an isolated conjunctive marker, while it occurs several times in the expression οὔτε … οὔτε.

From the functional perspective, the Greek -τε could be connected, in some cases, with the indefinite, both for its general deactualizing value and for its function as a conjunctive marker. In that sense, obvious comparisons would make sense, including comparisons to the Latin *quisque,* Sanskrit *yaḥ kaš ca,* and Avestan *yo čišča*, as largely demonstrated by Leumann, Hofmann, and Szantyr (1965: 473-475).

In the case of the third type of conjunctive marker attested in the Indo-European environment, one also notes the processes of overextension of pragmatico-discursive strategies, where deictic elements and notations with spatial features, especially locative, come into play.

Falling within the first subtype are the continuations of a base I.E. *$h_1$et(i) / *$h_1$at(i) in which – besides the vocalic element that appears differently realized (with the goal of expressing different semantic nuances, which are evident, e.g., in the Latin pair *et / at*) – the consonantic element recurs: *t (< I.E. *to, typical deictic marker, well attested in demonstratives: cf. Sanskrit *tad,* Vedic *utá,* Greek αὐ-τό-ς /οὔ-το-ς, Latin *is-te* < *is-to, Germanic þe, etc.).

The most well-known representative of the *$h_1$et(i) / *$h_1$at(i) type is indeed the Latin pair *et* vs. *at.* At the base of these two Latin forms are ancient locatival adverbs *$h_1$et(i) / *$h_1$at(i) "furthermore, besides" where the morph *i* has a deictic value, as agreed upon by Walde (1965: vol. I, 421-422), Ernout and Meillet (1985: 53, 202-203), and Baldi (1999: 361). The form *$h_1$et(i) (> Latin *et*) has specific links to the Sanskrit *áti,* Avestan *aiti,* Old Pers. *atiy* "besides", and Greek ἔτι "still; more". Also interesting is the isolated outcome of Gallic *etic* (<*$h_1$et(i)-k^{w}e) "and", where the juxtaposition of two conjunctive markers functions as emphasis. In the Germanic environment, *$h_1$et(i) > Gothic *iþ* "then, but, and".

A parallel semantic strategy, characterized by the presence of processes of pragmatico-discursive overextension where deictic elements and notations of spatial character do not play a secondary role (evident, e.g., in the selection of ablative and locative cases), recurs also – as well demonstrated by Mauri and Manzelli (2008: 91) – in the conjunctive markers of Old Bulgarian, namely *a*

"and" (< i.e. *ōd, singular ablative in apophonic relationship to the pronoun *e-, *ei-, *i-) and *i* (from Old Bulg, it was later accepted in other Slavic languages); the (pan-)Slavic connective *i* derives from a I.E. base *ei, the locative singular form of the pronoun *e-, *ei-, *i (cf. Gothic *ei* "so that", Greek εἰ "if").

Closely connected to the case of I.E. *h₁et(i) are the outcomes of the parallel I.E. root *h₁at(i), whose original value was "therefore" (and then "back, again" > "since", as is still attested in forms such as the Latin *at-avus*). The most immediate connections, as observed also by Leumann, Hofmann, and Szantyr (1965: vol. I, 488-489), include the Sanskrit *áti* (preposition with accusative) "therefore, in the face of", and, also, *áti-* (compound element), Avestan *aiti-,* Old Pers. *atiy-* "in the face of". The Celtic outcome is also interesting, attested in the Gallic *ate-* which is present in a nominal compound like Gallic *Ate-gnatus* "known", a form which cannot be separated from the Latin *at-avus.*

Lastly, the Latin compound *atque* "and then, and also, and", is also noteworthy in its comparability to the Avestan *aṭ-čā* "and then, and". From the Latin *atque* also comes the reduced form *ac* (cf. Leumann, Hofmann and Szantyr, 1965: vol. I, 576-579), well attested in the history of Latin.

The analysis of the data related to copulative coordination markers in the Indo-European linguistic environment shows a notable variety of forms that – despite their formal variety – all belong to two main logico-semantic paths: the type 'by OPPOSITION' of elements placed in a series (well represented by the continuations of the base *n̥t-) and the type 'by RELATION' of elements placed in a series (well represented by the continuation of the Indo-European base *kʷe).

The continuation of the Indo-European base *h₁et(i) > Latin *et* – taken in its relationship to the parallel form *h₁at(i) > Latin *at* – proves, like the coordination marker *et* (which in classical Latin has the exclusive value of a coordinative marker) to be in fact the final outcome of a process of resemanticization of a form having, at its origin, the exact character of a marker 'of OPPOSITION'. The person, thing, or event placed in a series is definite in its specificity (and uniqueness) as a semantic mechanism that tends to contrast it with the single elements that become a part of the whole. It is not a coincidence that the Latin conjunctive marker *et* is typologically and etymologically close to the Latin disjunctive marker *at.*

One can say that in Latin "true" coordination was expressed either asyndetically or via the morph *-que*, attested in formulaic expressions like *domi bellique, Senatus Populusque Romanus,* etc. The generalization of *et* as a copulative marker in Latin should be understood as a (relatively) later innovation, born out of the desemanticization of its first value with an oppositive character.

4. *Conclusions*

The comparison between the strategies for marking coordination in (Mandarin) Chinese and in the Indo-European environment allowed us to individuate marked differences as concerns the semantic values employed, considering the semantic paths attested in the languages of the world (see Langacker, 1987).

In the (Mandarin) Chinese system there existed / there exists, in the processes of seriation of 'people', 'things', and 'events', a clear separation between copulative coordination and disjunctive coordination.

By contrast, in the Indo-European languages, the primary idea at the base of the processes of seriation is represented via morphs that highlight the 'antithesis', the 'contraposition' between the elements of a series which, properly 'individuated', are then gathered within a single notional whole. In this respect, the continuations of the base I.E. *$n̥t$- and the bases *$h_1$et(i) / *$h_1$at(i) are indicative.

On the other hand, the 'serialization' of units that can be connected by markers in the semantic sphere of 'RELATION' appear to be secondary, in relation to the extension of use, as emerges from the continuations of morphs derived from the I.E. root *-k^we in the Indo-European languages.

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