A Cartographic Approach to Focus-Related Linguistic Phenomena

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List of Abbreviations

1	first person	M	masculine
2	second person	NOM	nominative
3	third person	PAST	past tense
CL	clitic	PERF	perfective
COMP	complementizer	PL	plural
COP	copula	POSS	possessive
Decl	declarative	PP	Past Participle
F	feminine	PRES	present
Foc	focus	PROG	present progressive
FUT	future	PRT	particle
IMP	impersonal	Q	question feature
IMPF	imperfect	REFL	reflexive clitic
INF	infinitive	SG	singular

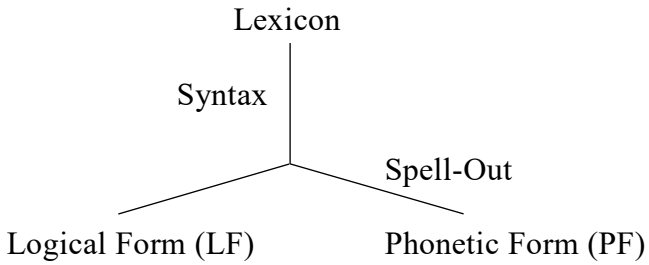
Chapter 1

Introduction

1. 1. Preliminary Remarks

The notion of focus has a long tradition in linguistics, in particular, generative grammar. In his paper, Chomsky (1970b: 70, fn. 22) remarks that "[t]here is no reason to suppose that a satisfactory characterization of focus and presupposition can be given in purely grammatical terms, but there is little doubt that grammatical structure plays a part in specifying them." This remark has been regarded as one of the key guidelines in exploring the grammar of focus, leading generative scholars to address the following two general issues: (i) what type of focus is specified by grammatical structure, and (ii) how grammatical structure specifies it. Within the Principle-and-Parameter (P-and-P) approach (i.e., the inverted-Y model), the computational system or syntax accesses the lexicon and generate linguistic expressions which are transferred to the PF and LF interfaces for phonological and semantic interpretation.

(1)



Since the very early stage of generative grammar, the notion of focus has been discussed in terms of the interface between syntax, phonology and semantics. Under this approach, the two issues stated above have been widely addressed, constituting a number of empirical and theoretical contributions which cover a variety of languages and types of focus.

By overviewing some of the previous influential studies on focus in generative grammar (cf. Rebuschi and Tuller (1999)), this chapter aims to recapitulate the principal issues associated with focus and make clear how they are approached in this thesis.

1. 2. Overview of the Research on Focus in Generative Grammar

1. 2. 1. Focus at the Interface between Syntax, Semantics, and Phonology

Turning to previous studies on focus within the generative grammar framework, we find a series of early proposals by Chomsky (1957, 1970b) that put the notion "focus" on the research agenda. If the notion of focus is momentarily understood as prosodic salience (or nuclear stress) at the sentential level, Chomsky's (1957) work will be seen as the earliest inquiry which introduced focus into generative research. Although Chomsky did not use the word "focus" itself, the so-called "Do-Support," or emphatic *do*, was discussed as an instance of prosodic salience.

(2) a. He DID/DOES come.

b. * He did/does COME.

According to Chomsky (1957: 446), emphatic *do* must occur with heavy stress. The point is that the auxiliary *do* itself does not usually have this property in other syntactic configurations (e.g., in interrogative or negative sentences); other (lexical) auxiliaries such as *must* and *will* do not normally carry such heavy stress, except for the case in which contrastive stress is independently assigned to them. Hence, Chomsky proposes that a morpheme named "Accentuation (AC)" will trigger Do-Support, just as negation will (e.g. *He did <u>not</u> come*.) (see also Klima (1964) for a similar proposal). At that time, the primary concern was form, and therefore the exact semantics of emphatic *do* was not well-discussed.

Later in the Government and Binding (GB) theoretical framework, Laka (1990) argues that emphatic *do* involves emphatic affirmation of a propositional content: that is, the auxiliary *do* functions to "emphasize" the affirmative polarity of the propositional content. From the perspective of the notion of focus, Laka's study further lead López and Winkler (2000) to interpret "emphatic affirmation" as polarity focus, or the focus on the (affirmative) polarity component of the sentence.

Thirteen years after Chomsky (1957), Chomsky (1970b) introduced another aspect of focus into the research agenda: the Focus-Presupposition articulation. Although Chomsky did not provide the clear definitions of "focus" and "presupposition" in his paper, the focus is roughly defined as the non-presupposed information in the sentence (see also Jackendoff (1972), Lambrecht (1994)), and the presupposition denotes "the information assumed by the speaker to be shared by him and the hearer (Jackendoff (1972: 16))." At that time, since neither LF nor PF was postulated, it was assumed that the surface structure of a sentence contains its intonation center.[1]

(3) He was warned to look out for an ex-convict with a red SHIRT.

More specifically, the question was whether focus (i.e., prosodic salience) was derived from the surface structure or a deeper level of representation. Chomsky showed that it was simpler to derive the prosodic focus effect from the surface structure. For example, the syntactically provided structure indicated by brackets in (4) enables us to compute the intonation center of the sentence and its influence on the projection/extension of focus; in this case, the focus of the sentence corresponds to any of the five constituents containing the

[1] The example sentence in (3) is a modified version of the example in (53) in Chomsky (1970b).

intonation center borne by the last lexical item (i.e., α, β, γ, σ, and ε). In other words, a normal accent pattern is the one in which the accent is used to identify a focus constituent, where the focus constituent represents the new information of the sentence.

(4) He was [$_{\alpha}$ warned to [$_{\beta}$ look out for [$_{\gamma}$ an ex-convict with a [$_{\sigma}$ red [$_{\varepsilon}$ SHIRT]]]]]

Thus, it directly follows that "the focus is [one of] the phrase[s] containing the intonation center, and the presupposition is determined by replacement of the focus by a variable (Chomsky (1970b: 91))." Chomsky's argument yielded the influential insight that focus falls under the case in which semantic interpretation relates more directly to surface structure than to deep structure (see Rochemont (1986) for the subsequent development).

Along with Chomsky's (1970b) approach to focus, Jackendoff (1972) independently provided a technically sophisticated approach to the Focus-Presupposition articulation. Jackendoff started his discussions from the following principle:

(5) If a phrase P is chosen as the focus of a sentence S, the highest stress in S will be on the syllable of P that is assigned stress by the regular stress rules.

(Jackendoff (1972: 237))

Following the principle in (5), Jackendoff proposed that a syntactic marker Focus (F) can be associated with any node in the surface structure. This amounts to saying that F can be freely introduced in the syntactic derivation (i.e., the surface structure). Therefore, a syntactic structure with F serves as an input both to the phonology (i.e., PF) and to the semantics (i.e., LF).

On the phonological side, the Emphatic Stress Rule defined below assigns emphatic stress to the most salient syllable of the phrase with F:

(6) $V \rightarrow$ [emph stress] / [X [1stress] Y]$_F$ (Jackendoff (1972: 241))

The emphatic stress rule will be in the phonological cycle, following all the other stress rules. On the semantic side, the Focus-Presupposition articulation is derived as follows. First, the presupposition part (i.e., [Presupp$_S$ (x)]) is formed by replacing the Focus (i.e., the surface element with F) by a variable in the sentence. Next, a presuppositional set is built; in this case, the presuppositional set is defined as "the set of values which, when substituted for x in [Presupp$_S$ (x)] yields a true proposition" (Jackendoff (1972: 245)). The presuppositional set must have the pragmatically determined property of being under discussion: that is, each value included in the set is pragmatically provided. Finally, the assertion of a declarative sentence involving an element with F claims that the focus is a member of the presuppositional set:

(7) Focus $\in$ λx Presupp$_S$ (x) (Jackendoff (1972: 246))

Jackendoff's approach provides a basis for technical implementations of focus on different theoretical backgrounds (see also Erteschik-Shir (2007)): the emphatic stress rule and the Focus-Presupposition semantic rule take as an input the structures in which the focus constituent(s) are marked (with F). This idea provided one of the dominant views on focus within generative grammar: focus is determined at syntax and its phonological and semantic effects show up at the interface levels (i.e., PF and LF).

Jackendoff's (1972) approach to focus, however, faces a conceptual problem within

the recent development of the minimalist program (MP) framework (Chomsky (1995)). This is because the idea of introducing a focus marker F in the syntactic derivation is incompatible with the inclusiveness condition, which bans the introduction of a syntactic feature in the derivational process.

(8) *Inclusiveness*

> Any structure formed by the computation ... is constituted of elements already present in the lexical items selected for the numeration; no new objects are added in the course of computation apart from rearrangements of lexical properties. (Chomsky (1995: 228))

If one respects the inclusiveness condition, then she or he needs to consider how to deal with the contradictory situation. Different proposals are made on different theoretical frameworks (e.g., Erteschik-Shir (2006, 2007); Aboh (2004b) for a cartographic approach), but they seem to explore a possibility that focus features (or focus morphemes) exist in the lexicon; therefore, they, as well as other lexical items, are used as primary items in order to build up sentences. Under this version of the inverted-Y model, structures involving focus are derived without any additional syntactic mechanism; since focus features exist in the lexicon, they, like lexical items, are always available to the syntactic computation. In what follows, I will refer to this approach as a "feature-driven" one.[2]

[2] Under the feature-driven approach, discourse-related features such as topic and focus exist in the lexicon, and they trigger syntactic operations such as structure-building and displacements (i.e., external/internal merge). For example, within the cartographic framework, discourse-related features motivate certain constituents to their dedicated functional projections (e.g., Topic and Focus). As a result of the syntactic operations, the semantic and phonological effects show up at LF and PF. The feature-driven approach enables us to explore the nature of focus in accord with the inverted-Y model. The details of the feature-driven approach will be introduced in Chapter 2.

Before closing this section, I would like to mention the stress-based approach to information structure (cf. Reinhart (1995); Zubizarreta (1998); Szendrői (2001, 2003); Samek-Lodovici (2006)). The core idea of this approach is that prosody plays a crucial role in determining the focus of a sentence, in particular, the stress-focus correspondence; therefore, the phonological and the semantic components directly connect with each other. Under the stress-based approach, the existence of syntactic features responsible for the realization and interpretation of focus has been disputed and challenged. However, any of the analyses following this approach will force a substantial revision of the inverted-Y model (cf. (1)). Such a revision will be viewed as a weakening of the principle of the independence and autonomy of syntax (Chomsky (1955, 1957)), according to which syntactic rules and principles must be independent of meaning or discourse.

To sum up, a series of Chomsky's (1957, 1970b) works on focus have provided a solid basis for scholars to explore the grammar of focus in terms of the interface levels (i.e., the interface between syntax, phonology and semantics). Since then, a vast amount of work has been devoted to exploring the correspondence relationship between syntactic structure, focus structure and the thetic/categorical judgment distinction. The next section reviews the relevant previous studies.

1. 2. 2. Syntax, Focus Structure, and Thetic/Categorical Judgments

Lambrecht (1994) provides an influential view on the correspondence between syntax and focus structure. In general, the extension of focus denotes the part of the sentence that falls under its scope. According to this notion, focus has been traditionally classified into *narrow focus* and *wide focus*. Narrow focus includes a single constituent (e.g., an argument or an adjunct), and wide focus involves the focus being projected up to the entire VP or the whole CP. Furthermore, Lambrecht categorizes focus into the following three types,

argument focus, *predicate focus* and *sentence focus*, each of which is illustrated below:

(9) a. Argument Focus

Q: I heard your motorcycle broke down?

A: [MY CAR] broke down.

b. Predicate Focus

Q: What happened to your car?

A: My car/It [broke DOWN].

c. Sentence Focus

Q: What happened?

A: [MY CAR broke down].

(Lambrecht (1994: 223), bracketing mine)

These three types of focus roughly correspond to the following three syntactic categories: DP, VP, and IP, respectively. Among the three types of focus, predicate focus and sentence focus further correspond to the widely-known distinction between categorical and thetic judgments (Sasse (1987), Breul (2004)).

According to Sasse (1987: 558), "the thetic statement forms a unit with respect to what it contributes to the discourse at a given point. It expresses a pragmatically unanalyzed state of affairs and presents it as a piece of complex information. [...] Thetic statements are thus uttered at those points of the discourse when compact information is required. This is not the case of the categorical statement. It presents a state of affairs as something analyzed, dissected into different information units. It selects one of the participants of the state of affairs in order to present it as a predication base and arranges the rest in such a way that it forms the predication about the selected predication base." The thetic/categorical

judgment distinction can be grammatically distinguished, as shown by the following contrast from Japanese (cf. Kuroda (1972, 1979)):

(10) a. Inu ga hasitte iru.

b. Inu wa hasitte iru.

'A/the dog is running.'

(Kuroda (1979: 8), underlining mine)

The subject in (10a) is marked with the nominative case particle *ga*, while the one in (10b) includes the topic particle *wa*. According to Kuroda's (1979: 8) claim, "the difference between the sentence types with the particle *ga* and *wa* corresponds to the distinction between the thetic (subjectless) judgment and the categorical judgment, i.e., the judgment that has the subject-predicate structure." Thus, the *ga*-marked sentence is a thetic judgment, while the *wa*-marked sentence is a categorical one.

If the thetic/categorical judgment distinction is reinterpreted from the perspective of Lambrecht's classification of focus, thetic and categorical judgments will correspond to sentence focus and predicate focus, respectively; furthermore, the argument focus type will be seen as a third one (see Breul (2004) for the details). These corresponding relations (though not precise) will be adopted throughout this thesis.[3] Another important point is that a thetic judgment (a sentence-focus sentence) presents a state of affairs which is not separated into different information units. Therefore, it will be concluded that a sentence with the Focus-Presupposition articulation does not fall under the realm of thetic judgments. This means that focus fronting is basically incompatible with thetic judgments.

[3] In a narrow sense, the notion of "thetic judgment" refers to a more restricted set of sentences. See Hasegawa (2010) for the detailed characterization of thetic judgment sentences. The relevant point will be partly discussed in Section 3.2.

1. 2. 3. Focus and Topicalization

The Focus-Presupposition articulation also had an influential impact on the study of root transformation (cf. Emonds (1976)), especially, topicalization. Gundel (1974) observed that topicalization comes in two flavors: topic-topicalization and focus-topicalization.

(11) a. John, he called. [Topic-Topicalization]

b. JOHN he called. [Focus-Topicalization]

(Gundel (1974: 184), with modifications)

(11a) with topic-topicalization serves as a natural response to a question like "What about John?." In this case, the predicate part carries the primary stress. According to Gundel (1974: 184), (11b) with focus-topicalization has an interpretation which presupposes that the person designated as *he* called someone; hence, it is possible to use (11b) as a response to a question like "Who did he call?."[4] In (11b), the primary stress falls on the preposed element.

Gundel's (1974) dichotomy of topicalization was further sophisticated in the subsequent work on another aspect of focus: namely, the quantificational nature of focus, which is the topic reviewed in the next section.

1. 2. 4. Focus as Quantification

In the literature, focus and its relation to quantification (i.e., *wh*-movement and quantifier raising) has been another topic revolving around the grammar of focus. Chomsky (1976) will be seen as an important first step in exploring the connection between

[4] However, (11b) is not a completely natural answer to the question "Who did he call?" in the sense that it requires a (contrastive) set of alternatives.

focus and quantification. In his paper, Chomsky proposed a "rule FOCUS," which introduces a variable and informally yields the partially developed logical forms: that is, the focus rule substitutes a focus element with a variable. Let us consider the following examples (Chomsky (1976: 344)):

(12) a. Bill likes JOHN.

b. BILL likes John.

(13) a. the *x* such that Bill likes *x* — is John. (= (12a))

b. the *x* such that *x* likes John — is Bill (= (12b))

When the Focus rule is applied to the sentences in (12a, b), the focus elements are substituted by variables, resulting in the logical forms in (13a, b), respectively. Then, Chomsky argues that the logical forms yielded by the focus rule must satisfy the following principle:

(14) A variable cannot be the antecedent of a pronoun to its left.

