Extraposition and Ellipsis in Coordinative Structures[1]

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0   Introduction

What this paper aims to show is that within the field of symmetric coordination there seems to be much reason to distinguish between ellipsis and extraposition. This distinction differs from the claim that all coordinative constructions containing missing elements are elliptical constructions - cf. Wilder (1994, 1995, 1996) - or that all such construtions are extrapositional constructions - cf. the "Across-The-Board" theory (ATB) theory and the ride node raising (RNR) theory by Williams (1978, 1990) et al. The evidence supporting the coexistence of ellipsis and extraposition comes from German and Chinese, the latter provided by Chen, Xuan. Provided that the coexistence between ellipsis and extraposition proves to be correct in German and in Chinese, which are languages that differ typologically to a great extend, the question arises as to whether this distinction is universal or not. Because the research on Chinese ellipsis is still in its infancy, the Chinese data presented below may give the impression of only being ornamentally attached to the German data. However, if you take this article as a first step in comparing German and Chinese with regard to their information structure and ellipsis, this impression should disappear.

To give an impression of what is meant by ellipsis and extraposition in coordination let me give you a brief outline of both concepts.

1. Ellipsis

Although ellipsis is not only found in coordination but also in many other grammatical domains, such as in comparison, so called adjacency ellipses, situation bound ellipses, etc., we will concentrate only on coordination.

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(1)   (i)   Hans **LOBT** und Paul **KRITISIERT** seinen alten Lehrer.[2]

Hans **PRAISES** and Paul **CRITICIZES**   his   old teacher

BeideLehrer haben Hans und Paul vor zehn Jahren unterrichtet.
Both taught Hans and Paul ten years ago.

    (ii)   Zhang San zai **BIAOYANG**, Li Si zai **PIPING** ta guoqu de laoshi.

Zhang   San just praise   Li Si just criticize   he old   de teacher

Liang wei laoshi shi nian qian cengjing jiao-guo Zhang San he Li Si.
Both taught Zhang San and Li Si ten years ago.

(2)   (i)   Einen Gast hat **SIE** **jedem MÄDCHEN** und **ER** **jedem JUNGEN** vorgestellt.

A guest, Acc has **SHE** to **every GIRL**   and **HE** to **every BOY** introduced

Die Mädchen und Jungen haben sich mit den Gästen gut unterhalten.
The girls and the boys had a good time with the guests

    (ii)   * Yi wei keren, **LI SI** xiang **mei ge** **NÜHAI**, **ZHANG SAN** xiang **mei**

one CL pupil   Li Si   prep. every CL   girl   Zhang San   prep. every

ge NANHAI zuo-le jieshao

CL   boy   do-le introduce

An elliptical structure is commonly understood to be incomplete with respect to its complete counterparts. To preserve the sentential strucutre of elliptical structures and their syntactic parallelism to their antecedent structure, when one exists, elliptical structures are considered to contain empty categories. The empty categories may be generated by construction rules or result from phonological deletion.

(3)   [Hans **LOBT** ~~seinen alten Lehrer~~] und [Paul **KRITISIERT** seinen alten Lehrer]

Hans praises ~~his old teacher~~   and Paul criticizes   his   old   teacher

(4)   [Einen Gast$_i$ [hat **SIE** **jedem MÄDCHEN** e$_i$]] und [~~einen Gast~~, ~~[hat~~ **ER jedem**

a   guest has she to ever girl   and ~~a guest~~   has he to every

JUNGEN e$_i$ vorgestellt]]

boy   introduced

---

[2] The bold-face constituents signal the focus domain and the capitals the focus exponent.

Structures containing empty categories underly several grammatical, semantic, and pragmatic conditions, which, unfortunately have to be neglected. Here, I will mention only the one which is of greatest importance to our purposes:
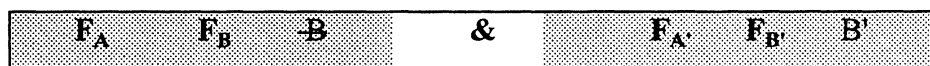
(c 1)   Elliptical categories must be recoverable.

This recoverability condition ensures that elliptical utterances are understood by the listener. Within the framework of information structuring theory, this recoverability condition can be easily translated into a background conditon:
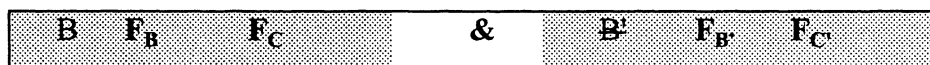
(c 2)   Elliptical categories must be background.

If we symbolize focal constituents as F and background constituents as B, we are able to transform the above mentioned elliptical configurations into the following, let us say, information structural schemes:

(3')

$$
\boxed{F_A \quad F_B \quad \cancel{B} \quad\quad \& \quad\quad F_{A'} \quad F_{B'} \quad B'}
$$

(4')

$$
\boxed{B \quad F_B \quad F_C \quad\quad \& \quad\quad \cancel{B'} \quad F_{B'} \quad F_{C'}}
$$

In both schemes, we see that each conjunct contains as many focal categories as the other. In other words, both conjuncts are parallel with regard to their information structure. Information structural parallelism as well as syntactic parallelism, and a certain semantic parallelism are all reflexes of the parallelism requirement of coordination - cf. Lang (1977, 1984).

To preserve information structural parallelism, it is required that each focused category of one conjunct differs from its counterpart in the other conjunct. If they do not differ they do not form a contrastive pair, which is commonly understood to be a condition of well-formed coordination.

Now, there are cases where this information structural parallelism seems to be disturbed in so far as one of the two conjuncts seems to contain an additional focused constituent.

(5)   (i)   HANS BEGRÜßT und PAUL KÜßT **seinen ehemaligen LEHRER.**

Hans   WELCOMES and Paul KISSES his   former   teacher.

Er ist ziemlich alt geworden. *Sie sind ziemlich alt geworden.

He has become quite old. *They have become quite old.

(ii)   Zhang San PIPING-le, Li Si FEIBANG-le **ta guoqu de LAOSHI.**

Zhang San criticize-le Li Si   insult-le he   old   de teacher

Zhei wei laoshi yijing tuixiu le

this   CL teacher already has retired.

This teacher already has retired.

(6)   (i)   HANS hat ANNA und FRITZ hat PAULA **einen SCHÜLER vorgestellt.**

Hans   has to Anna and Fritz has to Paula   a pupil introduced.

Der soll ein bekannter Pianist sein.

He is said to be a well known pianist.

(ii)   Zhang San wei CHUNMEI, Li Si wei QIUJU mai-le **yi ge DANGGAO**

Zhang San prep. Chunmei Li Si prep. Qiuju buy-le   1 CL cake

Zhei ge danggao shi yong guojiang zuo de.

this CL cake   be prep. jam   make de

This cake is made of jam.

(7)   (i)   **Einen LEHRER** hat jeder SCHÜLER GELOBT und hat jede SCHÜLERIN

KRITISIERT.

A TEACHER, Acc has every SCHOOLBOY, Nom. PRAISED and has every SCHOOLGIRL criticized

Dieser Lehrer ist schon seit zwanzig Jahren an der Schule.

This teacher has been at this school for twenty years

(ii)   You ge **XUESHENG,** Zhang San BIAOYANG-le, Li Si PIPING-le.

You CL   **PUPIL**   Zhang San PRAISE-le Li Si CRITICIZE-le

By pretending that the configurations (5) to (7) are elliptical configurations, we can consider them to have the following information structuring schemes, with Φ meaning the focused constituent which is thought to be shared by both conjuncts:
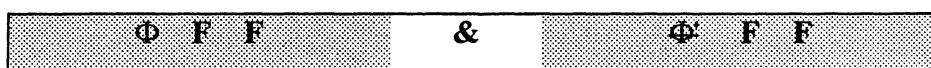
For (5) and (6):

(8)　*

F F Φ	&	F F Φ'

For (7):

(9)　*

Φ F F	&	Φ' F F
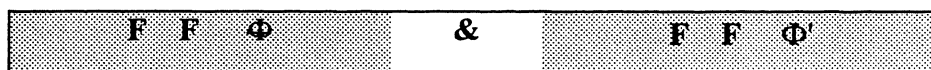
Besides the unwanted information structural disharmony in (8) and (9), there are still other objections to the respresentation of these configurations as ellipses. Before we go back to them below, let us get an overview of the alternative to the ellipsis concept - so called extraposition.

II.　Extraposition

As will be shown in the following, empirical arguments as well as theoretical ones will lead to the consideration that coordinative structures like (5), (6) and (7) have syntactic and information structuring representations in which the shared constituent Φ is somehow extracted out of the coordination.

(10)

F F ε_i	&	F F ε_i		Φ_i

(11)

Φ_i		ε_i F F	&	ε_i F F

In the next part of the paper, we will consider the syntactic and semantic arguments which are, respectively, pro or contra the ellipsis representation or pro or contra the extrapositon representation. Then, in the third part of the paper, I will discuss their syntactic representation.

2 Evidence for the coexistence of ellipsis and extraposition

At least in German, different possibilities of coordination ellipsis exist. They differ respecting the conjunct where the ellipsis takes place. Ellipsis located in the first conjunct is called *backward ellipsis* or backward deletion (*BWD*) - cf. (1), (3) and (8). Ellipsis in the second conjunct is labeled *forward ellipsis* or forward deletion (*FWD*) - cf. (2), (4), and (9). In the first conjunct, only background constituents to the right may be absent. This observation has been expressed by Wilder (1994) as the *right periphery condition*. In the right conjunct, on the other hand, background constituents to the left may be elliptical. Background constituents in the middle may also be missing, which is commonly known as gapping. Whereas the research on German elliptical constructions has already been well established during the last decades, research on Chinese ellipses is quite rare. If there is any, it is merely stated that certain kinds of elliptical constructions exist,and that they underly certain conditions. However, only little effort has been made to elaborate a consistent picture of Chinese constructions containing missing elements.