(Chomsky (1976: 342))

The principle in (14) rules out the coreferential reading of *he* and *John* in the following example, where *John* receives contrastive focus (Chomsky (1976: 344)).

(15) a. * The woman he$_i$ loved betrayed JOHN$_i$.

b. the *x* such that the woman he loved betrayed *x* — is John

cf. The woman he$_i$ loved BETRAYED John$_i$.

On the other hand, if it is the verb that bears the focal accent, the logical form will not contain

any variable corresponding to the object NP, so that coreference is permitted. An important point is that focused constituents behave similarly to quantified expressions with regard to the possibilities of anaphora (see also Rochemont (1986)). For example, the pronoun *he* in (16a) cannot be understood as coreferential with an individual referent that satisfies the quantified expression *someone* (cf. Rochemont (1986: 35)).

(16) a. * The woman he$_i$ loved betrayed someone$_i$.

b. the *x* such that the woman he loved betrayed *x* — is someone

If quantifier raising applies to the existential quantifier in (16a), the logical form in (16b) follows (cf. May (1977)). Because the logical form in (16b) violates the principle in (14), the intended coreferential reading in (16a) is impossible. The discussions provided above were seen as the convincing argument that quantifiers and (contrastive) focus share a similar LF representation and obey the same principle in (14).

Chomsky's (1976) influential view on the resemblance between focus and quantified expressions has been kept intact in the later studies (Chomsky (1977), Chomsky (1981)). Within the GB research framework, the rule of Focus belongs, along with the rule of quantifier movement and the LF rule of *wh*-movement, to the list of abstract, post s-structure instances of Move α. Under this GB-based view, the LF representations of *wh*-movement and that of focus share the configuration in (17):

(17) [$_{CP}$ ***wh$_i$*** **/ focus$_i$** [$_{IP}$ ... t$_i$ ...]] (LF)

(18) a. Who$_i$ does Bill's mother love t$_i$?

b. Bill's mother loves JOHN.

(19) a. [$_{CP}$ who$_i$ [$_{C'}$ does [$_{IP}$ Bill's mother love t$_i$]]] (LF)

b. [$_{CP}$ JOHN$_i$ [$_{C'}$ [$_{IP}$ Bill's mother loves t$_i$]]] (LF)

Under the GB framework, we can say that the principle on coreference in (14) is approached under the notion of (strong/weak) crossover by Postal (1971) and Koopman and Sportiche (1982). To see this, let us consider the following examples with Weak Crossover (WCO) effects (cf. Chomsky (1981: 196)):

(20) a. * Who$_i$ does his$_i$ mother love t$_i$?

b. * His$_i$ mother loves JOHN$_i$.

(20a, b) suggest that the possessive pronoun *his* cannot be coreferential with an individual referent that satisfies the *wh*-word or an individual denoted by the contrastively-focused NP. These two examples are assumed to have the following LF representations:

(21) a. * [$_{CP}$ who$_i$ [$_{C'}$ does [$_{IP}$ his$_i$ mother love t$_i$]]] (= (20a))

b. * [$_{CP}$ JOHN$_i$ [$_{C'}$ [$_{IP}$ his$_i$ mother loves t$_i$]]] (= (20b))

According to Koopman and Sportiche, the unacceptability of these sentences is ascribed to the bijection principle, which prohibits an operator from locally A-bar binding two variables (i.e., the bound pronoun and the variable). One of the main insights of this approach is that focus is unified with *wh*-movement and quantifier raising into quantification.

Previous studies on WCO effects also have a great impact on Gundel's (1974) dichotomy of topicalization (see Section 1.2.3). According to Lasnik and Stowell (1991), all A-bar dependencies are sensitive to Strong Crossover (i.e., Principle C) (cf. (14)), while

WCO is a distinctive characteristic of A-bar relations involving genuine quantification (see also Rizzi (1994, 1997)). For example, *wh*-movement is sensitive to WCO effects, while topicalization is not, as shown below:

(22) a. * Who$_i$ does his$_i$ mother really like t$_i$? (Rizzi (1997: 291))

b. John$_i$, his$_i$ mother really likes t$_i$.

(Rizzi (1997: 293), with slight modifications)

Lasnik and Stowell argue that A-bar dependencies must be split into those involving a quantifier which binds a variable and those that contain (non-quantificational) anaphoric A-bar binding (i.e., binding of a null epithet/constant corresponding to a covert non-variable R-expression.). In connection with this, Culicover (1991) points out that topic-topicalization is insensitive to WCO effects, whereas focus-topicalization is not.

(23) a. Robin$_i$, his$_i$ mother really appreciates t$_i$.

b. * ROBIN$_i$ his$_i$ mother really appreciates t$_i$.

(Culicover (1991: 37))

Thus, WCO provides an independent evidence for the distinction between topic-topicalization and focus-topicalization, originally proposed by Gundel (1974).

To sum up, the unification of focus into quantification is one of the main fundamental insights gained in the previous studies.

1. 2. 5. Interim Summary

In a nutshell, the previous studies on focus in the generative approach has provided

three fundamental insights in understanding the grammar of focus under the unification of focus into quantification. First, the grammar of focus is associated with the interface between syntax, semantics, and phonology. Second, the distinction between predicate focus and sentence focus corresponds to the difference between categorical judgments and thetic judgments. Third, focus behaves similarly to quantification. The subsequent theoretical development of generative grammar and research on focus-related displacement effects have greatly benefitted from the three insights. Among different proposals is the cartographic project proposed by Rizzi (1997), the outline of which is reviewed in the next section.

1. 3. Focus in the Cartographic Enterprise

Generative-syntactic research on the phrasal architecture of a sentence and on the nature of various displacement phenomena has led to the identification of basic phrase structural layers within the clausal projection. A general characteristic that emerged from this type of research is that the syntactic configuration of a clause consists of the following three structural layers:

(24) a. Core Predicate Layer (i.e., VP/*v*P)

The core predicate layer consists of a core predicate and its arguments, and the s(emantic)-selectional requirement is satisfied in it.

b. Inflectional Layer (i.e., IP)

The inflectional layer is headed by functional heads corresponding to morphological specifications on the verb, and is responsible for agreement/inflectional features and case licensing.

c. Complementizer Layer (i.e., CP)

The complementizer layer is the left periphery (or the 'edge') of the clause which encodes discourse-linked properties such as interrogativity, relativization, focus, topicality, etc.

Under the X-bar theoretical view adopted in GB theory, each of these layers was identified as VP, IP, and CP, respectively; however, these X-bar theoretic assumptions turned out to be quite simplistic. For example, Larson (1988), following Kayne's (1984) binary branching hypothesis, proposes a VP-shell (or two-layered VP) analysis in order to explain the asymmetrical c-commanding relation in dative and double object constructions (cf. 'little v' in the minimalist framework (Chomsky (1995: 352))). Under the impact of Pollock's (1989) influential analysis of verb movement, furthermore, the IP domain dissolves into a series of functional projections, each corresponding to a single feature specification (overtly or abstractly) realized on the verbal system (e.g., Agr, T, Asp, ...) (cf. Chomsky's (1993) AGR system). These research trends have led researchers to assume that the CP domain also constitutes more than one functional projection. Such a school of thought includes studies which are often referred to as the *Cartographic Project*, originally proposed by Rizzi (1997). According to Rizzi, the traditional CP domain is decomposed into multiple discourse-related functional projections such as Force, Topic, Focus, and Finite.

A central idea behind the cartographic project is that discourse-related features (e.g., topic, focus, *wh*, etc.) are visible for the syntactic computation (i.e., internal/external Merge) and hence trigger it. Under this discourse-feature-driven view, discourse-related features play a fundamental role in determining word order alternations and motivate the movement of constituents to dedicated functional projections such as Topic and Focus in the left periphery of the sentence (e.g., topicalization, focus fronting, *wh*-movement). Moreover,

the discourse-related features are crucial in accounting for the syntactically/semantically different behaviors of the various discourse-related structures. Different formal realizations of the same propositional content (e.g. *John met Mary.* vs. *Mary, John met* (*her*).) reflect the information structure of the sentence, which is generally defined as the way in which linguistic expressions interact with various discourse functions on the basis of the mental states of the speaker and interlocutors. For example, Lambrecht (1994: 5) defines information structure as "[t]hat component of sentence grammar in which propositions as conceptual representations of state of affairs are paired with lexicogrammatical structures in accordance with the mental states of interlocutors who use and interpret these structures as units of information in given discourse contexts." Thus, the research on the relationship between grammar and discourse is closely associated with pragmatics and the use of sentences in discourse. This area of investigation, therefore, is referred to as the syntax-pragmatics interface. Notions such as topic and focus are indeed pragmatic in nature, but within the cartographic framework, they also function as fundamental notions for the semantic interpretation on account of their contribution to the relevant context, as well as due to the determination of certain syntactic configurations. Thus, the cartographic approach can be seen as an enterprise that aims to draw detailed '(discourse-related) cartographies' of syntactic structures under the inverted-Y model, thereby exploring the direct matching between syntax and the semantic interpretation at LF, as well as the phonological/prosodic properties at PF (cf. Jackendoff (1972)).

To see how the cartographic project has contributed to the better understanding of the interface between syntax and pragmatics, let us focus on the two discourse-related notions, topic and focus. Within the cartographic framework (Rizzi (1997)), it is generally assumed that there are two independent functional projections for topic and focus. These two functional projections are sandwiched between Force (i.e., the functional head which

specifies the clause type of a sentence as, say, declarative) and Finite, which determines the finiteness of a sentence either as finite or non-finite.

(25) Force ... Topic* ... Focus ... Topic* ... Finite

(26) a. Mary, John met (her).

b. ... [$_{TopP}$ Mary [$_{Top'}$ [$_{FinP}$ [$_{IP}$ John met (her)]]]]

According to Rizzi (1997: 285-289), the topic layer articulates the sentence (e.g. *Mary, John met* (*her*).) into the Topic-Comment configuration, in which the topic (*Mary*) expresses old information and the comment (or the rest of the clause) is an open proposition predicated of the topic and introduces new information; the main focal stress falls on the predicate part. The focus layer, on the other hand, has the Focus-Presupposition articulation (e.g. *MARY John met* (*not Nancy*).): the focus element bearing focal stress introduces new information, whereas the rest of the clause is interpreted as presupposition, the knowledge that the speaker presupposes to be shared with the interlocutor(s).

(27) a. MARY John met (not Nancy).

b. ... [$_{FocP}$ MARY [$_{Foc'}$ ... [$_{FinP}$ [$_{IP}$ John met]]]] (not Nancy)

This assumption for focus fronting, furthermore, has a consequence that the CP domain, in principle, cannot tolerate more than one fronted-focus because in that case, the lower fronted-focus (i.e., new information) will appear in the presupposition (i.e., old information) of the higher fronted-focus, which gives rise to the semantic incompatibility. Thus, Rizzi's assumption for focus deduces the principle of one focus per sentence, which excludes the occurrence of more than one fronted-focus in the left periphery (cf. Culicover (1991, 1996)).

In contrast with Rizzi's (1997) original proposal for focus, a recent study by Cruschina (2011) postulate two functional projections for focus: namely, information focus (IFoc) and contrastive focus (CFoc), the latter of which corresponds to the Focus layer in Rizzi's original split CP hypothesis in (25).

(28) Force ... Topic* ... Contrastive Focus [CFoc] ... Topic* ... Information Focus [IFoc] ... Finite IP ...

The typical function of CFoc fronting is to correct a wrong piece of information that has already been introduced in the previous discourse; therefore, CFoc fronting obligatorily creates a contrast between the correct piece of information and the wrong piece of information indicated by the negative tag (cf. (27a)). Observing focus fronting phenomena in Sicilian, Sardinian and other Romance languages, Cruschina points out that certain focus fronting phenomena do not necessarily result in creating a contrast: namely, QP-fronting and emphatic/mirative fronting.

(29) QP-Fronting (Leonetti and Escandell-Vidal (2009: 156))

a. **Nada** tengo que añadir a lo que ya dije [Spanish]
Nothing have.PRES.1SG to add to it that already say.PAST.1SG
en su dia.
in its day
'I have nothing to add to what I said at the time.'

b. **Algo** debe saber.
Something must.PRES.3SG know
'S/he must know something.'

(30) Mirative/Emphatic Fronting (Cruschina (2011: 71), with a slight modification)

A: Chi successi? [Sicilian]

what happen.PAST.3SG

'What happened?'

B: **A casa** si vinnì!

the house REFL sell.PAST.3SG

'He bought the house!'

QP-fronting in Spanish involves fronting of "affective operators," which Klima (1964) defines as those operators licensing negative polarity items. Mirative fronting involves non-contrastive focus fronting giving rise to an unexpected new information interpretation: the term 'mirativity' has its root in linguistic typology studies which have argued that mirativity exists as an independent category of other linguistic categories such as evidentiality (Delancey (1997, 2001, 2012)). Cruschina identifies some similar behaviors between QP-fronting and mirative fronting. For example, unlike CFoc fronting, they must obey the focus-verb adjacency, which is indicated by the unavailability of the interposition of a topic between the fronted-focus and the verb. Cruschina argues that these two non-contrastive focus fronting phenomena are derived by fronting certain constituents to [Spec, IFocP]. Thus, Cruschina's split CP hypothesis in (28) implies that there can be more than one focus layer in the CP domain. Throughout this thesis, this idea will be referred to as "the two-layered focus hypothesis." Under the two-layered focus hypothesis, the grammar of focus will be interpreted as specifying two different types of focus in the CP domain: IFoc and CFoc. Thus, the two-layered focus approach will lead us to a better understanding of the grammar of focus, or what role grammatical structure plays in specifying focus.

Cruschina's (2011) two-layered focus approach provides another theoretical

contribution to the relationship between focus and the thetic/categorical judgment distinction (see Section 1.2.2). Lambrecht's (1994) classification of focus leads us to find the corresponding relationship between predicate/sentence focus and categorical/thetic judgments. In other words, if the focus of a sentence projects up to the IP category, then the sentence corresponds to a thetic judgment. Since (contrastive) focus fronting yields the bipartite Focus-Presupposition articulation, the resulting configuration is not a thetic judgment sentence. In connection with this, Cruschina argues that CFoc fronting contributes to the bipartite Focus-Presupposition articulation (see also Cruschina (2011: 13, fn.3)), while IFoc fronting leads to a unified assertion (i.e., the information structure without any discourse partition). In other words, IFoc fronting (e.g., (30B)) is compatible with the sentence-focus (thetic) statement context, which corresponds to the notion of sentence focus in Lambrecht's (1994) classification of focus. Therefore, the two-layered focus hypothesis opens a new conceptual and theoretical possibility that certain instances of focus fronting (i.e., IFoc fronting) yield sentence-focus (thetic) statements.

Conducting a comparative linguistic study, Cruschina (2011) aims to determine the syntax of the functional projections associated with discourse-related features and to account for word order alternations in Romance languages, but an issue remains as to whether his two-layered focus hypothesis is empirically supported by other languages like English. This issue is not only relevant to the clausal domain (CP) but also to the nominal domain (DP). Since the earlier stage of generative grammar, much research has been conducted to explore the symmetrical relationship across the clausal and nominal domains in terms of, say, grammatical functions (e.g., subjects and objects), the presence of INFL/AGR, transformation operations (e.g., passivization), to name a few (Chomsky (1970a), Abney (1987)). The recent development of such research has led researchers to hypothesize that the parallelism between the clausal and nominal domains extends to information structure

(Aboh, Corver, Dyakonova, and van Koppen (2010)). If such a hypothesis is taken together with Cruschina's two-layered focus hypothesis, one may wonder whether the presence of IFoc movement is substantiated from certain focus-related phenomena in the nominal domain. The empirical exploration of such a new possibility will provide independent evidence for Cruschina's two-layered focus hypothesis, but there are few previous studies which attempt to tackle with the relevant issue, with an exception of Shimada and Nagano (2016). They argue that emphatic IFoc fronting in the nominal domain is substantiated from the so-called "Kantaiku" nominals (emotional vocatives) in Japanese (e.g., *Takai-yama!* "So high a mountain!") (see Section 4.2.3 for the details).