To distinguish extrapositional structures from ellipsis, let us introduce REX for 'right extraposition' and LEX for 'left extraposition'. REX is found if the shared and focused constituent is to the right of the second conjunct - cf. (5), (6), and (10), and LEX, if the shared focused constituent is to the left of the first conjunct - cf. (7) and (11).

There are four pieces of evidence in favour of the coexistence of the ellipsis and extrapositional representation. As will be shown in chapter four, two of them are subsumable and all of them are explainable with respect to information structure.

2.1 Distinct or unique reference of indefinite shared constituents

The evidence being dealt with in this chapter comes from the referential properties of indefinites and their determination by the information structure of the construction. What is of interest here is the focusing or non focusing of indefinites and the type of focus they have. For that purpose, let me give you a brief outline of focus and indefinite expressions.

In accordance with Eckardt (1996), we will distinguish between two kinds of foci - F1 and F2 . The latter means the commonly known foci, such as focus associated with

particles, corrective focus and question-answer focus. F1 is considered by Eckardt to be a judgement focus, which corresponds to the presentational focus - cf. Drubig (1994) or to the nucleus of the sentence - cf. Diesing's (1992) tripartite analysis of sentences. Both, F1 and F2 are realized by a certain accent and allow focus projection. According to Eckardt, F1 indicates the domain of existence. For indefinites in F1, their existential part as well as their predicative part are focused. Because the existential part is focused and, therefore, just introduced into the discourse, the existence of its referent is asserted. Such indefinites are commonly said to be existentials. Having just established their referents in the discourse, they are accessible to pronouns. Indefinites located outside F1 are not existentials. Being outside of F1 means that they are either within F2 or that they are not focused at all. As for indefinites in F2, their existential part is presupposed. Then, it is only the predicative part of the DP, this means the NP, that is focused. This type of indefinite is to be called a presupposed existential. If indefinites are not focused at all, neither their existential part nor their predicative part isasserted. So, both parts are presupposed. These indefinites are called generic expressions by Eckardt (1996). Similar considerations may be found in Reinhart (1995) and Diesing (1992) who assume unfocused indefinites to be quantifier phrases.

What we now have are three types of indefinites with each type dependent on its information structural status as F1, F2 or non focus. Adopting here the view that information structure is anchored in the syntactic structure, it is necessary to correlate these focus domains to syntactic structure. Considerations on how F1 and F2 are syntactically realized may be seen in Eckardt (1996:5f.). There, F1 corresponds approximately to VP, which in its turn corresponds to Diesing's (1992) nuclear part of the sentence. When we implement Eckardt's F1 in our syntactic informational structure theory, which postulates functional categories for informational structure relevant constituents, it should correspond to our Focus-2-Phrase. We will come back to this in chapter three. Eckardts F2, on the other side, corresponds to our functional category Foc1P.

Having, although in a very rough simplification, established the prerequisites, we turn now to our concern, namely to decide whether a coordinative structure has to be represented as an elliptical one or as an extrapositional one. We will start with constructions for which it may be predicted that they have to be represented as elliptical structures.

With regard to backward ellipsis, the shared indefinite constituents B and B' have a different reference, provided they are not focused. This different reference is reflected in the possibility for the referents of both of the constituents B and B' to be expressed by a plural anaphoric expression in a following expression. That this effect can be found in German as well as in Chinese backward ellipsis can be observed by regarding the following two examples (12) and (13). Recall that Bwd is the label for backward and Fwd the label for forward ellipsis.

BWD:

(12) (i) **HANS** hat **ANNA** ~~einen Pfannkuchen~~ und **FRITZ** hat **PAULA** einen

Hans has **Anna** a̶ d̶o̶u̶g̶h̶n̶u̶t̶ and **Fritz** has **Paula** a

Pfannkuchen geschenkt.

doughnut given.

Beide Pfannkuchen waren übrigens mit Pflaumenmus gefüllt.

Both doughnuts were by the way with plum jam filled.

(ii) **ZHANG SAN** song-le **CHUNMEI** ~~yi ge danggao~~, **LI SI** song-le **QIUJU**

Zhang San give-le **CHUNMEI** 1 CL cake **LI SI** give-le **QIUJU**

yi ge danggao

1 CL cake

Zhei liang ge danggao dou shi yong guojiang zuo de.

this two CL cake all be prep. jam make de

The effect of the pronoun having two referents is due to the fact that the indefinite is interpreted as a QP or ,to express it in Eckardt's terms, as a generic indefinite. This interpretation follows from the information structural status of the indefinite, which is neither F1 nor F2. Thus, its predicative part as well its existential part are presupposed by the context. That the indefinite has a distributive reading also is anchored in the discourse. Both, the coordination with its distributive force and the indefinite expression as the distributed entity are presupposed by the context. This is observable in the contrasted subjects and objects which indicate that the other parts of the constructions have to be presupposed.

As for forward ellipsis, this distributive effect is also observable.

FWD:

(13) (i) Einen Pfannkuchen hat **HANS ANNA** und ~~einen Pfannkuchen~~ hat **FRITZ**

A doughnut has **HANS ANNA** and ~~a~~ ~~doughnut~~ has **FRITZ**

PAULA geschenkt.

PAULA given.

Beide Pfannkuchen waren übrigens mit Pflaumenmus gefüllt

Both doughnuts were by the way with plum jam filled.

(ii) *Yi ge danggao, **ZHANG SAN** song-gei-le **CHUNMEI**, ~~yi ge danggao~~, **LI SI**

1 CL cake **ZHANG SAN** give-gei-le **CHUNMEI**, ~~1 CL cake~~ **LI SI**

song-gei-le **QIUJU**

give-gei-le **QIUJU**

Zhei liang ge danggao dou shi yong guojiang zuo de.

this two CL cake all be prep. Jam make de

Recall that we assume that indefinites are interpreted generically if they are not contained in F1 or F2. In (13)(i), the indefinite is neither in F1 nor in F2 so that it may get a generic/quantificational interpretation. Like the presupposed existentiality, the distributivity is also presupposed. With such a reading of the indefinite, the construction is well-formed and can be represented as an elliptical configuration. By the way, because the indefinite expression has been moved out of F1, it cannot be interpreted as an existential.

The failure of the Chinese example can be accounted for by the inability of the 'indefinite' expression *yi ge danggao* to be topicalized.

In turning to expressions where the shared indefinite expression is focused, we will observe that Φ has a unique reference, unlike the unfocused indefinite in the previous examples. This is witnessed by the possible use of a singular pronoun, which refers to Φ and, thus, indicates that Φ is unique, and, additionally, by the inability to use a plural pronoun.

For convenience, the label REX has been introduced for extraposition at the right of the coordinative construction, and LEX given as the label for constructions with an extraposed constituent at the left side.

(14) (i) Hans hat Anna und Fritz hat Paula **einen Schüler vorgestellt.**
Hans   has to Anna and Fritz has to Paula   a pupil introduced.
Der soll ein bekannter Pianist sein.

He is said to be a well known pianist.

*Sie (die Schüler) sollen gute Pianisten sein.
They (the pupils) are said to be good pianists.

(ii) Zhang San gei Xiao Li, Li Si gei Xiao Wang jieshao-le **yi ge nü peng you.**

Zhang San   to Xiao Li, Li Si to   Xiao Wang introduce -Asp1 CL female friend

The indefinite in this example may either be in F1 and, so, an existential, or in F2 and interpreted as an answer to a question or as a correction. If it is an existential, the construction cannot be considered an elliptical one. The objection to the representation of (14) as ellipsis is based on the referential properties of this existential. Here, it is asserted that a person exists whose cardinality is one, who is a pupil and who has been introduced to two people by two people. Because the existential introduces a new discourse entity, there cannot be a deleted indefinite in the first conjunct as there would be if we considered a coordinative structure like (14) to be an elliptical construction. Hence, if the indefinite in (14) serves as an existential, the only way for the existential to join the coordination that contains a position for it in each conjunct, is to be situated outside the coordination.

The objection to the ellipsis representation may be treated from another, semantic representational view. If we assume the first conjuncts in (14) to contain an elliptical existential indefinite, where the deleted material is considered to be a copy of its antecedent in the second conjunct, we have, in the ellipsis site, an indefinite expression having the same interpretation as the one located in the non elliptical conjunct. If we further represent indefinite expressions as expressions containing a variable which is bound by the existential operator $\exists$, we yield a semantic representation like the following one:

(15) $\exists x :$ PUPILx [... x ...] & $\exists x :$ PUPILx [... x ...]

This representation does not prevent the variable x in the second conjunct, which is bound by the second ∃-operator, from being instantiated by a contextual entity differing from the one which is the instantiation of the x bound by the first ∃-operator. Therefore, (15) does not conform to the interpretation of the focused indefinite expression as introducing a new discourse entity. To anchor the necessary non different instantiation of x in both conjuncts, it seems to be appropriate for the indefinite expression to be out of the coordination, as is illustrated by the schemes (10) and (11). In this way, we yield the appropriate semantic respresentation, like the following one:

(16)   ∃x : PUPILx [[... x ...] & [... x ...]]