1. 4. Aims

The empirical exploration of Cruschina's (2011) two-layered focus hypothesis, as discussed in the previous subsection, is at the frontier of the cartographic approach to focus-related linguistic phenomena. With this background in mind, hoping to contribute to the deep understanding of focus-related linguistic phenomena, this thesis attempts to answer the following main question:

(31) Is Cruschina's (2011) two-layered focus hypothesis empirically supported by focus-related linguistic phenomena in English?

In addressing this main question, I will first make explicit certain syntactic and semantic diagnostics for CFoc/IFoc fronting; then, I will argue that the derivation of particle fronting (e.g. *Out gushed the secrets*.) and that of negative inversion (e.g. *Never have I seen such a hippopotamus*.) involve IFoc fronting. Furthermore, I will demonstrate that the presence of the IFoc layer in the DP domain is empirically supported by the following three linguistic

phenomena: comparative binominal NPs (e.g., *That idiot of a man!*), demonstrative double genitives (e.g., *That nose of John's*!), and negative inversion in the DP (e.g., *not very difficult (of) a task* vs. *not a very difficult task*). Finally, I will argue that *wh*-exclamatives (e.g., *What a beautiful girl she is!*) do not involve movement to [Spec, IFocP]; rather, their derivation involves CFoc fronting.

Importantly, these focus-related linguistic phenomena are not examined in Cruschina (2011). Therefore, the inquiry into them will provide independent arguments for the empirical and theoretical validity of the two-layered focus hypothesis. If I borrow some key expressions in Chomsky's (1970b) remarks, the present approach will claim that grammar specifies two different types of focus, CFoc and IFoc, by means of the corresponding two different types of focus fronting operations. In this sense, Cruschina's two-layered focus hypothesis provides us with theoretical tools to delve into focus-related linguistic phenomena from a cross-linguistic perspective.

1. 5. Organization

This thesis is organized as follows. Chapter 2 presents Cruschina's (2011) split CP hypothesis as the main theoretical framework that this thesis adopts. It introduces the typology of focus (cf. Lambrecht (1994)) and defines the notions of IFoc and CFoc. It also proposes basic diagnostics for CFoc fronting and IFoc fronting in terms of syntax and semantics; more precisely, adopting Cruschina's original syntactic and semantic diagnostics, the present study will suggest that CFoc fronting contributes to the bipartite CFoc-Presupposition articulation; on the other hand, IFoc fronting creates a unified information structure in which both the IFoc element and the propositional content forms a unified assertive syntactic unit (Bianchi, Bocci, and Cruschina (2011); cf. Potts (2005)). Such a unified assertive syntactic unit results from the focus-verb adjacency (SAI, or head

movement), which is required in IFoc fronting. After showing that emphatic (mirative) focus fronting in Sicilian and Italian has two semantic components, new information and the speaker's evaluative meaning, Chapter 2 also considers the issue of how the speaker's evaluative meaning is derived in IFoc fronting and review Shimada and Nagano's (2016) hypothesis that the speaker's evaluative meaning in emphatic IFoc fronting comes from evaluative morphology, which aims to explore how the speaker's affective/evaluative meanings (e.g., pejorative, augmentative, diminutive, endearment, etc) are expressed in words and phrases (Cinque (2015)) (see Chapter 4 for Shimada and Nagano's (2016) analysis of Japanese *kantaiku* nominals).

Chapter 3 is devoted to two case studies. First, I will consider particle fronting phenomena in German and English in terms of IFoc fronting. According to Trotzke and Quaglia (2016), particle fronting in German is derived by IFoc fronting, and therefore contributes to a unified assertive information structure. They, furthermore, argue that particle fronting in German is sensitive to whether the fronted particle verb is sensitive to the speaker's expressive/evaluative meaning or not (cf. Morzycki (2012)). By considering their observation in terms of the speaker's evaluation, I will argue for Shimada and Nagano's (2016) core idea that emphatic IFoc fronting consists of two semantic values: new information and the speaker's evaluation. I will extend the proposed analysis to particle fronting in English (e.g. *Up rose my temper!*) and comparative substitution (e.g. *Humongous is that Akita dog!*) Second, I will examine negative inversion in English (e.g. *Never in my life have I seen such a hippopotamus*.) in terms of IFoc fronting. Within the cartographic framework, it has been argued that negative inversion is derived by focus fronting (Rizzi (1997), Haegeman (2000, 2012)). Under the two-layered focus hypothesis, there are two possible analyses of negative inversion: negative inversion is derived either by IFoc fronting or CFoc fronting. After demonstrating that negative inversion in English does not

contribute to the bipartite Focus-Presupposition structure, I will propose that negative inversion is primarily derived by IFoc fronting.

Chapter 4 extends Cruschina's (2011) two-layered focus hypothesis to the nominal domain under the recent assumption that the parallelism between the clausal and nominal domains extends to information structure (e.g., Aboh et al. (2010)). More specifically, I will argue that the presence of IFoc fronting in the DP domain is empirically supported by comparative binominal NPs (e.g., *That idiot of a man!*), demonstrative double genitives (e.g., *That mother of John's!*), and negative inversion in the DP (e.g., *not very difficult a task* vs. *not a very difficult task*).

Comparing emphatic IFoc fronting with *wh*-exclamatives, Chapter 5 considers the syntactic and semantics of *wh*-exclamatives in terms of the two-layered focus hypothesis. According to Zanuttini and Portner (2003), *wh*-exclamatives are characterized by the following two semantic components, scalar implicature (the speaker's surprise or extreme degree) and factivity. Based on their study, I will argue that *wh*-exclamatives are derived by CFoc-fronting.

Chapter 6 offers concluding remarks.

Chapter 2

Theoretical Background

2. 1. Introduction

This chapter aims to introduce some fundamental assumptions that has been adopted in the cartographic project (Rizzi (1997, 2004), Cinque (1999, 2015), Haegeman (2012)) and the two-layered focus hypothesis proposed by Cruschina (2011).

(1) a. The Split CP Hypothesis (Rizzi (1997))

Force ... Topic* ... Focus ... Topic* ... Finite IP ...

b. The Two-Layered Focus Hypothesis (Cruschina (2011))

Force ... Topic* ... Contrastive Focus [CFoc] ... Topic* ... Information Focus [IFoc] ... Finite IP ...

Within the cartographic framework, it is assumed that a sentence involving A-bar movement must meet two semantic requirements through its syntactic derivation: one is the so-called s(emantic)-selectional requirement (i.e., theta-role assignment) (cf. Grimshaw (1979)) and the other is the criterial requirement (i.e., licensing of a certain discourse-related meaning) (Rizzi (1997, 2004)). This chapter starts with a brief sketch of the basic mechanism necessary to satisfy the criterial requirement and provides some detailed assumptions concerning the Force-Fin system and the Topic-Focus system on the basis of Rizzi's original split CP hypothesis in (1a). After that, the rest of the chapter focuses on the two-layered focus hypothesis proposed by Cruschina (2011) (cf. (1b) and considers certain basic diagnostics in order to differentiate Information Focus (IFoc) fronting from Contrastive Focus (CFoc) fronting.

This chapter is organized as follows. Section 2.2 outlines the background of the cartographic framework, the basic mechanism of A-bar movement and the split CP hypothesis proposed by Rizzi (1997). Section 2.3 introduces the Force-Fin system, and Section 2.4 considers the difference between Topic and Focus. Section 2.5 introduces Cruschina's (2011) two-layered focus hypothesis. Section 2.6 discusses how *wh*-movement is analyzed under the two-layered focus hypothesis. Section 2.7 summarizes this chapter.

2. 2. S-Selection and Criteria as Triggers for A-bar Movement

Within the generative framework, an interrogative sentence like "*Which book should you read?*" is assumed to meet two semantic requirements through its syntactic derivation: the so-called s-selectional requirement and the discourse-related meaning (i.e., the *wh*-interrogative interpretation). In the GB theoretical framework, the former requirement is satisfied by the theta-role assignment by the lexical verb, and the latter is satisfied by establishing the Spec-Head agreement relationship between the fronted *wh*-word in [Spec, CP] and the inverted auxiliary in the C head. In the recent development of minimalist program, these two semantic properties are syntactically encoded by external merge and internal merge, respectively (Chomsky (2001, 2004, 2008)):

(2) a. You should read [which book]. [External Merge]

b. Which book should you read _? [Internal Merge]

Under Chomsky's (2008) view, edge features may be assigned to a phase head (i.e., the C head) to ensure that scope or discourse-related properties relevant for the specific interpretation trigger movement (i.e., internal merge) to an extra specifier position at the left edge of the phase. Topic and focus, on the other hand, are not present as syntactic features

(i.e., edge features) which trigger fronting operations; rather, they are purely semantic features which are only visible and accessible at the interfaces.

In contrast, the cartographic approach assumes a more direct and active implementation of discourse-related features in the narrow syntax. Under this approach, discourse-related features are related to the corresponding functional projections and drive syntactic operations. This feature-driven approach is implemented in Rizzi's (1997) split CP hypothesis, according to which the traditional CP domain splits into multiple discourse-related functional projections including Topic and Focus, as shown below:[1]

(3) The Split CP Hypothesis (Rizzi (1997)) (= (1a))

Force ... Topic* ... Focus ... Topic* ... Finite IP ...

Under the cartographic viewpoint, the following sentences are assumed to involve A-bar movement to different discourse-related functional projections:

(4) a. This book, you should read _. [Topic]

b. Which book should you read _? [Focus: *Wh*]

c. THIS BOOK you should read _ (rather than something else) [Focus: CFoc]

(Rizzi (2006: 101), with modifications)

In these examples, the DP phrase [D book] receives the thematic property of 'theme of the verb *read*,' and the interpretive/criterial property of 'topic,' '*wh*-interrogative,' or 'focus.' In what follows, we will see some more details on the derivational process mentioned above.

[1] The denotation '"Topic*" means that the higher/lower Topic layer allows recursion, or the multiple occurrence of a topic. As we will see later, this is possible in the case of CLLD in Romance languages.

Once it is assumed that discourse-related features trigger syntactic operations in the narrow syntax, they are also assumed to exist in the lexicon as functional features which may be assigned an overt phonological exponent. In English, topicalization and focus fronting are not morphologically distinguished, but Gungbe is sensitive to such a difference in that topic and focus are morphologically marked in different ways, as shown in (5).[2]

(5) ... ɖɔ̀ dàn lɔ̀ yà Kòfí wɛ̀ hù -*(ì) [Gungbe]
that snake the Top Kofi Foc kill.PERF - it
'... that the snake, Kofi killed it.'

(Aboh (2004b: 51))

Based on the observation above, Aboh (2004b) assumes that these discourse markers/morphemes exist as functional features in the lexicon, and they are picked out from the lexicon. Thus, a topic element consists of a lexical element which occupies [Spec, TopP] and the topic feature which occurs at the Top head. Then, the lexical item with the discourse-related feature is licensed in the following Spec-Head agreement configuration:

(6) XP_F and X_F must be in a Spec-Head configuration, where F = Q, Topic, Focus, R(elative) ...

This licensing condition is called "criterion," which all of the types of A-bar movement must satisfy in their derivation (Rizzi (2006)). To see how this system works, let us consider the following examples:

[2] Gungbe belongs to the Gbe Languages which form a cluster of related languages spoken in the area between Ghana and Nigeria (see Aboh (2004b) for details).

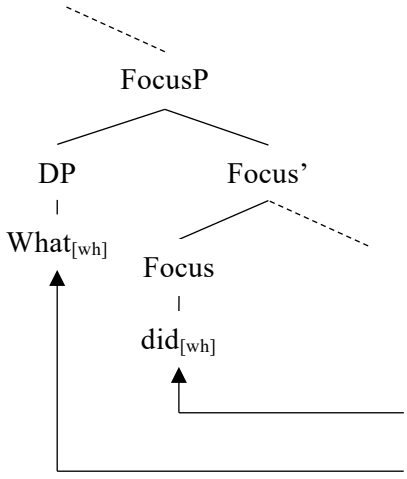
(7) a. ... [$_{FocP}$ What$_{[wh]i}$ [$_{Foc'}$ did$_{[wh]j}$ ... [$_{FinP}$ [$_{IP}$ you t_j buy t_i]]]]?

Head Movement

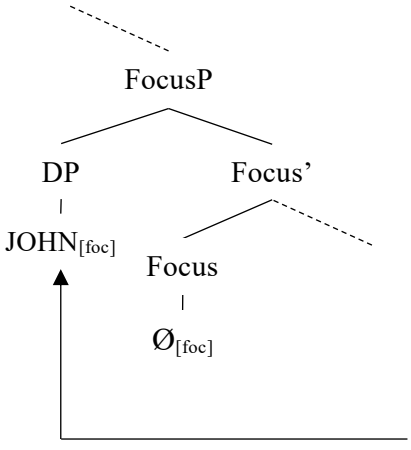
b. ... [$_{FocP}$ YOUR BOOK$_{[foc]i}$ [$_{Foc'}$ Ø$_{[foc]}$ ... [$_{FinP}$ [$_{IP}$ you should give t_i to Paul]]]].

In the case of *wh*-interrogatives, the *wh*-word and the auxiliary are assumed to possess the *wh*-feature [wh]. These two elements end up in the Spec-Head agreement configuration after *wh*-movement and subject-auxiliary-inversion (SAI) (i.e., head movement) apply. The resulting configurations satisfies the Focus criterion, and the derivation converges. In the case of CFoc fronting, on the other hand, the object DP is assumed to possess the focus feature [foc], and the zero morpheme with the [foc] feature is generated at the Focus head position. CFoc fronting is applied to the object DP, and it establishes the Spec-Head agreement relation to the Focus head occupied by the null morpheme with the focus feature. As a result, the Focus criterion is satisfied, and the derivation converges. Thus, the Focus criterion can be satisfied by the following two syntactic configurations:

(8) a. *Wh*-Movement



b. Contrastive Focus Fronting



This subsection has reviewed how a certain criterial requirement is satisfied in the

Spec-Head agreement configuration. It should be noted here that the occurrence of Topic and Focus is not obligatory in the sense that the Topic-Focus system is necessary when a constituent bears topic or focus features to be sanctioned by a Spec-Head criterion. In contrast, the Force-Fin system is assumed to occur obligatorily. The next subsection provides some details on this point.

2. 3. The Force-Fin System

Under the X-bar theoretic term, the CP projection is assumed to play two important roles in syntax. First, the CP projection interface with discourse-related functions (*wh*-questions, topicalization, focalization, etc.) in the matrix clause or the matrix predicate in the embedded context. Second, the CP projection also has something to do with the tense specification of the IP domain. Under the cartographic framework, these two essential roles are played by two different functional projections: namely, Force and Finite.

The Force layer is assumed to encode the clause type of a sentence.[3]

(9) "Complementizers express the fact that a sentence is a question, a declarative, an exclamative, a relative, a comparative, an adverbial of a certain kind, etc., and can be selected as such by a higher selector. This information is sometimes called the clausal type (Cheng (1991), or the specification of Force (Chomsky (1995))."

(Rizzi (1997: 283))

For example, the complementizer *that* encodes the clause type of the embedded sentence as

[3] One may wonder whether the exact landing site of a *wh*-word is in the Force layer or the Focus layer. As we will see later, *wh*-movement is assumed to target the Focus layer in Rizzi's (1997) system. At this moment, whether exclamative *wh*-movement targets the Force layer or the Focus layer is an open question (cf. Rizzi (2015)).

declarative (e.g. *John said that Bill was intelligent.*). The choice of the declarative complementizer is, furthermore, associated with the finiteness of the embedded sentence; for example, the declarative complementizer introduces a finite sentence, while the complementizer *for* takes an infinite clause as its complement. Thus, the Force head is assumed to communicate with the Finite head and specify the finiteness of the sentence either as finite or non-finite.