It is not so easy to decide whether a shared focused indefinite, which is an existential in constructions like (14), may have a distributive meaning in addition to its unique reading. Provided the distributive reading of (14) is possible, two pupils will have been introduced by the boys to the girls. Even if this reading, which involves more than one referent of the indefinite, occurs, (14) can not be continued by a sentence containing a plural pronoun like *They (the boys) are very handsome*. Pronouns like anaphors, clitics and 0-pronouns are markers for textual entities being highly accessible. The use of definite descriptions, on the other hand, signals the very low accessibility of their antecedents - cf. Reinhart (1995:102) and Ariel (1990). Hence, an existential, which introduceds a new discourse entity into the discourse by its expression, can always be referred to by a pronoun in the following sentence. The distributivity interpretation of the indefinite in (14), on the other hand, has not been introduced explicitly by the previous context. Therefore, the different antecedents are hardly accessible. Thus, they can only be refered to by a definite description like *die beiden Schüler*.

In addition to the existential interpretation, the focused indefinite in (14) can have an interpretation where the existence of a person is presupposed, which is characterized by the predicate SCHÜLER. This occurs, for example, when a construction like (14) is preceded by a question like *Who did Hans to Anna and Fritz to Paula introduce?* Because this question, which is now the context for (14), does not exclude distributivity, for the focused presupposed indefinite in (14), the distributive reading is obtainable in addition to the unique one. In the unique interpretation, the underlying syntactic structure cannot be elliptical. Whether (14) has an elliptical structure with regard to its

distributive interpretation will be discussed in chapter 2.5. Having a presupposed existential reading, indefinites cannot be referred to by a following pronoun because their referents are in the background and therefore hardly accessible.

Similar observations can be made as to the unique reference if the indefinite is to the left of the coordination. Imagine that the indefinite in the following example is contained in the presentational focus domain so that it has to be an existential:

(17)   (i)   Ein SCHÜLER hat PETER erst GELOBT und hat dann FRITZ KRITISIERT.

            A PUPIL   has PETER first   PRAISED and has then   FRITZ criticized

            Er ist schon seit zwei Jahren an der Schule.

            He has been at this school for two years

    (ii)   You ge XUESHENG, Zhang San BIAOYANG-le, Li Si PIPING-le.

            You CL   PUPIL   Zhang San PRAISE-le   Li Si CRITICIZE-le

Note that, with regard to the Chinese example, there is a particular expression, the you-Phrase, which introduces, by its lexical meaning, a new discourse entitity.

Because the gap in the second conjunct cannot be represented as a deleted existential, the sentence cannot be represented as an elliptical configuration and the following sentence cannot contain a plural definite description.

Whereas in (17) the Chinese you-Phrases allows only an existential reading, the German indefinite may have a generic in addition to the existential reading. If the indefinite expression at the left carries the main accent, it belongs to F2 so that it is a presupposed existential.

(17')   Ein SCHÜLER hat PETER erst GELOBT und hat dann FRITZ KRITISIERT

TheF2-meaning of the indefinite in (17') may occur if the whole expression serves as an answer of a question like *Who has first praised Peter and then criticized Fritz?*, which would have introduced the existential part of the indefinite in the answer.

In German, the distributive reading of the existential, located at the left of the construction is not possible, unlike the optional distributive reading of an existential shared indefinite at the right is. Remember that, with regard to the latter, the foregoing

coordination can function as a kind of distributor. Not having such a context, existentials at the left of the sentence cannot be interpreted as being distributed. The same holds true if the indefinite like in (17') is the subject and if it has a presupposed existential meaning. When, on the other side, the focused presupposed existential is an object, it may get a distributive reading.

(17") **Irgendeinen SCHÜLER**$_i$ [[hat ER einem MÄDCHEN e$_i$] und [hat SIE einem
      JUNGEN   e$_i$ vorgestellt]]
      some pupil, acc   has he to a girl   and has she to a boy introduced

Why (17") unlike (17') does allows a distributive reading, seems to be connected with the consideration that objects seem to be better accessible to a distributive reading than subjects are. Indefinites being presupposed existentials at the left cannot have deleted equivalents in the second conjunct. As we will see in chapter 2.5., they are F2-foci and therefore, they need a focused counterpart in the second conjunct.

To summarize our observations with regard to German shared indefinites: If an indefinite is in the domain of presentational focus, this means in F1, it has an existential interpretation - cf. LEX and REX in (14) and (17). Because existentials introduce a new discourse entity, they cannot be deleted, this means, ellipsis of an existential is excluded. When not in F1 but in F2, the 'contrastive' focus domain, the indefinite has a presupposed existential reading. Then, its existential part is presupposed and its predicative part is focused At the right of the coordination, existentials as well as focused presupposed existentials may have a unique or distributive reading - cf. (14). The latter is possible because of the distributive force of the foregoing coordination. In the opposite, left located existentials, which only can be subjects, and presupposed indefinite subjects have only a unique reading. The reason is that they are not preceeded by the coordination cf. (17'). Because the trace of a shifted object, being a focused presupposed existential, is preceeded by the coordinative phrase, the shifted focused object may get a distributive reading - cf. (17"). If focused indefinites refer uniquely, their deletion is excluded. That their deletion is also excluded with regard to their focused distributive reading, will be shown in chapter 2.5. When the indefinite is neither in the presentational nor in the contrastive focus domain, it gets a generic interpretation - cf. (12) and (13)(i). Then, the existential as well the predicative part of the indefinite is

presupposed. This occurs, for example,when the construction including the distributive indefinite, contains constituents contrasting with each other like *Anna* and *Paula* or *Hans* and *Fritz* in (12)(i) and *Zhang San* and *Li Si* or *Chun Mei* and *Qiu Ju* in (12)(ii). Because not only the total meaning of the generic indefinite but also its distributive reading is presupposed, constructions containing totally presupposed indefinites may be represented as ellipses. Thus, we have the following, admittedly unfinished picture: on the one hand, there are coordinative structures with shared indefinites located in F1 or in F2, which have to be represented as extrapositional structures. On the other hand, we have coordinative structures with shared indefinites located neither in F1 nor in F2, which have to be represented as elliptical constructions.

2.2 Distinct or unique referents of shared possessive constituents

The next two examples mirror the difference between the distributive and unique reading of shared constituents in an additional way. When the shared constituent B is a possessive expression and is unfocused, coreference between the possessive pronoun and the respective DP is possible. In other words, such configurations allow sloppy identity.

BWD:

(18) (i) HANS$_i$ **LOBT** ~~seinen$_i$ alten Lehrer~~ und PAUL$_j$ **KRITISIERT** seinen$_j$ alten

Hans praises ~~his$_i$~~ ~~old~~ ~~teacher~~ and Paul$_j$ criticizes his$_j$ old

Lehrer

teacher

Beide Lehrer haben Hans und Paul vor zehn Jahren unterrichtet.

Both teachers have Hans and Paul ten years ago taught.

(ii) ZHANG SAN$_i$ zai **BIAOYANG** ~~ta$_i$ guoqu de laoshi~~, LI SI$_j$ zai **PIPING** ta$_j$

guoqu de laoshi

Zhang San just praises ~~he old de~~ Li Si just criticizes he old

.de teacher

Liang wei laoshi   shi nian qian cengjing   jiao-guo   Zhang San he LI Si.
Two   CL teacher   ten year ago   cengjing   teach-guo   Zhang San   and Li Si

The sloppy identity results from the possessive phrase being neither in F1 nor in F2. Hence, there may be, in the first conjunct, a copy of the possessive phrase situated in the second conjunct. What is copied is not the coreferentiality between the possessive pronoun and the subject in the second conjunct but the coreferentiality between the possessive pronoun and a binding DP in the respective sentence - for a more detailed analysis cf. Tancredi (1992).

Besides the reading given in (18), where the possessive pronouns are coreferential with the subject of their conjunct, one further reading is possible. The possessive in the elliptical topicalized constituent may be coreferent with a third person who is not in the coordination construction but in the broader context.

Regarding forward ellipsis like (19), sloppy identity is not possible in Chinese, whereas it may occur in German.

FWD:

(19)   (i)   Seinen$_i$ Vater hat FRITZ$_i$ **einem FREUND** und ~~seinen$_j$ Vater~~ hat PAUL$_j$

His$_i$ father has Fritz$_i$ to a friend   and his$_j$ father has Paul$_j$

einer FREUNDIN vorgestellt

to a girl friend   introduced.

Die Väter wurden herzlich aufgenommen.

The fathers were   warmly   recieved.

(ii)   *Ta$_i$ de laoshi, ZHANG SAN$_i$ **BIAOYANG**-le, ~~ta$_j$ de laoshi~~, LI SI$_j$ **PIPING**-le

he de teacher   Zhang San   **PRAISE**-le   he de teacher   Li Si **CRITICIZE**-le

Liang wei laoshi   shi nian qian cengjing jiao-guo   Zhang San he LI Si.

Two   CL   teacher   ten year ago   cengjing   teach-guo   Zhang San and Li Si

What happens if the shared possessive expression belongs to F1 or F2? Before trying to answer this question, let me give you some brief prerequisites related to the inner structure of possessive phrases, and to the coreference of the possessive 'pronoun' and its antecedent. The possessive expression is considered here to be similar to an operator phrase which indicates that the referent e_1 of the variable y, which is in the scope of this operator and therefore bound by it, is correlated to a contextually given person e_2, which

in its turn is the referent of a variable x. To give an image of how a possessive phrase like *seinen lehrer* might be represented, I propose the following provisional representation: $\exists_y$ [yRx $\wedge$ MALE PERSONx $\wedge$ LEHRERy]. Whereas the referents of x and R are always presuppositional, y and LEHRER may be either focused or presupposed. Because the existence of e_2, as well as the relation between e_1 and e_2, is always presupposed in this operator phrase, the existence of e_1 must also be somehow presupposed. Despite the referent of y being somehow lexically presupposed by the relation R, it need not be mentioned in the previous context.[3] It may therefore in F1 be introduced into the discourse. As to the coreferentiality between x and a constituent in the respective text or sentence, coreferentiality within a sentence is only possible if the constituent serving as the antecedent of x c-commands either the possessive phrase itself or a trace of it.

Let us start with an example containing a possessive located in F1:

(20) (i) HANS$_i$ LOBT und PAUL$_j$ KRITISIERT seinen$_{k/*j, *i}$ alten LEHRER

HANS$_i$ PRAISES and PAUL$_j$ CRITICIZES his$_{k/*j, *i}$ old TEACHER

Er hat die beiden vor zehn Jahren unterrichtet.

He has the both ten years ago taught.

* *Beide Lehrer haben Hans und Paul vor zehn Jahren unterrichtet.*

Both teachers have Hans and Paul ten years ago taught.

(ii) Zhang San$_i$ zai PIPING, Li Si$_j$ zai FEIBANG ta$_{k/*j, *i}$ guoqu de LAOSHI.

Zhang San just criticize Li Si just insult he old de teacher

Keshi zhei wei laoshi ba tamen ding huiqu le
but this CL teacher ba they reprimand le

In the case of the possessive expression located in F1, imagine a preceding question like *What are Hans and Paul doing?* Since the possessive expression is in F1, only one referent of y has just been introduced into the discourse. This means that there are not other referents being characterized like y, as it would be if the coordinative structure and

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[3] Cf. Reinhart (1995:100) who claims for definite descriptions that "...they are frequently found also with no previous discourse mention." Because possessive expressions seem to be quite similar to definite descriptions, we may adopt this consideration for them. Whereas the referents of definite descriptions have to be familiar, at least by world knowledge, the referent of possessive expressions becomes familiar by the presupposed relation between the possessive expression and a presupposed entity.

the existence of y were presupposed. Because there has only one referent e_1 been introduced into the context, this e_1 can only be related to one contextually given entity e_2. Since the coordination offers two e_2-referents and both cannot serve as antecedents of one expression at the same time, sloppy identity is not obtainable. Therefore, the possessive pronoun refers to a person not expressed in the coordinative structure but in the closer context. To say it in other words, possessive pronouns, like all pronouns, may only refer to the most familiar entities in the discourse. If a possessive expression has just been introduced into the discourse so that only one entity has been introduced, the possessive pronoun has better access to one antecedent than to two, as it is be in (20). Because sloppy identity is excluded with regard to coordinative constructions that contain possessive expressions , which are in F1 at the right of the construction, such constructions cannot be represented as elliptical structures.

On the other hand, if the possessive is in F2, sloppy identity may occur and an ellipsis representation is not impossible.

(20') (i)   HANS$_i$ LOBT und PAUL$_j$ KRITISIERT   **seinen**$_{k/j,i}$ **alten LEHRER**
             HANS$_i$ PRAISES and PAUL$_j$ CRITICIZES   his$_{k/j,i}$ old   TEACHER

(ii)   Zhang San$_i$ zai PIPING, Li Si$_j$ zai FEIBANG **ta**$_{k/j,i}$ **guoqu de LAOSHI.**
       Zhang   San just criticize   Li Si just insult   he   old de teacher

Containing a F2-focus, the whole expression may serve as a corrective or as a question answer focus. What is contrasted here is the predication LEHRER. The distributivity of the possessive expression is, for such cases, presupposed by the context. This enables the coreference between the possessive pronoun with a DP in each conjunct. Although these constructions allow sloppy identity, their syntactic representation cannot be elliptical. The reason is that focused constituents cannot be deleted.

We move now on to shared focused possessives at the left of the construction:

(21) (i)   **Seinen**$_k$ **Vater**   hat FRITZ$_i$ einem FREUND und hat PAUL$_j$ einer FREUNDIN
             vorgestellt
             His$_k$ **FATHER** has Fritz$_i$ to a friend   and has Paul   to a girl friend
             introduced

Die Väter wurden/ er wurde herzlich aufgenommen.
The fathers were / he was warmly recieved.

(ii)   **Ta$_k$ de wuli LAOSHI,** Zhang San BIAOYAN-le, Li Si PIPING-le

he de physic teacher   Zhang San PRAISE-le   Li Si CRITICIZE-le

Here, the possessive phrase at the left of the coordinative structure cannot be in F1 because it is not in the F1-domain. If the possessive expression were a subject, it could be in F1. Then, however, it could not be coreferential with a DP of the sentence because it would not be c-commanded by this DP.

Being in F2, the construction is an answer or a correction of a foregoing sentence. Because the distributivity of the possessive expression may then be introduced into the context, sloppy identity is possible. However, sloppy identity does not coincide with the ellipsis representation, as has been shown regarding (18) and (19). Because the possessive phrase in (21) is focused, unlike the possessive phrases in (18) and (19), it cannot be deleted. Therefore, an ellipsis representation should be excluded even for the distributive interpretation of shared focused constituents at the left of the coordination.

To put our considerations on focused and unfocused possessive phrases in a nutshell: Focused possessive expressions in F1 do not allow distributive reference or, in other words, sloppy identity. On the other hand, possessive phrases in F2 allow sloppy identity. Whereas distributive reference of the possessive DP or, in other words, sloppy identity, can be represented in an elliptical configuration with one expressed and one deleted possessive phrase, unique reference or the impossibility of sloppy identity should be represented as an extrapositional configuration having the possessive phrase outside the coordinative phrase. The same holds true for possessive expressions located in F2 and allowing sloppy identity because the deletion of focused constituents is not allowed cf. chapter 2.5..

2.3　Scope peculiarities

In this chapter, we are going to investigate the behaviour of indefinite DPs towards strong quantifiers in order to gather further evidence for the coexistence between ellipsis and extraposition in coordination.

Having considered that indefinites should be interpreted as existentials if they are in F1, we may make the prediction that indefinites do not allow so called scope reordering if they are in F1 and not in the scope of strong quantifiers like *every*. Non focused indefinites, indefinites in F2 and indefinites in F1 and in the scope of $\forall$P, on the other hand, allow scope reordering. Because scope reordering, which yields an individual reading, coincides with the ellipsis representation, and non scope reordering, which results in a unique reading, can only be represented as an extraposition configuration, existential indefinites may again deliver strong arguments in favour of the distinction between ellipsis and extraposition.

Without going into great detail, I will give a brief outline of what is meant by scope reordering.

If an indefinite expression preceeds a strong quantifier in a sentence, the scope order of the surface structure need not be the intended one. Therefore, the intended scope order has to be reconstructed - cf. for scope ambiguities Frey (1989), Diesing (1992), Krifka (1995), Reinhart (1995) and Lechner (1997).

To be in the scope of a strong quantifier like $\forall$P, $\exists$P itself - cf. (22)(i) - or a trace of $\exists$P - cf. (22)(ii) - has to be c-commanded by $\forall$P.

(22)　(i)　　Jedes Mädchen hat einen Gast vorgestellt.

　　　　　　Every girl　　has a　　guest introduced

　　　(ii)　　Einen Gast$_i$ hat er jedem Mädchen e$_i$ vorgestellt.

　　　　　　A guest　　has he to every girl　　introduced

(22)(i) and (ii) are ambigious with regard to the different scope orders. The intended scope order depends on the information structural status of the indefinite phrase and on the context.

Recall that we distinguish between two kinds of foci - F1 and F2 . The latter icludes the common known foci like focus associated with particles, corrective focus and

question-answer focus. Because F1 indicates the domain of existence, an indefinite expression being in F1 is to be interpreted as an existential. Indefinites being outside F1 are not existentials, they are interpreted either as generic expressions cf. Eckardt (1996) or as 'presupposed existentials' (F2).

Because not being in F1 the indefinite in (22)(ii) can either be interpreted as generic or as a presupposed existential (F2). Being F2, it carries the main accent. If the indefinite expression is a generic expression, its distributivity is presupposed and the ∀P has scope over it. If, on the other hand, the indefinite is F2, it may either have a distributive reading and so be in the scope of ∀P or it may have a unique reading and thus not be ind the scope of ∀P. Whether it is in the scope of ∀P depends on the respective context.

In the opposite to (22)(ii), the indefinite in (22)(i) can be interpreted as an existential. The distributive reading results from the strong QP *every pupil*, which has the existential in its scope.

Whereas (22)(ii) is ambigous in the distributive and non distributive F2-reading of the object, (23) shows ambiguity between an existential and a non existential reading of the subject.

(23)   Ein Schüler stellte jedem neuen Mitschüler einen Lehrer vor.
        A pupil   introduced to every new pupil   a teacher.

If the indefinite subject is not in F1, it is interpreted as a generic expression and refers to a known object.

(i)   Ein Schüler [$_{F1}$ stellte jedem neuen Mitschüler einen Lehrer vor]

If the indefinite is in F1 (ii), or if it has been moved out of F1 (iii), according to Eckardt's focus restriction R4 (1996:6), it is an existential. Being an existential and not in the scope of the strong QP, it cannot get a distributive reading.

(ii)   [$_{F1}$ Ein Schüler stellte jedem neuen Mitschüler **einen LEHRER** vor]
(iii)   [$_{F1}$Ein Schüler] stellte jedem neuen Mitschüler einen Lehrer vor.

If the indefinite in (23) carries the main accent, it is F2. In that case, the existence of its referent is presupposed and only its predicational part is focused.