(10) "The second kind of information expressed by the C system faces the inside, the content of the IP embedded under it. It is a traditional observation that the choice of the complementizer reflects certain properties of the verbal system of the clause, an observation formalized, e.g., by "agreement" rules between C and I, responsible for the co-occurrence of *that* and a tensed verb, of *for* and an infinitive in English." (Rizzi (1997: 283), underlining mine)

The statement in (10) amounts to saying that the Force layer characterizes the clause type of a sentence in tandem with the Fin layer.

Rizzi (1997) assumes that the Force-Fin system is the obligatory component of the CP domain. In other words, every sentence needs to syntactically express its clause type (or its role as a subordinator) and the specification of the finiteness, while Topic and Focus are optional in the sense that they occur when needed (i.e., when a constituent bearing topic or focus features are introduced in a sentence and is sanctioned by a Spec-Head agreement criterion.). Then, it is assumed that the Force head is endowed with one of the set of clause typing features such as declarative, relative, interrogative, exclamative, and so on; the Finite head may possess either [+fin] or [-fin]. In the default case, in which Topic and Focus are not needed, the Force layer and the Finite layer take the syncretic form *Force-Fin*, which can

be morphologically realized as the complementizer *that* or its null counterpart Ø. If Topic is introduced, the CP domain takes an analytic structure in which the Force layer is separated from the Finite layer, as shown in (11):

(11) Syncretic Structure *vs*. Analytic Structure

a. Force-Fin $_{[+decl, +fin]}$ [Syncretic]

that/Ø

b. Force $_{[+decl]}$ ... Topic* ... Focus ... Topic* ... Finite $_{[+fin]}$ IP ... [Analytic]

that Ø

In the latter case (i.e., analytic structure), the Force head is occupied by the complementizer *that*, and the Finite head is occupied by the null morpheme Ø. This analytic structure obligatorily realizes the Force head overtly with the declarative complementizer. When a topic element occurs in the CP domain, the Force-Fin system must take an analytic form; thus, the declarative complementizer must occur overtly, as shown in (12b).

(12) a. I think [$_{Force\text{-}FinP[+decl, +fin]}$ that/Ø [$_{IP}$ John will win the prize next year]].

b. I think [$_{ForceP[+decl]}$ *(that) ... [$_{TopP}$ next year$_{[top]i}$ ... [$_{FinP[+fin]}$ Ø [$_{IP}$ John will win the prize t_i]]]].

In the matrix context, there is no overt linguistic marker corresponding to the complementizer *that*. In this case, it is assumed that the clause type of the declarative sentence is determined by the null declarative head at the Force head. In the context of matrix *wh*-interrogatives, on the other hand, the *wh*-phrase is assumed to front to [Spec, FocP] (cf. (7a)). Although the Force layer is not filled with any syntactic element, the

clause type must be encoded as 'question.' In this case, adopting the searching operation proposed by Rizzi and Bocci (forthcoming), the present study assumes that the Force head with the clause typing feature [+Q] searches and agrees with the *wh*-phrase with the [+Q] feature in [Spec, FocP]; as a result, the Force head encodes the clause type of the sentence as "question."[4]

(13) $[_{ForceP}\ Ø_{[+Q]} \ldots [_{FocP}\ what_{[foc,\ +Q]j}\ [_{Foc'}\ did_{[foc]i} \ldots [_{FinP} \ldots [_{IP}\ you\ [_{I'}\ t_i\ [_{vP}\ buy\ t_j\ ]]]]]]]$

SEARCH

The Force-Fin system is also assumed to serve as an escape hatch in the case of long distance A-bar movement (e.g. *What do you think John bought _ yesterday?*); the Finite layer is seen as an entrance to the CP domain and the Force layer as an exit from the embedded clause to the matrix clause domain.

This subsection has reviewed the obligatory component of the CP domain, the Force-Fin system. The next subsection turns to the optional component, the Topic-Focus system.

2. 4. The Syntax of Topic and Focus

2. 4. 1. Topic *vs*. Focus

In the literature, it is a traditional observation that topicalization and focus fronting are tied to different information structural properties (e.g., Gundel (1974), Lambrecht (1994)). Let us consider the following examples (Rizzi (1997: 285)):

(14) a. Your book, you should give to Paul (not to Bill)

b. YOUR BOOK you should give t to Paul

[4] The SEARCH process needs to be developed in the subsequent research.

On the face of it, these two fronting patterns seem to be similar to each other, but they have different information structures. (14a) is an instance of topicalization. In this case, the fronted element is interpreted as a topic (i.e., the old information shared by the speaker and the interlocutor(s)), and the rest of the sentence is construed as a comment (i.e. new information). On the phonological side, the topic and the comment are separated by an intonation comma break, and the main stress falls on some part of the comment, say, *to Paul* in (14a). Thus, topicalization has the bipartite information-structure, or the Topic-Comment articulation. (14b) is, on the other hand, an instance of focus fronting. In this case, the fronted element is interpreted as a (contrastive) focus (i.e., new information) which functions to correct a wrong piece of information that has been given in the preceding discourse; the rest of the sentence is interpreted as a presupposition (i.e., old information). The fronted focus element receives a marked focal stress, and the rest of the sentence, in general, does not have any additional sentential focal stress. Basically, the same is true of Italian, except that topicalization corresponds to CLitic Left Dislocation (hereafter, CLLD) in this language.

(15) a. Il tuo libro, lo ho letto [CLLD]
'Your book, I have read it.'

b. IL TUO LIBRO ho letto (, non il suo) [Focus Fronting]
'Your book I read (, not his)'

(Rizzi (1997: 286), with modifications)

One of the defining characteristics of CLLD is that the anaphoric relationship between the left-dislocated element and its trace is established by the clitic (*lo*) attached to the tense morpheme (i.e., the I head). Although an independent research will be needed on the exact

syntactic mechanism involved in cliticization, the present study assumes that cliticization is a syntactic operation in which the clitic at an (object) argument position undergoes head movement to the I head (cf. Roberts (2010)).[5] The following schematic configurations summarize the information structural properties of topicalization and focus fronting:

(16) a. [$_{TopicP}$ Topic [$_{Topic'}$ ... [$_{FinP}$ Comment]]]

b. [$_{FocusP}$ Focus [$_{Focus'}$ ... [$_{FinP}$ Presupposition]]]

These schemes show that topicalization and focus fronting contributes to the two different types of bipartite discourse structures.

In addition to the information-structural differences discussed above, Rizzi (1997) proposes the following basic diagnostics for CLLD and focus fronting:

(17) CLLD (Topic) *vs*. Focus [Italian]

a.	Resumptive clitic	[typical of topics, impossible with foci]
b.	Weak-Crossover	[foci give rise to WCO effects, topics do not]
c.	Bare quantifiers	[they can be foci, but not topics]
d.	Uniqueness	[there can be many topics, but only one focus per sentence]
e.	Compatibility with *wh*-phrases	[topics are compatible, foci are not]

(Cruschina (2011: 54))

These diagnostics are proposed to make distinctions between CLLD and focus fronting in

[5] Another theoretical issue is how to characterize the head movement process involved in cliticization. Interested readers are referred to Roberts (2010).

Italian. Given that CLLD corresponds to topicalization in English and these two phenomena show some different properties (see Section 2.4.2), the following diagnostics are assumed to differentiate topicalization and focus fronting in English:

(18) Topic *vs*. Focus [English]

a.	Weak-Crossover	[foci give rise to WCO effects, topics do not]
b.	Bare quantifiers	[they can be foci, but not topics]
c.	Uniqueness	[one focus and <u>one topic</u> per sentence][6]
d.	Compatibility with *wh*-phrases	[topics are compatible, foci are not]

In what follows, we will see how these diagnostics tell the difference between topicalization and focus fronting.

The first diagnostic is Weak-Crossover (WCO). Rizzi (1997) observes that CLLD, unlike focus fronting, is not sensitive to WCO, as shown below:

(19) a. Gianni$_i$ sua$_i$ madre lo$_i$ ha sempre apprezzato.
'Gianni, his mother has always appreciated.'

b. ?? GIANNI$_i$ sua$_i$ madre ha sempre apprezzato t$_i$. (non Piero)
'GIANNI his mother has always appreciated, not Piero.'

(Rizzi (1997: 290))

In (19a) with CLLD, the topic element and its trace form an A-bar chain via the clitic *lo* attached to the tense auxiliary On the face of it, this configuration is expected to show the

[6] In contrast with CLLD in Italian, multiple topics are not permissible in English. The next subsection considers how this linguistic difference is accounted for.

WCO effect because the A-bar chain is formed across the bound pronoun (the potential bound variable), which does not c-command the trace. Nevertheless, the sentence is acceptable. In (19b) with focus fronting, on the other hand, the focus element and its trace forms an A-bar chain without recourse to a clitic; the resulting A-bar chain shows the WCO effect. Basically, the same pattern holds true of English, as pointed out by Culicover (1991):

(20) a. Robin$_i$, his$_i$ mother really appreciates t$_i$.

b. * ROBIN$_i$ his$_i$ mother really appreciates t$_i$.

(Culicover (1991: 37))

The second diagnostic is the occurrence of bare quantifiers. Basically, bare quantifiers are unable to refer to any particular (pre-existing) referent in the discourse. Therefore, they are not compatible with topicalization, but focus fronting can be applied to bare quantifiers:

(21) a. * Nessuno, lo ho visto.

'No one, I saw him.'

b. NESSUNO ho visto t.

'No one I saw.'

(Rizzi (1997: 290))

This diagnostic is also useful in distinguishing topicalization from focus fronting in English.[7]

[7] My informants reported that there is a clear contrast in acceptability between (22a) with topicalization and (22b) with focalization.

(22) a. * Nothing, he drank.

b. NOTHING he drank. (Reeve (2011: 149))

The two properties shown above are reduced to the difference in A-bar chain formation. Adopting Lasnik and Stowell's (1991) claim that WCO is sensitive to quantificational A-bar chains, Rizzi (1997) proposes the following configurations for topicalization and focus fronting.

(23) a. $[_{TopP}$ Robin$_{[top]i}$ $[_{Top'}$ Ø$_{[top]}$ ... $[_{FinP}$ OP$_i$ $[_{IP}$ his$_i$ mother really appreciate t$_i$]]]]

b. * $[_{FocP}$ ROBIN$_{[foc]i}$ $[_{Foc'}$ Ø$_{[foc]}$ ... $[_{FinP}$ t$_i$ $[_{IP}$ his$_i$ mother really appreciate t$_i$]]]]

In the case of topicalization, the topic element is base-generated at [Spec, TopP] and forms an A-bar chain with its trace by fronting to [Spec, FinP] the anaphoric null operator merged as the object DP. The resulting configuration establishes an anaphoric (non-quantificational) relationship between the topic DP and the trace of the anaphoric null operator, which is interpreted as the covert counterpart of an R-expression (i.e., null epithet/null constant). In the case of focus fronting, the focus element directly moves to [Spec, FocP] and enters the Spec-Head agreement relation to the Focus head with the focus feature. As a result of the focus fronting operation, the fronted focus and its trace forms a quantificational A-bar chain; thus, focus fronting shows the WCO effect.

Let us turn to the next diagnostic, uniqueness of focus (Rizzi (1997: 290)).[8]

(24) * A GIANNI IL LIBRO darò (non a Piero, l'articolo)

'TO JOHN THE BOOK I'll give, not to Piero, the article'

[8] My informants also reported that more than one fronted focus is not tolerable (25a, b).

(25) a. * THIS BOOK to ROBIN I gave.

b. * To ROBIN THIS BOOK, I gave.

According to Rizzi (1997), focus fronting is assumed to have the Focus-Presupposition articulation. By assumption, the complement of the Focus head is interpreted as a presupposition (i.e., old information), and hence if the CP domain includes more than one focus element, the lower focus element (i.e., new information) will be included in the presupposition of the higher focus element, which leads to a semantic contradiction. As a consequence, the principle of "one focus per sentence" is derived.

The fourth diagnostic is compatibility with *wh*. The following examples show that the occurrence of a (higher) topic is compatible with that of a *wh*-element:

(26) a. A Gianni, che cosa gli hai detto?

'To Gianni, what did you tell him?'

b. * Che cosa, a Gianni, gli hai detto?

'What, to Gianni, did you tell him?'

(Rizzi (1997: 291))

(27) a. ? This book, to whom should we give? (Pesetsky (1989: 13))

b. * To whom, this book, should we give?

Under Rizzi's (1997) split CP hypothesis, *wh*-movement must satisfy the Focus criterion by fronting a *wh*-phrase to [Spec, FocP] and fronting a verbal element to the Foc head. Thus, the focus element and the verbal element establishes a focus-verb adjacency relation in the Focus layer. The occurrence of a higher topic does not block the focus-verb adjacency; hence, the grammaticality of (26a) and (27a). In (26b) and (27b), on the other hand, the

focus-verb adjacency relation is blocked by the interpolated lower topic; hence the ungrammaticality of (26b) and (27b). Under this approach, the focus-verb adjacency in *wh*-interrogatives will be seen as a syntactic locality constraint. In contrast with topics, foci are incompatible with *wh*, as shown below:

(28) a. * A GIANNI, che cosa gli hai detto (, non a Piero)?
'TO GIANNI what did you tell him?'

b. * Che cosa, A GIANNI, gli hai detto (, non a Piero)?
'What TO GIANNI did you tell him?'

(Rizzi (1997: 291))

My informants reported that the English counterparts of (28a, b) are also infelicitous. Since *wh*-movement and focus fronting target the unique specifier of the FocP, it is to be expected that foci are incompatible with *wh*.

This subsection has provided the basic diagnostics of distinguishing topicalization from focus fronting. The next subsection briefly considers some differences between topicalization and CLLD and how they are treated in the cartographic framework.

2. 4. 2. CLLD *vs*. Topicalization

Since Rizzi (1997), it has been pointed out that though CLLD in Italian and topicalization show similar patterns, they also exhibit some different properties. Rizzi assumes that the CP domain includes two topic projections, higher and lower, and that the two topic projections allow adjunction.[9] As far as CLLD in Italian concerns, this

[9] An issue revolving around lower Topic is whether it is identical with the ModifierP proposed in Rizzi (2004). It is assumed that the ModP serves as a syntactic position dedicated to fronted adverbial elements.

assumption works well, but English argument topicalization does not allow the co-occurrence of a higher topic element and a lower one, as shown below:

(29) Higher Topic vs. Lower Topic

a. * This book, to Robin, I gave. (Culicover (1991: 36))

b. Il libro a Gianni, glielo darò senz'altro.
the book, to Gianni, him-it give-FUT-1SG for sure
'The book, to John, I'll give it to him for sure.'
(Rizzi (1997: 290), with modifications)

The contrast above suggests that Topic, as well as Focus, must be unique in the CP domain in English. In order to account for the difference between CLLD and topicalization, Haegeman (2012) proposes the following assumptions:[10]

(30) a. English Argument Topicalization

A topic element and its trace forms a (non-quantificational) A-bar chain by fronting a unique anaphoric null operator to [Spec, FinP].

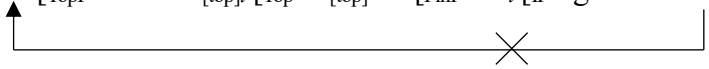
b. Italian CLLD

A topic element and its trace forms a (non-quantificational) A-bar chain with recourse to the occurrence of the (IP-internal) clitic; no fronting of an anaphoric null operator is involved in the derivation.

[10] For the sake of simplicity, I adopt Haegeman's (2012) positional account of the unavailability of multiple argument topics in English here. Haegeman also considers the alternative account of it in terms of the featural relativized minimality. In the alternative approach, the topic operator is assumed to have the feature specification OP+δ, with OP an operator feature and δ the D-linking property. By virtue of this feature set, topicalized constituents block *wh*-movement and topicalization. In this thesis, I will not compare the positional account with the analysis based on the featural relativized minimality.

The assumption in (30a) bans multiple argument topics in English because the anaphoric relationship is established by only one anaphoric null operator in [Spec, FinP].