(iv)   [$_{F2}$ **Ein SCHÜLER**]$_i$ stellte [jeden neuen Mitschüler]$_j$ [einen Lehrer]$_k$ [e$_i$ e$_j$ e$_k$ ...
         vor]

Because the ∀P is in the background and therefore not in the F1-domain, it has scope over a trace of the indefinite expression *ein Schüler*. Now, it depends on the context whether the F2-indefinite may get a distributive reading or not.

To summarize the necessary prerequisites for the distinction between ellipsis and extraposition regarding indefinite expressions and strong QPs: To simplify matters, the indefinite article is represented as the existential operator ∃ - cf. the differing and more differentiated representations of Diesing (1992), Reinhart (1995) and Eckardt (1996). If the ∃P is in F1, the existence of the referent of ∃P is asserted, at least in declarative sentences. If ∃P is not in F1, the existence of its referent is presupposed. The ∃P is not in F1 if it is F2 or if it is scrambled out of F1. The latter case is interpreted generically. For indefinite expressions located in F2, their predicational part is focused and contrasted to a previously mentioned predication on the presupposed referent.

The existential gets a unique interpretation (∃∀) if it is not in the scope of a strong QP, and it gets a distributive reading (∀∃) if it is in the scope of such a strong QP. The distributive or unique reading of ∃Ps in F2 depends on the respective presupposed context. If ∃P is F2 and the article is focused, the unique reading is obtained. Whether it is correct to say that ∃Ps that have a generic interpretation may also have a distributive reading cannot be considered here. Because they never take scope over strong QPs, they are here , for matters of simplicity, considered to be distributive (∀∃).

To return to our predictions: (i) Indefinites do not allow so called scope reordering if they are in F1 and not in the scope of strong quanitifiers like *every*. Having therefore a unique reading, they cannot be represented as a deleted indefinite in an elliptical coordinative configuration. (ii) Indefinites that are not in F1 allow scope reordering, which, conversely, can be represented as an elliptical coordinative configuration. Let us now have a look at an example for forward ellipsis and then at an example for backward ellipsis.

FWD:

(24)   (i)   Irgendeinen Gast hat ER **jedem MÄDCHEN** und ~~irgendeinen Gast~~ hat SIE

Some   guest, Acc has HE **to every GIRL**   and some   pupil has SHE

jedem JUNGEN vorgestellt.

to every BOY   introduced.

Die Gäste waren von den Mädchen und Jungen sehr beeindruckt.
The guests were by   the girls   and boys very impressed.

$\forall x$: GIRLx [$\exists y$: PUPILy [he INTRODUCE y to x]] & $\forall x$: BOYx [$\exists y$: PUPILy [she INTRODUCE y to x]]

(ii)   * Mou yi wei keren, LI SI **xiang mei ge** NÜHAI, ZHANG SAN **xiang**

some 1 CL   pupil Li Si prep. every CL   girl   Zhang San   prep.

mei ge NANHAI zuo-le jieshao

Because in Chinese, yi-phrases are not allowed to be preposed, scope ambiguity like in the German example is not possible. Thus, such examples do not suitably count as arguments for FWD in Chinese.

As for the German example, the indefinite is neither in F1 nor in F2 and, consequently, gets a generic interpretation and so a 'distributive' reading. Or, in other words, it is in the scope of the strong QPs in each conjunct. To have scope over the $\exists$P, the $\forall$P has to c-command $\exists$P or a trace of $\exists$P. The trace of $\exists$P, in its turn, must be bound by its antecedent in the conjunct. Hence, with regard to (24), repeated here as (25), the $\forall$P in the first conjuncts has a trace of the $\exists$P in its scope, whose antecedent is in the conjunct.

(25)   Irgendeinen Gast$_i$ hat ER **jedem MÄDCHEN** e$_i$ ~~vorgestellt~~ und ~~irgendeinen~~

Some   guest, Acc has HE **to every GIRL**   and ~~some~~

~~Gast~~$_j$ hat SIE **jedem JUNGEN** e$_j$ vorgestellt.
~~pupil~~ has SHE **to every BOY**   introduced.

For the $\forall$P in the second conjunct to have a trace of the $\exists$P in its scope, $\exists$P must be present as the antecedent of the trace. Being deleted and so somehow expressed, the $\exists$P in the second conjunct serves as this antecedent. The ellipsis representation accordingly mirrors the necessary distributive reading. The distributive reading thus allows a plural anaphoric expression in a following sentence to have access to both of the represented indefinite expressions - cf. the context given under (24). As for the semantic inter-

pretation of (25), two alternatives should be discussed. The first one presupposes syntactic reconstruction with the ∃P being copied into its trace. The second one reconstructs the variable bound by the ∃P as a type shifted variable - cf. Lechner (1997).

Another example supporting the syntactic ellipsis structure is the following BWD, where a strong QP in the first conjunct is thought to be elliptical.

BWD

(26)　(i)　　[F₁ **Ein MATHELEHRER** HAßTE ~~jeden Schüler~~]und [F₁ **ein MUSIKLEHRER** LIEBTE jeden Schüler]
　　　　A　MATHTEACHER Akk.　HATES　and　a MUSICTEACHER Acc. loves every pupil Nom..
　　　　Wer sind die beiden?

　　　　Who are　the　both?

∃x : MATHTEACHERx [∀y : PUPILx [x HATE y]] & ∃x : MUSICTEACHER [∀y : PUPILx [x LOVEy]]

In Chinese again, such an example is not construable. The reason may be that indefinite expressions cannot be topicalized.

In the German example, scope reordering is not possible because the indefinite DPs are in F1 and, so, not in the scope of the ∀Ps. For the ∃P to have scope over the ∀P in the first conjunct, the ∀P has to somehow be present there. If it is represented as a deleted constituent having syntactic and semantic but no phonological content, this condition is fullfilled. The same applies in the following example:

(27)　**Jeder MATHELEHRER** haßt ~~einen Schüler~~ und **jeder MUSIKLEHRER** liebt einen Schüler.

　　　Every math teacher　　　hates ~~a pupil~~　　and ervery music teacher　loves a pupil.

Here, the ∀P needs the ∃P in its scope to receive the distributive reading. This is only possible if the indefinite is present either with or without its phonological form.

In opposition to the examples (24) or (25), respectively, scope order reconstruction is not possible if the shared indefinite is in F1.

LEX:

(28)   (i)   [$_{F1}$ Ein Schüler stellte jedem Lehrer einen Schüler und jedemProfessor einen Studenten vor]

A pupil   introduced to every teacher a pupil   and to every prfessor a student

(ii)   You ge XUESHENG, ZHANG SAN gei yi ge NÜHAI jieshao le, LI SI gei yi

you CL   pupil   Zhang San to   1 CL girl   introduced le Li Si   to   1

ge NANHAI jieshao le

CL boy   introduced   le

To explain this example, let us first concentrate only on the first conjunct and pretend that the indefinite expression is there included. Furthermore, we must suppose that the indefinite is an existential located in F1. That it is an existential is particularly supported by the Chinese you-phrase, which expresses the existentiality lexically. In German, the existential is not in the scope of ∀P and therefore the distributive reading is not obtainable, or, in other words, scope reordering is excluded. Turning now to the second conjunct, we observe that there is not any indefinite which might serve as an existential. By pretending that the existential is contained in the first conjunct, the gap in the initial part of the second conjunct cannot be considered to be a deleted existential. The reason is, that existentials, as already stated for independent reasons, cannot be deleted. If the indefinite in the second conjunct is considered to be a deleted generic expression, scope reordering can take place in the second conjunct.

(28')   [$_{F1}$ Ein Schüler stellte jedem Lehrer einen Schüler ...]und [e̶i̶n̶ ̶S̶c̶h̶ü̶l̶e̶r̶ ̶s̶t̶e̶l̶l̶t̶e̶ jedemProfessor einen Studenten vor]

A pupil introduced to every teacher a student   and to every professor a student

Scope reordering is now possible because the deleted constituent belongs then to the background. Therefore, it is out of F1 and has thus left a trace. The latter is in the scope of ∀P. But, this yields different scope orders and different information structures in both conjuncts. This contradicts the syntactic and semantic parallelism requirement which applies to coordinative structures - cf. Lang (1984). More importantly, this syntactic representation cannot be mapped into a appropriate semantic represention. In order to

get this, the existential cannot be in the first conjunct, but must be *structurally anchored* outside the coordination.

Whereas (28) is an example of an extraposed existential at the left of the coordination, let us now turn to an example where the existential is at the right of the coordination.

REX

(29) Jeder Schüler [$_{F1}$ haßt ...] und jede Schülerin [$_{F1}$ liebt **einen MATHELEHRER**]

     Every schollbay   hates   and every schoolgirl   loves a math teacher

Here, the indefinite is an existential because it is in F1, but, in contrast to (28), it is ambigious with regard to its distributive and non distributive reading. To ensure the unique reading, the indefinite article can carry a special accent so as to avoid the distributivity induced by the ∀P. This accent then expresses F2. In this way, the existence of the referent of the indefinite is presupposed and its cardinality is focused.

(30) Jeder Schüler haßt und jede Schülerin liebt [[$_{F2}$ **EINEN**]Mathelehrer]

     Every schoolboy hates and every schoolgirl loves   a mathteacher

Focusing the uniqueness results in scope reordering. How this works will become clearer when we have elaborated the syntactic and semantic representation of such constructions.

When we regard the gap in the first conjunct as a deleted constituent and, thus, as a copy of the indefinite in the second conjunct, we cannot see whether the article is stressed or not. We can, hence, not exclude a distributive reading. This does not fit the parallelism requirement and the appropriate semantic interpretation.

To return to (29), the existential there, is ambigious with regard to its unique or distributive meaning. For both interpretations, the representation of the coordinative structure as an elliptical one is possible in neither case because it then contains a deleted existential which cannot be deleted. As an alternative to the inappropriate ellipsis representation, which does not achieve the existential reading of the indefinite, we offer the extraposition representation.

In the next REX-example, scope reordering is induced by the indefinite having quitted the F1-domain. In doing so, the indefinite has left a trace which, in its turn, is in the scope of the ∀P. Now, the condition for ∀P to have scope over ∃P is fulfilled.

(31)   *Nun, da wir gerade über Mathe- und Musiklehrer sprechen:*

     Now, speaking about math and music teachers:

     [Einen MATHELEHRER HAßT ~~jeder Schüler~~] und [einen MUSIKLEHRER LIEBT **jeder SCHÜLER**].

     A MATHTEACHER, Acc. HATES   and a MUSICTEACHER, Acc. LOVES **every** PUPIL Nom..

     Die Mathematiklehrer sind nämlich immer so streng und die Musiklehrer sind eher lockerer.

     Namely, the math teachers are always very rigid and the music teachers are rather easygoing.

     * *Der Mathelehrer ist nämlich so streng, der Musiklehrer hingegen ist lockerer.*

     * *Namely, the math teacher is very rigid, the music teacher however, is more   easygoing.*

Here, if we suppose the gap in the first conjunct to be a deleted constituent, we yield the appropriate distributive interpretation because the deleted ∀P, as well as the non deleted one, have the traces of the scarmbled indefinite in its scope. . But then, there is a deleted focused constituent, which, as already was mentioned and, as we will see in chapter 2.5, must not be deleted.

To conclude this chapter: in addition to the evidence enumerated with connection to the unique or distributive reading of indefinite and possessive expressions, the evidence that existentials may have a unique reading and resist scope reordering if they are not in the scope of ∀P further favours the coexistence between ellipsis and extraposition.

2.4   Agreement Peculiarities

Another observation which, at least in German, leads to the conclusion that it is necessary to distinguish between ellipsis and extraposition with regard to missing elements in coordination, is connected with agreement.

Within BWD the morphosyntactic form of the finite verb must be the same in both conjuncts, provided that the finite verb is not focused. Thus, example (32) is well-formed because it includes both a deleted and a non deleted finite verb, whose morphological forms are identical.

(32)   *Bist du sicher, daß Hans BIER und Fritz WEIN gekauft hat?*

      Are you sure   that Hans Beer and Fritz Wine bought has?

    Na, ich glaube eher, daß HANS SAFT ~~gekauft hat~~ und FRITZ MILCH gekauft hat.

        I   believe rather that HANS JUICE ~~bought~~ ~~has~~ and FRITZ   MILK   bought has.

Example (33), on the other hand, where the morphological forms of the finite verbs differ, is not acceptable.

(33)   *Bist du sicher, daß die Kinder BIER gekauft haben und Fritz WEIN?*

      Are you sure   that the CHILDREN BEER bought have and Fritz WINE?

    *Na, ich glaube eher, daß die Kinder SAFT ~~gekauft haben~~ und Fritz MILCH gekauft hat.

        I   believe rather that the children JUICE ~~bought have~~   und Fritz MILK bought has

That this observation is relevant to our purposes, is easily seen if we compare (32) with (34). Here, we realize that the finite verb is plural whereas the subject in each conjunct is singular. In this case, the verb must be focused.

(34)   *Bist du sicher, daß HANS den SAFT und FRITZ den WEIN GESTOHLEN haben?*

      Are you sure   that HANS the JUICE and FRITZ the WINE STOLEN   have?

    Na, ich glaube eher , daß HANS den SAFT und FRITZ den WEIN GEKAUFT **haben.**

      I   believe   that HANS the JUICE and FRITZ the WINE BOUGHT   have.

When the finite verb is focused, it has the plural form, even if the subject in each conjunct is singular. This apparent number mismatch dissolves if the focused finite verb is somehow extracted out of the coordination. Under these circumstances, it is possible to explain the plural of the verb as agreement between the verb plural and the plural triggered by the sum of the subjects in the coordination structure. In the latter case, it

seems plausible that it is determined semantically. Exactly how this works is a question still to be answered.

2.5   Focus and Coordinative parallelism

In this chapter, we will first reconsider the possibility of the focused shared constituent being represented as a phonological empty pro-element. This consideration will then be rejected by stating binding and information structural parallelity grounds.

Recall that focused shared constituents cannot be represented as deleted entities. But, what prevents them from being represented as pro elements? Without going into great detail, pro elements are here supposed to be phonologically empty elements with underspecified syntactic and semantic properties. Thus, with regard to e.g. (14) and (17) we yield the following representations:

(35)   HANS hat ANNA [vp pro ~~vorgestellt~~][und FRITZ hat PAULA [vp **einen SCHÜLER vorgestellt**]]

Here, the pro is not bound, and so, this representation is ruled out. If the pro is in the second conjunct it may be bound by its antecedent.

(36)   [DP**Ein SCHÜLER**] hat PETER erst GELOBT [und pro hat dann FRITZ KRITISIERT]

Because the pro is coreferent with its antecedent, it refers to the same entity the expressed focused constituent does. This fits the semantic interpretation and the construction has an appropriate syntactic representation. However, we consider the parallism requirement valid for symmetric coordinative constructions. The requirement demands, among others, that a coordinative structure is also parallel with regard to its information structure. Two conjuncts of a coordinative structure are parallel with regard to their information structure if both have the same amount of focused constituents. Regarding constructions like (35) and (36), as well as configurations like (21) and (28) and as containing an empty pro element in either conjunct does not meet this above-mentioned requirement. Hence, this parallelism requirement serves as a very strong

evidence to separate the focused shared constituent from the coordinated conjuncts. In addition, such separation is not always possible. If the shared constituent is at the right of the first conjunct or it is at the left of the second conjunct, it cannot be extracted out of the coordination. As will be shown in chapter three, only constituents that are either at the left or at the right of the whole construction may be 'extracted'. In German, nevertheless, it is possible to have the shared focused constituent at the right of the first conjunct.

(37)   Hans hat Anna [$_{F1}$ einen Schüler vorgestellt] und Fritz Paula [$_{F1}$ AUCH]

Here, the German conjunction *auch* is focused and, thus, indicates the focus of the second conjunct. Information structural parallelism is, thus, maintained within this construction. The focused *auch* actually allows an elliptical VP in the second conjunct. This is supported by the fact that the deleted indefinite in the second conjunct is a copy of its antecedent, referring, like its antecedent, to its own referent. The Chinese language does not have an equivalent to this stressable German AUCH.

Whereas shared constituents that are focused must be outside the coordination, constituents not being focused need not be extracted. The reason is that there is not any information structure anchored motivation for their extraction. Because both conjuncts must be parallel in their information structure, they must have the same number of focused constituents. This is the case with the examples considered so far as ellipses - cf. (12), (13), (18), (19), (24) to (27) and (32). In these examples, there is no need to extract a non focused constituent to preserve information structural parallelism.

A focused constituent must always be licensed by its alternative, to F1, or its contrast partner, to F2. In a coordination structure, the contrast or alternative partner of a focused constituent has to be in the other conjunct. When the focused constituent is outside the coordination, it must be licensed by an alternative or contrast partner, either in the grammatical or the situational context - cf. (38) and (39).

(38)   [[HANS hat ANNA] und [FRITZ hat PAULA]] [einen PFANNKUCHEN] geschenkt] und nicht ein SANDWICH.

[HANS has ANNA and FRITZ has PAULA] a DOUGHNUT given and not a SANDWICH

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(39) [**Einen** PFANNKUCHEN [[hat HANS ANNA] und [hat FRITZ PAULA geschenkt]]]
      und nicht **ein** SANDWICH.

      A DOUGHNUT [has HANS ANNA and has FRITZ PAULA given] and not a SANDWICH

To formulate a summary of chapter two, coordination constructions containing missing elements can either be elliptical or non elliptical. In the elliptical case, the missing element is overt in one conjunct and somehow covert in the other one. In the non elliptical construction type, the so called shared constituent is somehow extracted.

Both coordination types appear not only in German but also in Chinese. This may lead to the conclusion that both types are universal. That German and Chinese differ with respect to certain ellipsis and extraction types is determined by certain characteristics of their grammars.

In the next part, we will discuss the syntactic representation of the so called extraposition type. This does not mean that all questions concerning the syntactic as well as the semantic representation of the ellipsis type are answered. Delaying representational problems of the ellipsis type to a later time, let us touch the syntactic structure of the extraction type.

# 3   Considerations on the Syntactic Representation of the Extraction Type

Before starting with the syntactic representation of the extraposition within coordination, there are two remarks regarding the adopted sentence structure and the coordination format. As to the sentence structure, we depart from the structures proposed by Rizzi (1995), Gasde (1997) and Meinunger (1997)

(40)   CP > TopP > Foc2P > IP > Foc1P > VP

Here, Foc1P covers the domain of presentational focus, or to express it in Eckardt's terms, the F1-domain. The Foc2P, on the other hand, is the place for F2-foci. Note that in Gasde's and Meinunger's sentence structure, Foc1P is our F2 and Foc2P is our F1. In order to illustrate the idea of how to represent syntactically the extrapositional structure,

let us neglect the details of German innersentential focus structure and leave the structural scheme (40) as is.

The here applied coordination format has been developed by A.Munn (1996).