(31) $[_{TopP} \ldots [_{TopP}$ to Robin$_{[top]i}$ $[_{Top'}$ Ø$_{[top]}$ … $[_{FinP}$ OP$_i$ $[_{IP}$ I gave this book t$_i$]]]]] (= (29a))



The second difference is concerned with the relative order of Topic and Focus. The following contrast shows that the Topic-Focus order is permissible in English, while the reversed order is not:

(32) Topic > Focus [English]

a. This book, to ROBIN I gave.

b. * To ROBIN, this book, I gave.

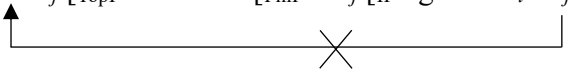
(Culicover (1991: 36))

In order to account for the contrast, Haegeman (2012) proposes that the presence of a null anaphoric operator in [Spec, FinP] blocks any subsequent A-bar movement operation because the escape hatch (the entrance) is already filled with the fronted anaphoric null operator.

(33) * Focus > Topic

a. ... $[_{TopP}$ ... $[_{FocP}$ ... $[_{TopP}$ this book $[_{FinP}$ OP$_j$ $[_{IP}$ I gave t$_i$ to Robin]]]]]

b. ... $[_{TopP}$ ... $[_{FocP}$ to ROBIN$_j$ $[_{TopP}$ this book $[_{FinP}$ OP$_j$ $[_{IP}$ I gave t$_i$ t$_j$]]]]]



In contrast, Italian CLLD is derived without fronting an anaphoric null operator; rather, the topic and its trace forms an A-bar chain by means of cliticization (i.e., an operation which attaches the clitic at the object position to the finite verb). As a result, the escape hatch (i.e., [Spec, FinP]) is not filled with any syntactic element. Therefore, multiple topics are permissible in CLLD.

This section has introduced the basic assumptions concerning the Force-Fin system and the Topic-Focus system. The next section introduces the two-layered focus hypothesis proposed by Cruschina (2011).

2. 5. The Two-Layered Focus Hypothesis

According to Rizzi's (1997) split CP hypothesis, there is only one functional projection for focus. By contrast, Cruschina (2011) proposes the following version of the split CP hypothesis, which departs from Rizzi's original one:

(34) The Two-Layered Focus Hypothesis (Cruschina (2011)) (= (1b))

Force ... Topic ... Contrastive Focus [CFoc] ... Topic ... Information Focus [IFoc] ... Finite IP ...

The crucial point here is that the Focus layer in Rizzi' original split CP hypothesis is assumed to split into two focus projections: Contrastive Focus (CFoc) and Information Focus (IFoc). The following subsections show the details of this hypothesis.

2. 5. 1. IFoc *vs.* CFoc

Before proceeding, let us consider the fundamental distinction between IFoc and CFoc.

Cruschina (2011) defines these two notions as follows:[11]

(35) Information Focus [IFoc]

> "The novelty/new information feature of IFoc indicates that the assertive part of the sentence, that is the focus of the sentence, must be interpreted as innovative and the most informative, in the sense that it contributed new and relevant information to the universe of discourse ... ."

(Cruschina (2011: 14))

(36) Contrastive Focus [CFoc]

> "… the assertion corresponds to denying or correcting a previous innovative assertion or presupposition that the speaker does not share …"

(Cruschina (2011: 14))

In short, IFoc corresponds to the assertive part of the sentence and introduces new information to the discourse, while CFoc serves to correct a certain wrong piece of information that has already been introduced into the discourse. To see the relevant difference, let us consider the examples in (37).

(37) a. (Context: What car did John buy?)

John bought [a Ferrari]$_{\text{IFoc}}$ (Cruschina (2011: 14))

b. [YOUR BOOK]$_{\text{CFoc}}$ you should give __ to Paul (not mine)

(Rizzi (1997: 285), with modifications)

In (37a), the DP at the object position carries the new piece of information and serves as an

[11] See É. Kiss (1998) for another classification of focus.

answer to the *wh*-question. In (37b), the preposed DP carries CFoc and functions to correct the wrong piece of information, which is indicated by the optional occurrence of the negative tag *not mine*. Thus, CFoc fronting can be indicated by the optional occurrence of a negative tag at the end of the sentence. In the two cases, the focus is narrow in the sense that only the object DP is interpreted as focus and the rest of the sentence is interpreted as a presupposition (i.e., the knowledge shared by the speaker and the interlocutor(s)).

Based on the distinction between IFoc and CFoc, the next subsection introduces the dichotomy of neutral IFoc and emphatic IFoc.

2. 5. 2. Neutral IFoc and Emphatic IFoc

Within the cartographic framework, focus fronting has been discussed in terms of the notion of contrast. According to Cruschina (2011), Sicilian, a Romance dialect, also allows CFoc fronting, as shown below:[12]

(38) N'ARTICULU scrissi, no na littira. [Sicilian]
an-article write.PAST.1SG not a letter.
'I wrote an article, not a letter.' (Cruschina (2011: 25))

Cruschina, furthermore, observes that Sicilian and other Romance languages allow non-contrastive focus fronting (see also Cruschina (2006, 2009, 2010, 2011, 2016)). For concreteness, let us consider the following example:

[12] According to Cruschina (2011: 7), "[t]he data presented in this work are mainly drawn from Sicilian, the mother tongue of the present author. More specifically, the variety under study here is that spoken in Mussomeli, a small town in the province of Caltanissetta." Cruschina also states that several Sicilian dialects exist within the island of Sicily and its satellite islands.

(39) A. Chi scrivisti? [Sicilian]

what write.PAST.2SG

'What did you write?'

B. a. Scrissi **n'articulu**. b. **N'articulu** scrissi!

write.PAST.1SG an article an article write.PAST.1SG

'I wrote an article.' 'I wrote an article.'

(Cruschina (2011: 58), with slight modifications)

The mini-discourse in (39) shows that the *wh*-question by Person A can be answered either by the declarative sentence in (39Ba) or the sentence with focus-fronting in (39Bb). In (39Ba), the DP with IFoc occurs at the object position and functions to provide a new piece of information in a neutral way: that is, the IFoc element does not necessarily express "emphasis," or the speaker's evaluative/emotional meaning (e.g., unexpectedness or surprise). In (39Bb), on the other hand, the fronted DP carries new information with a concomitant of the speaker's evaluative/emotional meaning such as surprise or unexpectedness. In connection with this, Cruschina makes the following remark:

(40) "The focus constituent can therefore fronted not only when contrasted with a single alternative or a set of alternatives, giving rise to a clear contrastive interpretation, as with CFoc, but also when FF [=Focus Fronting] contributes to various emphatic purposes in the absence of any contrastive reading (with IFoc) (cf. Cruschina (2006b, 2010a))." (Cruschina (2011: 24))

In what follows, I will call the meaning in question "emphatic IFoc" in the sense that the focus fronting operation always trigger "emphasis," or the speaker's evaluative meaning (e.g.,

unexpectedness or surprise).[13]

The next subsection introduces some differences between CFoc and emphatic IFoc.

2. 5. 3. CFoc *vs*. Emphatic IFoc

In appearance, it looks as if emphatic IFoc fronting and CFoc fronting belong to the same kind of focus fronting operation. However, Cruschina (2011) and Bianchi, Bocci, and Cruschina (2016) observe certain differences between CFoc fronting and IFoc fronting.

On the syntactic side, emphatic IFoc fronting needs to satisfy the focus-verb adjacency, while CFoc fronting does not. This property is shown by the interpolation of a topic between the focus and the verb. The following examples from Italian illustrate this point:[14]

(41) [Italian: emphatic IFoc fronting]

a. Ma guard ate! **In bagno** ha messo le chiavi!
but look.IMP.2SG you in bathroom have.PRES.3SG put.PP the keys
'Look at that! He put the keys in the bathroom!' (Cruschina (2011: 120))

[13] Cruschina (2011) adopts the term "mirativity," which is proposed as an independent linguistic category of evidentiality in the linguistic typology field (DeLancey (1997, 2012); see Ikarashi (2015)). In short, mirativity is defined as follows:

(i) "Mirativity is a grammatical category whose primary meaning is the speaker's unprepared mind, unexpected new information, and concomitant surprise."
(Aikhenvald (2004: 209))

In terms of Cruschina's approach, fronting phenomena related to mirativity are reduced to a syntactic operation which targets the IFoc layer in the CP domain. Therefore, the notion of mirativity does not exists as an independent syntactic category (such as MirativeP) in Cruschina's approach. For this reason, I do not adopt and use the term "mirative fronting" in this thesis.

[14] In what follows, fronted IFoc elements are denoted by bold letters; fronted CFoc elements are indicated by capitalized letters.

b. ??/*Ma guards te! **In bagno**, *le chiavi*, ha messo!
but look.IMP.2SG you in bathroom the key have.PRES.3SG put.PP
'Look at that! He put the keys in the bathroom!'

(Cruschina (2011: 122), with modifications)

The contrast in (41) shows that the fronted emphatic IFoc element and the verbal element must be adjacent to each other; the interpolation of a topic makes the emphatic IFoc fronting sentence unacceptable, as shown in (41b). The focus-verb adjacency is required in emphatic IFoc fronting, but no such condition is imposed on CFoc fronting, as shown below:

(42) [Sicilian: CFoc fronting]

A SALVO *i chiavi* i detti (, no a Pinu.).
to Salvo the keys them.CL give.PAST.1SG not to Pinu
'I gave the keys to SALVO, but not to Pinu.'

(Cruschina (2011: 106)) [Pir.I: 151]

To sum up, the violation of the focus-verb adjacency requirement obligatorily results in a CFoc interpretation. In order to capture the focus-verb adjacency in emphatic IFoc fronting, Cruschina proposes that it requires the Spec-Head agreement between the fronted emphatic IFoc element and the raised verbal element (cf. (44a)).[15]

(43) The Two-Layered Focus Hypothesis (Cruschina (2011)) (= (1b))

Force ... Topic ... Contrastive Focus [CFoc] ... Topic ... Information Focus [IFoc] ... Finite IP ...

[15] For the expository reason, the null subject is indicated by *pro* here.

(44) a. … [$_{\text{IFocP}}$ **N'articulu**$_i$ [$_{\text{IFoc}}$, scrissi$_j$ [$_{\text{FinP}}$ [$_{\text{IP}}$ *pro* [$_{\text{I'}}$ t$_j$ [$_{v\text{P}}$ t$_j$ [$_{\text{VP}}$ … t$_i$ …]]]]]]]

b. … [$_{\text{CFocP}}$ N'ARTICULU$_i$ [$_{\text{CFoc}}$, Ø [$_{\text{TopP}}$ … [$_{\text{FinP}}$ [$_{\text{IP}}$ *pro* scrissi t$_i$]]]]]

(no na littra)

In contrast, it is assumed that CFoc fronting establishes the fronted CFoc element and the null morpheme in the CFoc head (cf. (44b)); in this case, no head movement is involved, and hence the lower-topic interpolation is allowable.

Cruschina (2011), furthermore, points out some information-structural differences between emphatic IFoc fronting and CFoc fronting. The following configurations show the relevant differences between emphatic IFoc fronting and CFoc fronting:

(45) a. … [$_{\text{IFocP}}$ **N'articulu**$_i$ [$_{\text{IFoc}}$, scrissi$_j$ [$_{\text{FinP}}$ [$_{\text{IP}}$ *pro* [$_{\text{I'}}$ t$_j$ [$_{v\text{P}}$ t$_j$ [$_{\text{VP}}$ … t$_i$ …]]]]]]]

IFoc *Assertion*

b. … [$_{\text{CFocP}}$ N'ARTICULU$_i$ [$_{\text{CFoc}}$, Ø … [$_{\text{FinP}}$ [$_{\text{IP}}$ *pro* scrissi t$_i$]]]] (no na littra)

CFoc *Presupposition*

In the case of emphatic IFoc fronting, the fronted IFoc element carries new information and the rest of the sentence is also interpreted as assertion (i.e., new information); therefore, a sentence with emphatic IFoc fronting and its declarative counterpart are similar in that they carry new information as a whole (i.e., the propositional content is interpreted as assertion). The point here is that emphatic IFoc fronting does not create a bipartite information-structure because the fronted focus and the rest of the sentence carry new information as a whole (i.e., the Focus-Assertion unit). In connection with this, verb-raising in emphatic IFoc fronting plays a syntactic role to connect the fronted IFoc element with the rest of the sentence (i.e., the assertive part). In the case of CFoc fronting, on the other hand, the fronted CFoc

element carries new information, while the rest of the proposition is construed as a presupposition (i.e., old information). In other words, CFoc fronting contributes to the Focus-Presupposition articulation, a clear case of the bipartite information-structure.

The assertive status of emphatic IFoc fronting is indicated by the fact that a sentence with emphatic IFoc fronting can be used as an answer to a sentence-focus *wh*-question like "What happened?"

(46) Compatibility with Sentence-Focus

A: Chi successi? [Sicilian]
what happen.PAST.3SG
'What happened?'

B: **A casa** si vinnì!
the house REFL sell.PAST.3SG
'He bought the house!'

(Cruschina (2011: 71), with slight modifications)

Since the answer to a sentence-focus *wh*-question carries new information as a whole, it will be naturally concluded that emphatic IFoc fronting does not create the Focus-Presupposition articulation; rather, they create the integrated Focus-Assertion unit. Another sentence-focus context is shown below:

(47) [Context: Lucy is telling news about her friend's new boyfriend]

A: Pensa unpo': **un anello di diamanti** le ha regalato!
think a little: a ring of diamonds to-her.CL has given

B: Niente affatto! (Chi ti ha detto questa assurdità)
nothing at-all! who you.CL has told this absurdity
'A: Guess what! He gave her **a diamond ring**!'
'B: You're wrong! (Who told you this absurd thing?)'
(Bianchi, Bocci and Cruschina (2016: 18), with slight modifications)

In this event-reporting context, the sentence-focus *wh*-question uttered by Person A is followed by the self-answer with emphatic IFoc fronting. Furthermore, the assertive status of the propositional content is indicated by the fact that the interlocutor B is able to deny the truth of the propositional content.

To summarize, the following diagnostics are useful in distinguishing emphatic IFoc fronting from CFoc fronting. On the syntactic side, the focus-verb adjacency must be satisfied in emphatic IFoc fronting, but not in CFoc fronting. On the semantic side, emphatic IFoc fronting is compatible with the sentence-focus context; furthermore, the (assertive) propositional content can be challenged and corrected by some interlocutor in the discourse.

The next subsection turns to another important semantic aspect of emphatic IFoc fronting, namely, the speaker's evaluative meaning.

2. 5. 4. Emphatic IFoc and the Speaker's Evaluative Meaning

According to Cruschina (2011), emphatic IFoc fronting always involves the speaker's evaluative meaning (e.g. surprise, unexpectedness). Adopting Relevance Theory proposed by Sperber and Wilson (1995), Cruschina argues that the speaker's evaluative meaning comes from the interaction between the information that the emphatic IFoc element conveys and the knowledge state of the speaker and the participants in the communication.

(48) "… we claim that [emphatic IFoc fronting] in Sicilian is always associated with the relevance of the focalized constituent and with the contextual effects yielded by the relevant new information when it combines and interacts with the previous knowledge of the participants in the communication and with the anterior stages of the discourse." (Cruschina (2011: 60), with a modification)

In other words, under Cruschina's view, the speaker's evaluative meaning is not syntactically encoded, though emphatic IFoc fronting always triggers the relevance of the fronted focus element to the knowledge of the speaker and the discourse participant(s). However, one may wonder why emphatic IFoc fronting always trigger such a relevance meaning; another related question will be whether the "emphatic" nature in question is purely pragmatic or not.

These questions mentioned above seem to lead Shimada and Nagano (2016) to propose an alternative approach based on evaluative morphology, a research field which aims to make clear how the speaker's evaluative meaning is encoded in words and phrases (Cinque (2015)). For example, Italian has certain nominal suffixes which express the speaker's evaluative meanings (cf. Cinque (2015: 69-71)).