(41)

```
              XP
            /    \
         XP        BP
                 /    \
               B        YP
```
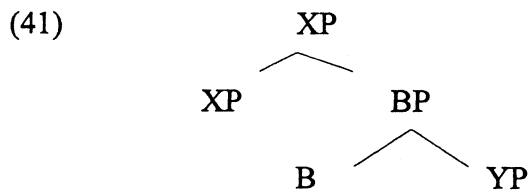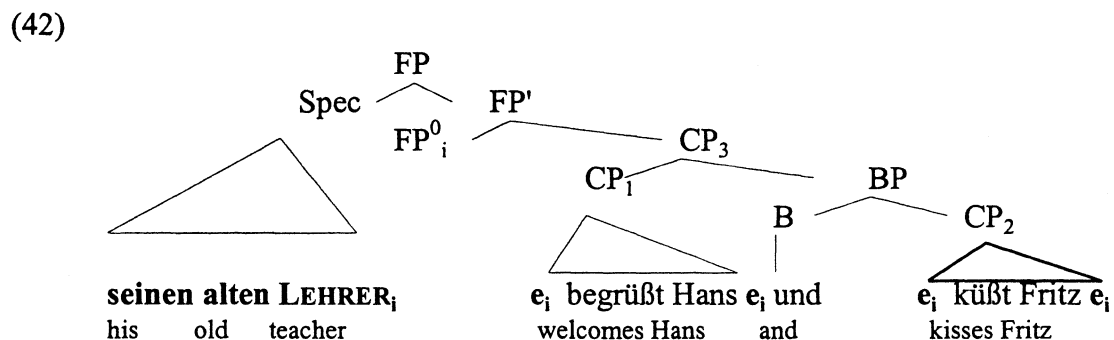
He suggests coordination to be a Boolean Phrase BP with a conjunction as head, the first conjunct an adjunct to this BP, and the second conjunct the complement of the conjunction. Because the particular structure of coordination does not have great influence on our present considerations on extraposition, we will neglect further details.

With regard to extraposition, remember that there exist two extraposition types: LEX, with the focused expression at the left edge of the coordination, and REX, with the focused expression somewhere in the right of the second conjunct. Let us start with LEX:

3.1 Syntactic Representation of the 'Left-extraction' type

It has turned out to be appropriate that a focused constituent which is shared in both conjuncts must be outside the coordination structure. If we take the sentence scheme represented within (40) and Munn's coordination format, the focused shared constituent should be adjoined to the coordinate phrase CP, which, in its turn, consists of two coordinated CPs.

(42)

```
                        FP
                      /    \
              Spec            FP'
                       FP⁰ᵢ  /      \
                                      CP₃
                              CP₁  /        \
                                          BP
                                     B  /    \
                                              CP₂

    seinen alten LEHRERᵢ    eᵢ begrüßt Hans eᵢ und    eᵢ küßt Fritz eᵢ
    his    old    teacher   welcomes Hans   and      kisses Fritz
```

The adjoined FP may either be F1 or F2. Whether it is F1 or F2 depends on the status of the extracted Φ. As to the example (42), it is considered to be F2. The extraposed constituent has the same index as its traces e in each conjunct. Within this extraction approach, this will be achieved by the condition that the movement of two constituents into one landing site will be only possible if this two constituents are identical. That the shared focused constituent Φ and its traces have the same index ensures that the traces are copies of Φ. The traces are identical copies of Φ if they agree with Φ in all semantic properties. Such a identity enables the unique reading of extraposed focused indefinite and possessive expressions in coordinative configurations - cf. (44) and (43)(ii). Under identity the possessive pronoun cannot be coreferential with the subject in neither conjunct because the subjects differ from each other -cf (43)(iii).

(43)   (i)   *Wen küßt Hans und begrüßt Fritz?*.

               Who kisses Hans and welcomes Fritz?

     (ii)   **Seinen$_k$ alten LEHRER** [[e$_k$ küßt Hans] [und [e$_k$ begrüßt Fritz]]]

              His   **old**   **TEACHER** kisses HANS and welcomes FRITZ.

     (iii)   ***Seinen$_k$ alten LEHRER** [[e$_i$ küßt Hans$_i$] [und[e$_j$ begrüßt Fritz$_j$]]]

              His   old   teacher   kisses Hans and welcomes Fritz.

And, under identity, only one referent can be denoted by the indefinite expression as we may notice with respect to (17'') or (44) and (45).

(44)   **Irgendeinen SCHÜLER$_i$** [[e$_i$ hat ER einem MÄDCHEN e$_i$] [und [e$_i$ hat SIE einem

        JUNGEN   e$_i$ vorgestellt]]]

        Some   **PUPIL**   has HE to a GIRL   and has SHE to   a

        BOY introduced

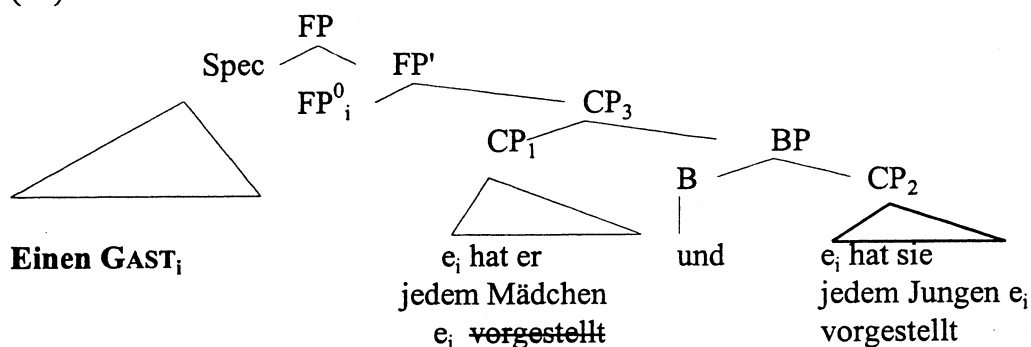∃x : PUPILx [∃y : GIRL Y [he INTRODUCE   x to y] & ∃z : BOYz [she INTRODUCE x to z]]

Provided that the traces of the extraposed focused expression are variables they are bound by the ∃-operator which being the semantic interpretation of the indefinite article is located in the extraposition and has so scope over both variables.

     A problem arises if the shared F2-constituents in (43), (44) and (45) have a distributive reading.

(45)   **Einen GAST** hat er jedem Mädchen und hat sie jedem Jungen e_i vorgestellt.

A guest   has he to every girl   and has she to every boy introduced.

(45)

FP
Spec   FP'
FP^0_i CP₃
         CP₁   BP
                  B   CP₂

Einen GAST$_i$ e_i hat er   und e_i hat sie
                       jedem Mädchen   jedem Jungen e_i
                       e_i ~~vorgestellt~~   vorgestellt

Recall that a shared constituent being F2 may have a distributive and a unique reading - cf. (21) and (17"). Having a unique reading, the traces of Φ are identical copies of Φ. Remember that an indefinite expression as well a possessive expression consists of an existential and a predicative part. To be an identical copy y of a constituent z, y must be identical with regard to its existential as well with regard to its predicational part. This means that the copy and its antecedent refer to the same entity and that they have the same predicational part.

Now, with regard to the existential part, it may happen, that the traces of Φ refer to different entities. Then, they only share the predicative part and are thus only partially identical. Referring to different entities and having a shared predicative part results in a distributive reading. For Φ, this means that it hosts only the predicative part and that it has left the existential part in its traces. Leaving the existential parts in the coordination and not having them in F2 coincides with the presupposition of these existential parts.One implementation of this idea into an appropriate semantic representation could be to represent the traces of Φ as variables of the type $<<e,t>t>$. This corresponds to semantic reconstruction - cf. Lechner (1997).

3.2   Right Extraposition Representation

Having just outlined some considerations on the syntactic representation of focused shared constituents being adjoined to the left of the coordination, we turn now to con-

structions where the shared focused constituent is at the right of the coordination - cf. (14), (20), (29), and (31).

The REX representation differs from the LEX representation - cf. (43), (44) and (45) - in one additional derivational step. Thus, the coordinative phrase, which is background because it does not belong to any focus domain, has to be moved into the TopP. Like the Foc2P, the TopP is adjoined to the left of the coordination.

(46) HANS hat ANNA und FRITZ hat PAULA **einen PFANNKUCHEN geschenkt**.
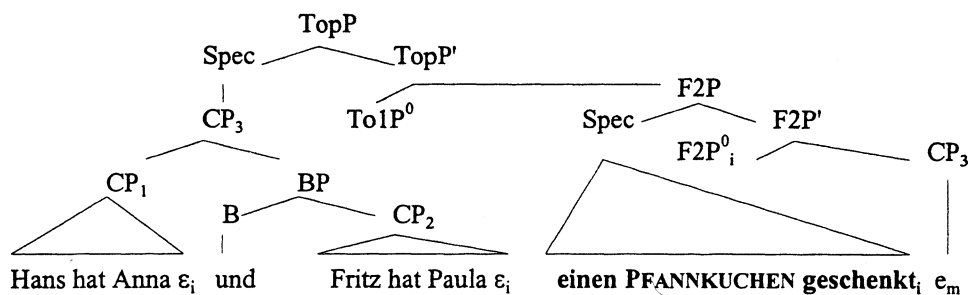
To conclude the considerations on the syntactic representation of extraposed constituents, let me name only a few of unsolved problems. First, what is if Φ contains also non focused material like in (47) and (48).

(47) Ich bin sicher, daß HANS ANNA und FRITZ PAULA [$_{F2}$ **einen STUDENTEN**] vorgestellt hat.

I'm shure   that Hans to Anna   and Fritz to Paula   a   student introduced has.

(48) HANS hat ANNA und FRITZ hat PAULA [$_{F2}$ **einen PFANNKUCHEN**] geschenkt.

HANS has ANNA and FRITZ has PAULA   a   DOUGHNUT   given.

Second, problems arise if the whole coordinate phrase belongs to the F1 domain - cf. (17). Then, it is hard to find any motivation for the coordinate phrase to move to the TopP. Recall that the CP_3 in (46) has moved to TopP because it did not belong to a focus domain. And third, what prevents REX-constructions from being represented as constructions whith Φ being adjoined to the right of the construction?

Regardless of these problems, there are interesting similarities between extrapositional and cleft constructions.

3.3 Cleft and Extraposition

As to the syntactic representation of extraposed constituents within coordination the focused shared constituent is thought to be located in FocP, which is adjoined to the left of the coordination. Let us assume that this FocP is similar to the Foc2P in (40), which is adjoined to IP and has been justified for independent reasons by Gasde (1997) and Meinunger (1997). They adopt this position to represent Chinese and German it-cleft- and pseudo cleft sentences. In considering these cleft sentences to be monoclausal, they need the sentence inititial Foc2P for the focal part of their it- cleft- and pseudocleft sentences. And in addition, they need the sentence initial TopP for the topical part of their pseudocleft-sentences. Because it-cleft- and pseudocleft-sentences also allow coordination, they may give further support for the extraposition representation in coordinative structures.

If we will compare the LEX-construction (49)(i) being structured like (45) with its it-cleft paraphrase (49)(ii), we may see that they may be represented in a similar way:
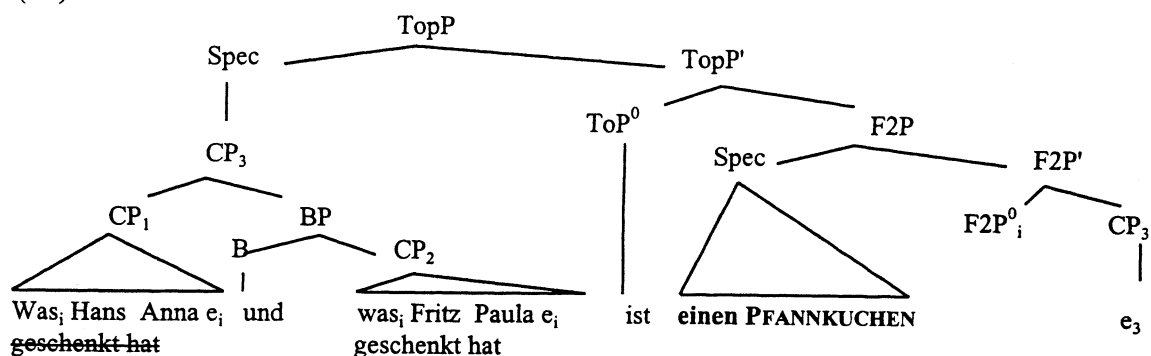
(49) (i)   **Einen PFANNKUCHEN** hat Hans Anna und hat Fritz Paula geschenkt.

      (ii)   Es ist **einen PFANNKUCHEN**, den HANS ANNA und FRITZ PAULA geschenkt hat.

(50)
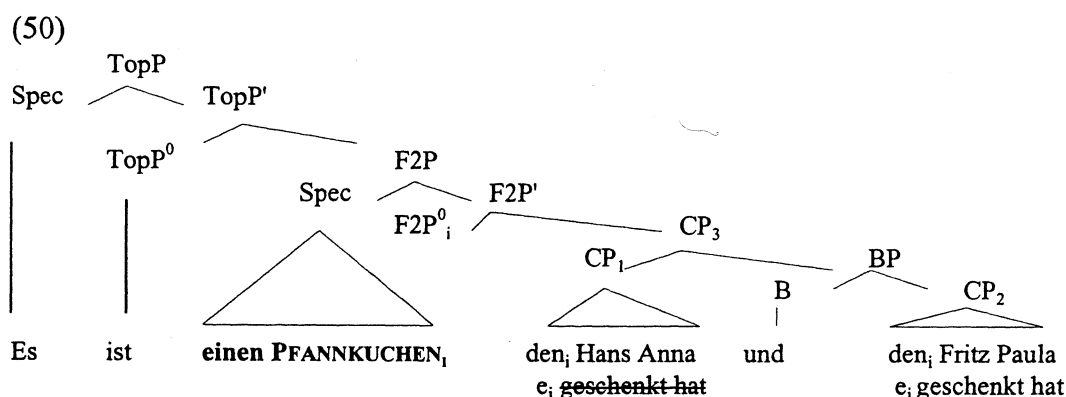
The same holds true for REX-constructions and their pseudocleft paraphrases:

(51) (i)   HANS schenkt ANNA und FRITZ schenkt PAULA **einen PFANNKUCHEN.**
      (ii)   Was HANS ANNA und FRITZ PAULA schenkt, ist **einen PFANNKUCHEN.**

(51)

```
                        TopP
        Spec  _____  TopP'
         |                      ToP⁰    _____  F2P
        CP₃                              Spec _____ F2P'
       /    \                            /\          /
     CP₁    BP                          /  \     F2P⁰ᵢ   CP₃
    /  \   B──── CP₂                   /    \            |
   /    \  |    /  \                  /_____\
  Was_i Hans Anna e_i und   was_i Fritz Paula e_i   ist  einen PFANNKUCHEN        e₃
  ~~geschenkt hat~~         geschenkt hat
```

Besides several structural similarities between extraposition coordination and their cleft-paraphrases, there are some differences. To name only a few: Extrapositional coordinations contain focal 'gaps' whereas cleft sentences contain traces being bound either by a 'relative pronoun' (it-cleft-sentences) or by a wh-phrase (pseudocleft-sentences). Both, the 'relative pronoun' as well as the wh-phrase are connected with the focused constituent. Thus, they function to a certain extend as focus markers whereas the extraposed constituents are only focus marked by the FocP they are contained in.

4   Concluding Remarks

I have to confess that the just outlined syntactic representation of extraposition is far from being well thought out. So, there arise many open questions with respect to the syntax of extrapostion and to its semantic interpretation. What I have tried to justify, has been the coexistence of elliptical coordinations and coordinations with extraposed expressions.

The argumentation is founded on four pieces of evidence: (i) unique and distributive interpretation of indefinites, (ii) allowed or not allowed sloppy identity of possessive expressions, (iii) allowed or not allowed scope reordering, and (iv) no number agreement between focused finite verbs and singular subjects in each conjunct. It has turned out that the first three pieces of evidence can be attributed to referential properties of indefinites and possessive expressions on the one hand and to the information structural status of such expressions on the other hand.

The indefinite and possessive expression have in common that they have an existential and predicative part. Both, the existential and the predicative part may be presupposed and/or focused. If the possessive or indefinite expression is in the presentational focus domain, hence in F1, the existential as well as the predicative part is introduced into the context. Then, the existence of the referent of the indefinite expression is asserted. The existence of the referent of the possessive DP is, however, not asserted. It is merely introduced into the discourse. This is due to the meaning of the possessive pronoun, which establishes a relation between the referent of the possessive phrase and a contextually given entity. If a (singular) indefinite or possessive expression is in F1 and not in the scope of a strong QP like *every NP*, only one referent is introduced or asserted, respectively. This means that the F1 status of an indefinite and a possessive DP coincides with its uniqueness interpretation. With regard to coordinative configurations, this uniqueness interpretation prohibits the distinct reference reading of indefinites, sloppy identity of possessive pronouns and scope reconstruction from $\exists\forall$ to $\forall\exists$. This uniqueness interpretation cannot be mapped into an ellipsis representation because deleted constituents are identical copies of their antecedents. Being identical copies of their antecedents deleted constituents have their own referent, which would not go with the appropriate semantic interpretation. Thus, the uniqueness serves as a strong evidence in favour of the coexistence of the ellipsis and the extraposition representation.

If the indefinite or the possessive expression is not in F1 and thus either in F2 or not focused at all, their existential part is presupposed. Being presupposed and in an appropriate context, the possessive or indefinite expression may get a distributive reading. Despite the distributive interpretation may coincide with the ellipsis representation, the ellipsis structure is only possible if the indefinite or possessive DP is not focused at all. If they are in F2 and have thus a focused predicational part, they cannot have a deleted focused counterpart in the other conjunct. This is not allowed because of the parallelism requirement, which requires syntactic, semantic and information structural parallelism for conjuncts in coordinative constructions. Every focused constituent in one conjunct demands an alternative in the other conjunct. If there is not any alternative, the focused constituent has to be located outside of the coordination. Hence, we have, in addition to the uniqueness argument, an argument, which in its turn is attributed to information structural considerations.

Because, for Chinese, similar pieces of evidences are observable like in German, it does not seem to be implausible to ask the question whether the coexistence between ellipsis and extraposition is universal or not. However, to answer this question presupposes thourough knowledge of Chinese possessive, 'indefinite', quantificational expressions, of Chinese coordinative and elliptical structures, and, last but not least, of Chinese information structure.

The third part of this article has outlined the syntactic representation of the German extrapositional configurations. What is so special about it is that the left and right extrapositional configurations have a very similar syntactic representation. Thus, they use the same focus position - F2 - for their focused constituent.

Finally, the right and left extraposition configurations were compared to respective cleft constructions. Because these cleft constructions have, for independent reasons, a similar syntactic and informational structure like the extrapositional ones, they give further support for the distinction between expraposition and ellipsis.

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