(49) … Aug(mentative)P … Pej(orative)P … Dim(inutive)P … End(earment)P … (base) …

a. om-*acci-on-e* (man-*Pej-Aug-M.SG*) 'big ugly man'

b. om-*ett-in-o* (man-*End-Dim-M.SG*) 'small frail man'

For example, the host (nominal base) *om 'man'* can be followed by the pejorative suffix *-acci 'ugly'* and the augmentative suffix *-on 'big.'* This ordering pattern is fixed, and hence the reversed order is not permissible. Observing the relative ordering of the speaker's

evaluative suffixes, Cinque proposes the functional hierarchy in (49). English does not have evaluative suffixes attached to a host nominal part, but this language expresses the speaker's evaluative meanings by the choice of adjectives, as shown below:

(50) That's quite a {little / small} discovery you've made there.

(Kayne (2007: 94), with modifications)

The size adjective *small* is neutral in the sense that it describes the physical size of something as small; the evaluative adjective *little*, on the other hand, also expresses the speaker's evaluative attitude (e.g., endearment) toward the referent. Based on this observation, Cinque (2015) attempts to argue that the evaluative functional heads in (49) may exist in the extended nominal domain (i.e., the DP domain).

Cinque's (2015) approach seems to suggest that the evaluative heads in (49) exist across words and nominal phrases. His idea seems to be consistent with the distributed morphology (DM) framework (Halle and Marantz (1993)), according to which there exists only one computational engine (i.e., syntax) to build both words and phrases (the "Single Engine Hypothesis"). If Cinque's approach is viewed from DM, it will be hypothesized that the evaluative heads in (49) exist across different syntactic categories (i.e., words, the DP domain, the *v*P domain, the IP domain, and the CP domain, etc.) (cf. Shimada and Nagano (2016)). Following this line of reasoning, Shimada and Nagano (2016) hypothesize that the evaluative hierarchy in (49) is responsible for the syntactic encoding of the speaker's evaluative meaning in emphatic fronting. Their idea is shown in (51b), where the IFoc layer is selected by the Evaluative layer:

(51) a. … Force … CFoc ... … Fin TP …

CFoc *Presupposition*

b. … Force … Eval(uative) … IFoc … Fin TP …

Emphatic IFoc *Assertion*

An important open issue to be tackled with is whether and how their hypothesis is empirically supported, but at the core of their hypothesis seems to be the idea that emphatic IFoc fronting grammatically encodes new information and the speaker's evaluation. I will consider the relevant issue in Chapter 3 (see Section 3.1).

2. 6. Wh-Movement under The Two-Layered focus Hypothesis

Having seen the differences between CFoc fronting and emphatic IFoc fronting, this section considers how Cruschina's (2011) two-layered focus hypothesis is extended to *wh*-movement. Since Pesetsky (1987), the term Discourse-linking (D-linking) has been used to indicate those phrases (typically, but not exclusively, *which*-phrases) that imply a link with the existing discourse. This link generally consists of the entailment of a set of elements that are known both to the speaker and the hearer. Based on D-linking, Cruschina proposes that non-D-linked *wh*-movement is assimilated to IFoc fronting, while D-linked *wh*-movement is reduced to CFoc fronting. This section provides the details of his arguments.

2. 6. 1. Wh-Movement and D-Linking

According to Cruschina (2011), non-D-linked *wh*-movement behaves like emphatic IFoc fronting. For example, non-D-linked *wh*-phrases must be adjacent to the verb in Italian.

(52) a. * A chi Gianni ha donato i soldi?
to whom Gianni have.PRES.3SG donate.PP the money
'To whom did John give the money?'

b. A quale associazione Gianni ha donato i soldi?
to which association Gianni have.PRES.3SG donate.PP the money
'To which association did John give the money?'

(Cruschina (2011: 157))

(52a) shows that the non-D-linked *wh*-phrase and the finite auxiliary cannot be separated by the overt subject. On the other hand, (52b) suggests that the overt subject can intervene between the D-linked *wh*-phrase and the finite auxiliary. This difference is the same as the one observed between emphatic IFoc fronting and CFoc fronting (cf. (41) vs. (42)). Furthermore, non-D-linked *wh*-phrases, unlike D-linked *wh*-phrases, can be extracted across weak islands (e.g., *wh*-islands, negative islands, etc.), as shown below:[16]

(53) a. ?? A chi ti chiedi quanti soldi hai dato?
to whom REFL ask.PRES.2SG how-much money have.PRES.2SG give.PP
'To whom are you wondering how much money you gave?'

b. A quale dei tuoi figli ti chiedi quanti soldi
to which of your sons REFL ask.PRES.2SG how-much money
hai dato?
have.PRES.2SG give.PP

[16] *Wh*-islands have been seen as a weak (selective) island because D-linked *wh*-phrases (but not non-D-linked *wh*-phrases) can move across them. On the other hand, relative clauses (or clausal adjuncts) have been regarded as a strong island because neither D-linked *wh*-phrases nor non-D-linked *wh*-phrases move across them.

'To which of your children are you wondering how much money you gave?'

(Cinque (1990: 18))

Under the two-layered focus hypothesis, the contrast above is accounted for in terms of the feature-based relativized minimality (Rizzi (2004)).[17] Within the cartographic framework, discourse-related features trigger syntactic operations. According to the feature-based relativized minimality, the local relation between an extracted element (X) and its trace (Y) is disrupted when it moves across an intervening element (Z) whose morphosyntactic featural specification matches the specification of the elements it separates. In the following scheme, the local relation between X and Y is disrupted because (i) Z structurally intervenes between X and Y, and (ii) Z matches the morphosyntactic featural specification of X and Y.[18]

(54) * ... $X_{[F]}$ ... $Z_{[F]}$ ... $Y_{[F]}$ ...

Let us consider how this system works. First, it is assumed that indirect *wh*-operators bear the [+wh] feature. Second, non-D-linked *wh*-phrases bear the [+wh] feature, while D-linked ones have the [contr(astive)] feature, a subtype of focus feature Non-D-linked *wh*-movement forms a [+wh] chain, but D-linked *wh*-movement a [contr] chain. Under the feature-based relativized minimality, the [+wh] chain formation can be blocked if the non-D-linked *wh*-phrase with [+wh] moves across an element with the same feature [+wh]. D-linked *wh*-movement, on the other hand, forms a [contr] chain. The [contr] chain formation cannot be blocked if the D-linked *wh*-phrase moves across an element with the [+wh] feature.

[17] I adopt the featural relativized minimality here in order to rephrase and clarify Cruschina's (2011: 151-160) core idea that IFoc fronting is sensitive to weak islands, but CFoc fronting is not.

[18] The notion of structural intervention is defined in terms of "c-command." When Z c-commands Y and does not c-command X, Z structurally intervenes between X and Y.

This is because the [contr] feature and the [+wh] feature are classified into different feature types: in other words, D-linked *wh*-phrases include the [contr] feature, which differentiate them from non-D-linked *wh*-phrases with the [+wh] feature.

(55) a. ?? … $X_{[+wh]}$ … $Z_{[+wh]}$ … $Y_{[+wh]}$ … (= (53a))

b. … $X_{[contr]}$ … $Z_{[+wh]}$ … $Y_{[contr]}$ … (= (53b))

Additionally, D-linked *wh*-movement differs from non-D-linked *wh*-movement from the perspective of semantics. IFoc implies an either open or contextually restricted set of alternatives; CFoc more directly evokes a closed set of alternatives which serve as antecedents for contrast. In a question-answer pair, the question functions as a request for identifying the value of the variable included in it. The IFoc interpretation provides the variable in question with a certain value, but in this case, no other members of the relevant set are mentioned and excluded. Let us consider the following example (Cruschina (2011: 148)):

(56) A: Chi scrivisti?
what write.PAST.2SG
'What did you write?'

B: **N'articule** scrissi.
an article write.PAST.1SG
'I wrote an article.'

The set of alternatives implied above include all other elements for which the predicate could potentially hold (e.g. {I wrote *a book*, I wrote *a poem*, I wrote *a note*, …}). Depending on

the contextual information or the specific properties of the predicate in question, the set of alternatives may consist of an indefinitely large number of alternatives (, though it must contain at least one element). By contrast, CFoc explicitly mentions the other alternatives of the set, which are clearly excluded by the relevant focus interpretation:

(57) N'ARTICULU scrissi, no un libbru.
an article write.PAST.1SG not a book
'I wrote an article, not a book.'

(Cruschina (2011: 148))

In connection with this, D-linked *wh*-questions (e.g. *Which of them did John meet?*) presuppose the range of the variable introduced by the D-linked *wh*-phrase (e.g. {John met *Mary*, John met *Nancy*, John met *Bill*); hence, D-linked *wh*-phrases generally imply a selection out of a presupposed set and contrastively exclude the other alternatives that are shared in the minds of both the speaker and the hearer(s). The interpretive parallelism between CFoc and D-linked *wh*-phrases is naturally captured under Cruschina's (2011) two-layered focus hypothesis, by assuming that CFoc fronting and D-linked *wh*-movement target [Spec, CFocP].

Cruschina (2011) does not mention the notion of "aggressively non-D-linked *wh*-phrases (e.g., *what on earth, who the tell, what the dickens*)," but it seems that they are closely related to IFoc. As Pesetsky (1987) and Cinque (1990) argues, aggressively non-D-linked *wh*-phrases show weak island effects in various languages (see also Rizzi (1990)). Under Cruschina's system, this fact suggests that aggressively non-D-linked *wh*-phrases exclusively target [Spec, IFocP], and therefore they are sensitive to weak islands. Furthermore, non-D-linked *wh*-phrases allow a "surprise" reading.

(58) a. Who bought that book?

b. Who the hell bought that book?

(Den Dikken and Giannakkidou (2002: 32))

Both interrogatives in (58) are genuine information questions. The speaker who utters (58a) or (58b) expects that somebody did indeed buy that book and seeks information about the identity of the buyer(s). However, in addition to an informative answer, (58b) licenses a negative inference of the form *Nobody was supposed to buy that book*. According to Den Dikken and Giannakkidou (2002), this inference induces a "surprise" reading. This may be seen as a reflex of "emphasis," which is tied to emphatic IFoc fronting in Sicilian.

To summarize, under Cruschina's (2011) approach, *wh*-movement is divided into IFoc fronting and CFoc fronting from the perspective of D-linking. Non-D-linked *wh*-movement is reduced to IFoc fronting, while D-linked one corresponds to CFoc fronting. Cruschina's system is proposed on the basis of Romance languages, and so one related issue is whether and how his system is extended to other languages like English. The next subsection addresses this issue.

2. 6. 2. Extension to Wh-Movement in English

According to Cruschina (2011), non-D-linked *wh*-movement targets [Spec, IFocP] and therefore behaves differently from D-linked *wh*-movement from the following two syntactic properties: the focus-verb adjacency and weak islands. The former property is accounted for by assuming that the IFoc element (non-D-linked *wh*-phrase) and the inverted verbal element establishes the Spec-Head agreement in the IFoc layer. Under Rizzi's (1997) original split CP hypothesis, it is assumed that the Spec-Head agreement relationship in the Focus layer correspond to SAI in English (i.e., the Focus criterion). If this assumption is

combined with Cruschina's system, it will be predicted that non-D-linked *wh*-movement triggers SAI in English while D-linked *wh*-movement does not. However, this prediction is incorrect:

(59) a. Who did John meet?

b. Which of them did John meet?

cf. * Which of them John met?

In the literature, it has been observed that SAI is sensitive to the clause type of direct interrogative questions in English, which is often represented as the [+Q] feature on the C head (cf. Pesetsky and Torrego (2001)). D-linked *wh*-movement in Italian does not have to meet the focus-verb adjacency requirement, while that in English must trigger SAI. In other words, SAI is associated with the interrogative clause type in English, while the focus-verb adjacency is sensitive to the absence of D-linking in Italian. The question here is whether both non-D-linked *wh*-movement and D-linked *wh*-movement must meet the focus-verb adjacency requirement in English (, though they both trigger SAI).

One possible test to examine the focus-verb adjacency is to check the occurrence of adjunct Lower Topic in English (Haegeman (2012)) (see Subsection 3.5.5.1 in Chapter 3).

(60) Force ... Topic* ... Contrastive Focus [CFoc] ... Topic* ... Information Focus [IFoc] ... Finite IP ... (= (1b))

Under the assumption that adjunct Lower Topic, unlike argument Lower Topic, can be licensed without recourse to an anaphoric null operator, it is predicted that non-D-linked *wh*-movement targeting [Spec, IFocP] cannot tolerate the occurrence of a lower adverbial topic,

while D-linked *wh*-movement targeting [Spec, CFocP] can. However, previous studies do not seem to reach a consensus as to whether the *wh*-phrase can precede an adjunct lower topic or not (cf. Haegeman (2012)). For example, Haegeman (2012) reports that there are dialectal variations as to whether the following sentence is acceptable or not:

(61) % Which letters, during the vacation, are you going to answer?

(Haegeman (2012: 49), with a slight modification)

She further states that further research is needed to account for the dialectal variations. In contrast with her survey, my informants reported that the example in (61) is actually acceptable only if the *wh*-phrase is appropriately D-linked. For example, if the speaker and the interlocutor both know the set of the letters that the interlocutor is going to answer, the sentence in (61) can be used as a felicitous *wh*-question. If the *wh*-phrase is replaced with a simple non-D-linked *wh*-phrase or an aggressively non-D-linked *wh*-phrase (e.g. ? {*Who /Who the hell*}*, during the vacation, are you going to visit?*), then the sentence becomes less acceptable. Thus, it will be concluded that D-linked *wh*-movement is compatible with lower adjunct Topic, while non-D-linked *wh*-movement is not.

The fact that the interrogative clause type triggers SAI can be captured in terms of the Force-Fin system (Rizzi (2015)). As we have already seen, the Force head (i.e., the clause typing head) communicates with the Fin head (i.e., the syntactic head encoding the finiteness of a sentence in accord with the clause type). For example, the declarative complementizer *that* (the Force head) specifies the finiteness of the complement clause (the Fin head) as finite. In the case of interrogatives, the Force layer requires the presence of an inverted auxiliary at the Fin layer in order to encode the clause type as 'question.' This idea can be theoretically implemented by assuming that the Force head with [+Q] triggers the fronting

of an auxiliary with the verbal feature [+V] to the Fin head with the same verbal feature in the main-clause context (cf. Rizzi and Shlonsky (2006)).

(62) a. $[_{\text{ForceP[+Q]}} \ldots [_{\text{FinP[+V]}} \text{did}_{[+V]i} [_{\text{IP}} \text{you} [_{\text{I'}} t_i [_{v\text{P}} \text{meet John }]]]]]?$

b. $[_{\text{ForceP[+Q]}} \ldots [_{\text{FinP[+V]}} \textbf{Auxiliary}_{[+V]i} [_{\text{IP}} \ldots [_{\text{I'}} t_i [_{v\text{P}} \ldots]]]]]$

This Force-Fin system accounts for the obligatoriness of SAI in the main-clause *wh*-interrogative context.[19] Then, it is assumed that the fronted auxiliary has two options. In the case of non-D-linked *wh*-movement, the non-D-linked *wh*-phrase with the [+wh] feature fronts to [Spec, IFocP] and the inverted auxiliary with the [+wh, +V] feature undergoes head movement to the IFoc head through the Fin head. As a result, the non-D-linked *wh*-phrase and the fronted auxiliary establishes a Spec-Head agreement in the IFoc layer:

(63) a. Who did you meet?

b. $[_{\text{ForceP[+Q]}} \ldots [_{\text{IFocP}} \text{who}_{[+wh,\ +Q]j} [_{\text{IFoc'}} \text{did}_{[+wh,\ +V]i} [_{\text{FinP[+V]}} t_i [_{\text{IP}} \text{you} [_{\text{I'}} t_i [_{v\text{P}} \text{meet } t_j]]]]]]]?$

In contrast, D-linked *wh*-movement is assimilated into CFoc fronting. The CFoc head is occupied by the null head with the [contr] feature, and the D-linked *wh*-phrase also bears the [contr] feature; thus, it is possible for the inverted auxiliary to remain at the Fin head. Then, the D-linked *wh*-phrase fronts to [Spec, CFocP] and the CFoc head establishes a Spec-Head

[19] An independent study is needed concerning the lack of SAI in subject *wh*-interrogatives in English. According to Rizzi and Shlonsky (2006), the lack of SAI in subject *wh*-interrogatives can be accounted for by assuming that the Finite head bears the nominal feature [+N]; the Fin head with the [+N] feature cannot attract an auxiliary with the [+V] feature. Alternatively, the absence of SAI in subject *wh*-interrogatives can be accounted for in terms of the syntax-phonology interface (i.e., affix hopping (cf. Chomsky (1957))).

agreement at the CFoc layer.

(64) a. Which of them did you meet?

b. [$_{\text{ForceP[+Q]}}$ … [$_{\text{CFocP}}$ which of them$_{\text{[contr, +Q]}j}$ [$_{\text{CFoc'}}$ Ø$_{\text{[contr]}}$ … [$_{\text{FinP[+V]}}$ did$_{\text{[+V]}i}$ [$_{\text{IP}}$ you [$_{\text{I'}}$ t$_i$ [$_{v\text{P}}$ meet t$_j$]]]]]]]?

Under the present approach, the D-linked *wh*-phrase and the inverted auxiliary do not have to establish a Spec-Head agreement; hence, a lower adjunct topic may occur between the D-linked *wh*-phrase at [Spec, CFocP] and the inverted auxiliary at the Fin head (cf. (61)).

Within the present system, Cruschina's (2011) dichotomy of *wh*-movement is basically extended to (non-)D-linked *wh*-movement in English, except that SAI (i.e., fronting an auxiliary to the Fin head) is triggered by the [+V] feature specified by the Force head on the Fin head. Therefore, Cruschina's account of the (in)sensitivity to weak islands is maintained in English (see Rizzi (2000) for a different approach).

(65) a. * Who do you wonder whether John met yesterday?

b. Which of them do you wonder whether John met yesterday?

(66) a. * … X$_{\text{[+wh]}}$ … Z$_{\text{[+wh]}}$ … Y$_{\text{[+wh]}}$ … (= (65a))

b. … X$_{\text{[contr]}}$ … Z$_{\text{[+wh]}}$ … Y$_{\text{[contr]}}$ … (= (65b))

2. 7. Summary

This chapter has introduced the basic assumptions adopted in the cartographic approach and the two-layered focus hypothesis. It also has suggested that IFoc fronting and CFoc fronting are different syntactic operations. The former targets the IFoc layer, wherein the IFoc element and the fronted verbal element establish a Spec-Head agreement

relationship. As a result of this operation, the IFoc element and the fronted verbal element keep to the focus-verb adjacency on the syntactic side. On the semantic side, the IFoc element implies an either open or contextually restricted set of alternatives; furthermore, the IFoc element and the rest of the sentence forms a unified information unit by virtue of the presence of the fronted verbal element. The latter, CFoc fronting, on the other hand, targets the CFoc layer, wherein the CFoc element and the null head establishes a Spec-Head agreement relationship. As a consequence of this operation, the CFoc element can be separated from the rest of the sentence by a lower topic on the syntactic side. On the semantic side, CFoc fronting directly evokes a closed set of alternatives which function as antecedents for contrast; in addition, it contributes to the bipartite Focus-Presupposition articulation. The distinction between IFoc fronting and CFoc fronting corresponds to the dichotomy between non-D-linked *wh*-movement and D-linked *wh*-movement.

Before leaving this chapter, let us briefly consider the principle of one focus per sentence under Cruschina's (2011) two-layered focus hypothesis. Although CFoc fronting and IFoc fronting target their dedicated focus projections, he argues that only one focus per sentence can be assigned. He assumes that the [contr] feature is a subtype of focus feature, and hence the uniqueness condition holds for IFoc fronting and CFoc fronting. Thus, a D-linked *wh*-phrase with the [contr] feature cannot co-occur with an IFoc element with the [foc] feature (cf. (67)).

(67) * Quali d'i tà figi **schettu** jè? [Sicilian]
which of-the your sons single be.PRES.3SG
'Which of your sons is single?' (Cruschina (2011: 162))

Thus, even under the two-layered focus hypothesis, IFoc fronting and CFoc fronting cannot co-occur in the same CP domain.

Chapter 3

Evidence for IFoc Fronting in the Clausal Domain

3. 1. Introduction

Chapter 2 has reviewed Cruschina's two-layered focus hypothesis that focus fronting targets two different functional projections for focus: CFoc and IFoc. Among these two focus projections, much attention has been paid to CFoc; however, under the two-layered focus hypothesis, the IFoc projection exists independently of the CFoc projection. Given that the two-layered focus hypothesis is proposed on the basis of non-contrastive focus fronting phenomena in Romance languages, the next issue is whether the presence of IFoc fronting is empirically supported by other languages. Therefore, the overall goal of this chapter is to lend empirical support to the presence of the IFoc projection by investigating particle fronting phenomena in German and English and negative inversion in English.

The first part of this chapter (Section 3.2) provides arguments for the claim that IFoc fronting is substantiated from particle fronting phenomena in German and English.

(1) a. RAUS hat Costa Rica die Engländer geschmissen! [German]
PRT(out) has C. R. the English.PL thrown
'The team of Costa Rica kicked out the English team.'
(Trotzke and Quaglia (2016: 119)

b. Up rose my temper! [English]

In Section 2.5.4, we have reviewed Shimada and Nagano's (2016) core idea that emphatic IFoc fronting is characterized by the following two semantic components: new information and the speaker's evaluation. In support of their idea, Section 3.2 argues that particle

fronting in German and English contributes to an expressive degree-intensifying meaning (cf. Trotzke and Quaglia (2016)). It also argues that a similar semantic effect is observed in comparative substitution (e.g., *Humongous was that Akita dog!*).

The second part of this chapter (Section 3.3) attempt to provide arguments for the claim that negative inversion (NI) in English is, in principle, derived by IFoc fronting.

(2) a. John has never lied. [Neutral Negative Sentence]

b. Never has John lied. [Negative Inversion]

By adopting Rizzi's (1997) split CP hypothesis, Haegeman (2000, 2012) proposes that NI is derived by satisfying the Focus criterion. Her proposal implies that NI falls under the focus category (including *wh*-movement and CFoc fronting). However, under Cruschina's (2011) split CP hypothesis, there are two possible analyses for NI in English. The negative phrase in NI may target either [Spec, CFocP] or [Spec, IFocP]. I will argue that NI in English is primarily reduced to IFoc fronting, with some exceptional cases which shows an ambiguous status of the preposed negative element between IFoc and CFoc fronting.

3. 2. Particle Fronting from the Perspective of Emphatic IFoc Fronting[1]

3. 2. 1. Introduction

In Section 2.5.4, we have seen that Cruschina (2011) identifies two semantic properties of emphatic IFoc fronting: new information and emphasis. Among these two semantic components, Cruschina ascribes the latter to pragmatics, or how new information is processed and related to the knowledge of discourse participants (the speaker and/or the interlocutor) (cf. Relevance Theory (Sperber and Wilson (1995)). One immediate question

[1] This section is a revised and extended version of Honda (2018c).

here is whether the emphasis involved in emphatic IFoc fronting is attributed solely to contextual implicatures.

Shimada and Nagano (2016), on the other hand, propose that the speaker's evaluative meaning component is associated with evaluative morphology, which aims to explore how various types of the speaker's evaluative meanings are encoded in words and phrases (cf. Cinque (2015)). For example, Italian has various morphological means to express the speaker's evaluative meanings in words (e.g., adding suffixes to the base of a noun). Observing the relative ordering of evaluative suffixes in Italian, Cinque (2015) argues that augmentative, pejorative, diminutive, and endearing morphemes are rigidly ordered in nominals. This fact points to the existence of correspondingly ordered functional heads in the nominal domain:[2]

(3) Aug(mentative)P … Pej(orative)P … Dim(inutive)P … End(earment)P … (base) …

a. om-*acci-on-e* (man-*Pej-Aug-M.SG*) 'big ugly man'

b. om-*ett-in-o* (man-*End-Dim-M.SG*) 'small frail man'

English lacks these evaluative morphemes in the word system, but this language expresses the corresponding interpretations by means of evaluative adjectives in the extended nominal system (i.e., DP). For example, the contrast between *little* and *small* shows that *little*, but not *small*, can be used to give praise (only possible if it is interpreted endearingly and not referring to size).

[2] These functional heads express the speaker's evaluative/expressive meaning. For example, the Augmentative head indicates large size and sometimes awkwardness or unattractiveness (though not necessarily negative). The Pejorative head denotes the appearance/look of an entity, the Diminutive head indicates small size, and the endearment head indicates the speaker's endearment to an entity.

(4) That's quite a {little / small} discovery you've made there.

(Kayne (2007: 94), with modifications)

Cinque (2015) argues that the evaluative projections in (3) also exist in the extended nominal domain (i.e., the DP domain). His argument implies that the evaluative projections in (3) may exist across different syntactic categories. This implication is in accord with the single engine hypothesis adopted in the Distributed Morphology (DM) framework, according to which words and phrases are derived by syntactic operations (i.e., external/internal merge). Thus, if one assumes the presence of the evaluative hierarchy in (3) in the word system, then it will follow that the same evaluative hierarchy exists across different syntactic categories (i.e., words and phrases). Following this line of reasoning, Shimada and Nagano make the following two assumptions: first, the CP domain includes the evaluative hierarchy in (3), and second, the evaluative hierarchy selects the IFoc projection as its complement. These assumptions lead us to the following syntactic structure:

(5) … Force … Eval(uative) … IFoc … Fin TP …

Emphatic IFoc *Assertion*

In (5), the IFoc criterion will be satisfied if the IFoc element and the fronted verbal element shares the IFoc feature and the Evaluative feature through the Spec-Head agreement.[3] Their hypothesis will be interpreted as a theoretical attempt to implement the idea that in addition to new information, the speaker's evaluation is involved in emphatic IFoc fronting.

[3] Under this approach, a slight modification will be needed to the notion of the Spec-Head agreement because the focus element in [Spec, IFocP] establishes the Spec-Head agreement with the IFoc head, but this focus element also has to establish the Spec-Head agreement with the Evaluative head.

Obviously, the hypothesis in (5) needs more detailed theoretical backgrounds in order to examine its validity; however, it seems that the semantic values related to the evaluative hierarchy provide a potential first step toward exploring the validity of the hypothesis in (5). For example, the evaluative hierarchy in (3) indicates the relationship between the speaker's evaluation and the bigness/smallness in size (i.e., the augmentative/diminutive heads). Roughly speaking, this will imply that the speaker's evaluation can be degree-oriented. If we confine our focus to the augmentative/diminutive aspects of the evaluative hierarchy in (3), it will be expected that emphatic IFoc fronting contributes to a degree-intensifying meaning. In what follows, what I would like to share with Shimada and Nagano (2016) is the idea that emphatic IFoc fronting is derived by grammatically encoding new information and the speaker's evaluation (cf. (5)).

In connection with this, it is worth mentioning that an evaluative adjective like *gigantic* shows an interesting modification pattern. The contrast between *big* and *gigantic* shows that *gigantic*, but not *big*, conveys the extreme degree of size (e.g., *very big vs.* ?? *very gigantic*), which seems to be related to the augmentative aspect of the speaker's evaluative meanings (cf. Cinque (2015)). According to Morzycki (2012), extreme adjectives such as *gigantic* restrict their degree modifiers to those which also encode extremeness (cf. (7)).

(6) Your shoes are downright (^{OK} gigantic, ?? big).

(Morzycki (2012: 568), with modifications)

(7) simply, just, positively, absolutely, flat-out, full-on, out-and-out, downright, outright, straight-up, balls-out (Morzycki (2012: 569), with modifications)

According to Morzycki, an adjective like *gigantic* is lexically extreme (i.e., an item which involves an extreme degree meaning as part of its lexical entry), and it combines with an

extreme-degree intensifier such as *downright*. In his words (Morzycki (2012: 606)), "[e]xtreme adjectives are those that relate an individual to a point on a scale on beyond [some] contextual limits." Thus, extreme adjectives are often said to be implicit superlatives (Cruse (1986)). These arguments suggest that extreme adjectives constitute a distinct natural class specialized for expressing extremeness (i.e., the extreme degree involving the speaker's evaluative judgment).

Bearing the background mentioned above in mind, this section aims to examine particle fronting phenomena in German, which is an instance of the verb-second (V2) phenomenon (Trotzke and Quaglia (2016: 119).

(8) RAUS hat Costa Rica die Engländer geschmissen! (= (1a))
PRT(out) has C. R. the English.PL thrown
'The team of Costa Rica kicked out the English team.'

On the basis of Morzycki's (2012) analysis of extreme-degree adjectives, Trotzke and Quaglia (2016) claim that certain instances of particle fronting in German carry a non-contrastive degree-intensifying interpretation: that is, certain particle-fronting patterns function to name a strongly emotionally evaluated situation without yielding discourse partitions. Their claim means that emphatic IFoc fronting is substantiated from certain particle-fronting phenomena in German; at the same time, it implies that emphatic IFoc fronting is associated with the speaker's evaluation (i.e., extreme-degree intensification). This section, furthermore, extends Trotzke and Quaglia's approach to particle fronting in English, which is, in general, seen as an instance of locative inversion (e.g., Emonds (1976)).

(9) Up and up went the balloon.

This section is organized as follows. Section 3.2.2. reviews Trotzke and Quaglia (2016) and shows that particle fronting in German carries an emphatic IFoc fronting interpretation; the emphatic IFoc interpretation points to its relation to the notion of extreme modification in Morzycki's (2012) sense (cf. (7)). Section 3.2.3 extends the emphatic IFoc approach to particle fronting in English, and Section 3.2.4 proposes the analysis of it. Section 3.2.5 further extends the proposed analysis to comparative substitution. Section 3.2.6 discusses some consequences of the proposed analysis. Section 3.2.7 offers concluding remarks.

3. 2. 2. Troztke and Quaglia (2016)

3. 2. 2. 1. Semantic Transparency

One of the important issues concerning particle verbs is what kinds of factors are involved in applying syntactic operations to verbal particles. For example, Jackendoff (2002) argues that particle fronting in English can be applied to those verb particles which shows semantic transparency (i.e., compositionality). According to his argument, the directional *up* is part of a non-idiomatic, transparent particle verb configuration and therefore is licit in particle fronting. In contrast, the idiomatic particle *up* (as in *blow up*) lacks the directional meaning and hence cannot be fronted.

(10) a. Up marched the sergeant.

b. * Up blew the building.

(Jackendoff (2002: 75)))

Furthermore, some previous studies point out that a similar restriction is imposed on particle fronting in German (e.g., Wurmbrand (2000)).

(11) a. Auf hat er die Tür gemacht (und nicht zu). (= transparent)
PRT(open) has he the door made and not PRT(closed)
'He opened (not closed) the door.'

b. * Auf hat Peter mit dem Trinken gehört. (= non-transparent)
PRT(up) has Peter with the drinking heard
'Peter stopped drinking.'

(Troztke and Quaglia (2016: 111))

By exploring what types of factors determine the notion of "semantic transparency," Trotzke and Quaglia (2016) identify expressive patterns of particle fronting in German. What follows shows some details of their arguments.

In order to make clear the notion of "semantic transparency," Trotzke and Quaglia (2016) propose that what determines semantic transparency is decomposed into two binary features: [±predicative] and [±contrast]. The former is proposed to measure the relation of dependency between the verb and the particle, as shown in (12).[4]

(12) Particle entailment test

If [X V NP Pt] entails [NP PredV Pt], then assign Pti. If not, assign Ptd.
PredV = predication verb (BE, BECOME, COME, GO, STAY)

(Lohse, Hawkins and Wasow (2004: 245))

Roughly speaking, this test amounts to saying that a particle verb is referred to as transparent if the particle can be a predicate in a copula construction (cf. Wurmbrand (2000)). For example, a sentence like "she went out" entails "she is/was out," and hence the verb particle

[4] The following abbreviations are used in (12): i = independent; d = dependent.

out is seen as transparent.[5]

The other test is the particle contrastivity test, which is defined as in (13).

(13) Particle contrastability test

Assign a particle Prt (in a particle verb [Prt V]) the feature [+contrast] iff Prt triggers a set of alternatives different from the empty set.

(Troztke and Quaglia (2016: 114))

This test enables us to identify whether a given particle verb is contrastive or not. For example, the particle *auf* in (14a) is a member of a set of alternatives where the meaning of V (*machen* 'make') is constant (i.e., *auf-machen* 'lit. open-make' vs. *zu-machen* 'lit. close-make'); accordingly, *auf* bears the contrastive feature. In contrast, the same particle *auf* in (14b) is not a member of a set of alternatives where the meaning of V (hören 'listen') is constant because *hören* in *aufhören* does not keep the meaning 'to hear.' If the meaning of V (hören 'listen') is kept, the particle *zu* can form a set of alternatives and hence bears the contrastive feature, as shown in (14c).

(14) a. (auf, zu)-machen

'to open/to shut'

[5] More precisely, they use the parameter value [± autonomous], but for the sake of simplicity, I will use the notation [± predicative]. It has been argued that the copula test is too restrictive in the context of particle verbs, because some motion verbs such as *carry* combine compositionally with particles such as *out*, although the particle verb fails the copula test (e.g., carry the ball out vs. * the ball is out) (cf. McIntire (2002), Cappelle (2008)). This point, however, does not raise any problem in the following discussions, because what is crucial in licensing the expressive patterns of particle fronting turns out to be whether a non-contrastive particle verb has an expressive meaning or not.

b. (auf, #zu)-hören

'to stop/to listen'

c. (zu, weg)-hören

'to listen/to not listen'

(Troztke and Quaglia (2016: 115))

If the contrastive particle in (14a) undergoes fronting, then the particle fronting sentence receives a contrastive reading.[6]

(15) Auf hat er die Tür gemacht (und nicht zu). (= (11a))

PRT(open) has he the door made and not PRT(closed)

'He opened (not closed) the door.'

On the basis of the typology of particle verbs, Trotzke and Quaglia (2016) observe that expressive patterns of particle fronting are restricted to the cases in which the fronting operation is applied to expressive, non-contrastive verb particles.[7] The next subsection reviews their arguments in details.

3. 2. 2. 2. Expressive Particle Fronting

The first point to be mentioned is that expressive patterns of particle fronting are observed when particle fronting is applied to those particles with the [-contrastive] feature.

[6] In German V2 phenomena, there is no clear syntactic distinction between topicalization and focalization; both of them share the same V2 word order. For this reason, the contrastive reading in (15) can be ambiguous between contrastive focus and contrastive topic.

[7] According to Trotzke and Quaglia (2016), [-predicative] verb particles may undergo particle fronting when they are [+contrastive]. For the sake of simplicity, I will confine my attention to [+predicative] verb particles.

To see this, let us consider the following mini-discourse. In the following event-reporting context, the speaker is trying to introduce the exclamatory statement sentence with particle fronting after making the sentence-focus *wh*-question:

(16) Stell Dir vor! ('Guess what!'):

a. RAUS hat Costa Rica die Engländer geschmissen!
PRT(out) has C. R. the English.PL thrown
'The team of Costa Rica kicked out the English team.'

b. ? RAUS hat die Band ihr neues Album gebracht!
PRT(out) has the band their new album brought
'The band published their new album.

(Troztke and Quaglia (2016: 119))

Trotzke and Quaglia argue that fronting non-contrastable particles basically result in a sentence-focus (thetic) statement that can have the flavor of a sentence exclamation. In the above examples, the particle verbs entail certain remarkability components which make them acceptable in the context that is associated with the interpretation of unexpectedness on the part of the speaker. Trotzke and Quaglia, furthermore, point out that the remarkability meaning component comes in two flavors, depending on the meaning of the particle verb. According to Trotzke and Quaglia, the particle verb *rausschmeißen* 'kick out' in (16a) is an expressive verb in the sense that it serves to name strongly emotionally evaluated situations (i.e., to get rid of someone/something in a harsh way.), while the particle verb *rausbringen* 'publish' in (16b) is not an expressive particle. More concretely, the speaker in (16a) presents the elimination of England by Costa Rica as a highly remarkable and unexpected situation. While *rausschmeißen* entails that a team has eliminated a competitor in a

stunning way, *rausbringen* does not denote any such remarkability scale that could serve as the basis for expressing the speaker's evaluation: either the band published or did not publish their album. According to Trotzke and Quaglia, there is a possible context in which (16b) is not so bad. For example, if a band is known to spend many years in the studio before releasing a new album, the speaker might express her or his surprise about the situation that the publishing process has been completed faster than she or he expected. In this case, the speaker's expectation will be violated on the basis of a likelihood ranking with respect to the speed of publishing of that particular band. In other words, the binary option of publication (either publish or not) is enriched by a degree-dimension related to the factor 'speed.' As is clear from this scenario, however, the degree component is derived from the contextual factor, not from the lexical meaning of the particle verb itself.

In order to make clear the distinction between the expressive particle verb *rausschmeißen* 'kick out' and the particle verb *rausbringen* 'publish,' Trotzke and Quaglia (2016) mentions Morzycki's (2012) extreme modification. As we have seen in Section 3.2.1, extreme adjectives only occur with adjectives that can be analyzed as conveying expressive or extreme content.

(17) Your shoes are downright (^{OK} gigantic, $^{??}$ big). (= (6))

(18) simply, just, positively, absolutely, flat-out, full-on, out-and-out, downright, outright, straight-up, balls-out (=(7))

Adopting this extreme-degree modification as a test, Trotzke and Quaglia identify expressive, non-contrastive particle verbs by examining whether a particle verb co-occurs with the extreme-degree modifier *regelrecht* 'downright.' They argue that those which allow the co-occurrence with it also naturally license expressive patterns of particle fronting:

(19) a. Costa Rica hat die Englander regelrecht rausgeschmissen.
C. R. has the English.PL downright PRT(out).thrown
'The team of Costa Rica downright kicked out the English team.'

b. ?? Die Band hat ihr neues Album regelrecht rausgebracht.
the band has their new album downright PRT(out).brought
'The band downright published their new album.'

(Troztke and Quaglia (2016: 121), underlining mine)

The natural co-occurrence of the particle verb *rausschmeißen* 'kick out' with the extreme degree modifier *regelrecht* 'downright' indicates that the particle verb in question allows extreme-degree modification, which further licenses expressive patterns of particle fronting. Taken together with the unacceptable data in (19b), the fact in (19a) indicates the correlation between the availability of extreme modification and the acceptability of expressive patterns of particle fronting.

To summarize, the expressive type of particle fronting in German is licensed by applying the fronting operation to expressive, non-contrastive verb particles. In order to account for the pragmatic properties (i.e., the compatibility with the sentence-focus context and evaluative modification patterns), following Cruschina (2011) and Bianchi, Bocci and Cruschina (2016), Trotzke and Quaglia (2016) propose that fronting of an expressive verb particle targets [Spec, IFocP] (i.e., [Spec, EmpP] in their term).

(20) [$_{\text{ForceP}}$ [$_{\text{EmpP}}$ raus [$_{\text{Emp0[contrast]/[intensity]}}$ … [$_{\text{VP}}$… raus…]]]]

(Troztke and Quaglia (2016: 134))

Under the present proposal, their argument has another important consequence for the

emphasis involved in emphatic IFoc fronting: that is, in the case of expressive patterns of particle fronting, the fronting operation (i.e., emphatic IFoc fronting) applies to those particle verbs which allow (expressive) extreme-degree modification. This fact will be expected under Shimada and Nagano's (2016) idea that emphatic IFoc fronting involves new information and the speaker's evaluation.

3. 2. 3. Extension to Particle Fronting in English

The previous section has argued that Shimada and Nagano's (2016) hypothesis is empirically supported by expressive patterns of particle fronting in German. This section aims to provide further support for their claim, by extending the IFoc approach to particle fronting in English, which is illustrated below:

(21) Up and up went the balloon.

Before proceeding, a word is in order about the difference between particle fronting in German and that in English. As we have seen in the previous section, particle fronting in German is an instance of V2 phenomenon in which the fronted particle is followed by the fronted finite verb; in this case, no restriction is imposed on the class of predicates, and hence, particle verbs can be intransitive or transitive. In contrast, particle fronting in English is grouped with locative inversion into the so-called directional adverbial preposing in the literature (cf. Emonds (1976)). One of the common features of locative inversion is that it is restricted to unaccusative verbs, or verbs of appearance/existence (Coopmans (1989), Bresnan (1994)).

(22) a. On the corner was {standing/*drinking} a woman.

b. Toward me {lurched/*looked} a drunk.

c. Into the hole {jumped/*excreted} the rabbit.

(Bresnan (1994: 78))

Throughout this section, as far as concerning the comparison between particle fronting in German and that in English, I will regard this verbal restriction is an independent, language-specific factor which affects the grammaticality of particle fronting in English.

3. 2. 3. 1. Some Basic Properties of Locative Inversion in English

Having seen the cross-linguistic difference in participle fronting, let us turn to some insights obtained in previous studies on particle fronting in English. Since the early stage of the generative framework, particle fronting has been seen as an instance of main-clause phenomenon, and Emonds (1976) analyzes it under the notion of root transformations (i.e., Directional Adverbial Preposing). For the expository reason, in what follows, I will use Locative Inversion (LI) as a cover term to refer to sentences like the followings (including particle fronting):

(23) a. Down the street rolled the baby carriage!

b. Round and round spins the fateful wheel!

c. Up trotted the dog!

(Emonds (1976: 29))

Furthermore, Emonds (1976: 29) observes that "[t]his construction [=Directional Adverbial Preposing] seems limited to exclamatory statements." This observation seems to motivate the hypothesis that the derivation of LI involves IFoc fronting. In addition to the

observation made by Emonds, the following list, though not exhaustive, summarizes the general properties of LI which have already been pointed out in the previous studies:

(24) a. Verbal Restriction: verbs of appearance/existence (e.g., Bresnan (1994))

b. Pragmatics: the compatibility with the out-of-the-blue (sentence-focus) context (Green (1980), Takami (1995)) / the compatibility with the thetic judgment context (Fukuchi (1985), Hasegawa (2008, 2010))

c. Presentational Focus: the post-verbal NP as presentational focus (Rochemont (1986))

As observed by Green (1980) and Takami (1995), LI is naturally used to introduce a sentence-focus statement. In fact, it is also possible to find attested data which suggest the compatibility of particle fronting with the sentence-focus context, as shown below.

(25) Well, dear old Mike, he refused the thought of a hospital and the need of a doctor. Instead, he stoically accepted the services of one of the Army fellows who was visiting at the time. It turned out he was a trained medic, so supposedly knew what he was doing. Guess what? Out came the awful old *Plumpy Plaster*!

(Our Wandering Years, Ridgway (2006: 57))

LI is also known to impose an interesting restriction on the information structure; the post-verbal DP cannot be occupied by anaphoric pronouns which indicate their connection with the (pre-existing) referents in the discourse, as shown in (26).

(26) * Rose$_i$? Among the guests of honor was sitting she$_i$/her$_i$.

(Bresnan (1994: 86))

(27) a. Into the forest ran HIM.

b. Next to his father stood HER.

(Rochemont (1986: 114))

The examples in (27a, b) show that LI allows the occurrence of a pronoun at the post-verbal position, but its interpretation is restricted to a deictic one. As argued by Hasegawa (2008, 2010), these properties will be well understood if LI indicates its close relation to the presentational function, in which the speaker vividly describes the situation in question as if she or he actually experienced it. The presentational function is also associated with the tense restriction imposed on particle fronting. For example, scholars claim that particle fronting is basically incompatible with any auxiliaries (Emonds (1976: 16-17)), with the exception of the auxiliary *will*. The preference for the simple past/present tense seems to suggest that particle fronting mainly represents a situation as if it suddenly happened before the eyes of the speaker and discourse participants. The nonoccurrence of the progressive aspect indicates the same point:

(28) * Down was coming the snow. (Cappelle (2002: 47))

The progressive represents a situation as ongoing, without reference to its start and end points. As Cappelle argues, the speaker and the discourse participants are not eyewitnesses of the entire situation, and therefore, the progressive form does not fit well with the idea of suddenness or sudden discovery.

The previous arguments reviewed above will motivate the hypothesis that LI is derived

by IFoc fronting. Let us consider the particle fronting sentence in (29a); in this case, the post-verbal DP and the [+predicative] particle forms a predication relationship. Therefore, I assume that the postverbal DP and the particle forms a small clause (SC), as shown in (29b) (cf. Stowell (1981)). Under this assumption, the particle verb *gush* takes the SC as its complement, and the particle occurs as the SC predicate. (29c) shows that the IFoc criterion is satisfied by fronting the particle to [Spec, IFocP] and the finite verb to the IFoc head.[8]

(29) a. Out gushed the secrets! (= the secrets were out.)

b. [$_{vP}$ gushed [$_{SC}$ [$_{DP}$ the secrets] [$_{PartP}$ out]]]

c. ... [$_{EvalP}$ [$_{IFocP}$ [$_{PartP}$ out]$_i$ [$_{IFoc'}$ gushed$_j$ [$_{FinP}$ [$_{IP}$ [$_{vP}$ t$_j$ [$_{SC}$ [$_{DP}$ the secrets] t$_i$]]]]]]]

Confining our focus to particle fronting, the next subsection presents some arguments for the hypothesis that particle fronting in English is derived by emphatic IFoc fronting.

3. 2. 3. 2. Particle Fronting in English as Emphatic IFoc Fronting

This subsection provides supportive evidence for the hypothesis that particle fronting in English is derived by emphatic IFoc fronting, by observing (i) the information structural/grammatical status of the sentence-initial particle and (ii) the lexical property of the preposed verb particle.

First, the preposed particle shows the dual status, the subjecthood (at some level) and focal. Cappelle (2002: 65, fn. 4) illustrates this property by the following examples (the original observation is attributed to Ray Jackendoff):

[8] For the sake of simplicity, I omit the traces indicating the head movement process.

(30) a. ... and in 5, 10, or 15 seconds ..., out'll come your answer.

(www.brigada.org/today/bt950825.tml)

b. And as their load seems to get lighter, down'll come a cold hard rain.

(www.christianstories.com/stories/thereis shelpalongthesay.html)

The data above show that the auxiliary *will* can be contracted and attached to the fronted particle. At the same time, the informational structural status of each fronted particle indicates that it is focal in some sense rather than topical (cf. Bresnan (1994) for the treatment of the preposed locative PP in LI as the subject at an abstract level and a topic at the pragmatic level; cf. Ura (2000); Doggett (2004); Mikami (2011)). The above phonological property shows that there is no comma intonation between the fronted particle and the predicate; rather, they seem to show the focus-verb adjacency, which is one of the defining characteristics of emphatic IFoc fronting in Romance languages.

The second argument comes from the observation on the lexical property of the particle verb. According to Trotzke and Quaglia's (2016) argument, expressive patterns of particle fronting are limited to non-contrastive particles. In connection with this, let us consider the following set of particle verbs with [+ predicative, -contrastive].

(31) a. The secrets gushed out.

b. gush (out, #in) [-contrastive]

c. The secrets were out. [+predicative]

(32) a. A new movie came out.

b. come (out, #in) [-contrastive]

c. A new movie was out. [+predicative]

The particle *out* in the particle verb *gush out* is [+predicative, -contrastive] because the particle functions as the predicate of the subject (with the meaning of "a secret document/piece of information is known to the public") and does not have any other particle as its alternative while keeping the meaning of the verb. The same is true of the particle *out* in the particle verb *come out*. One crucial difference between these two particle verbs concerns the presence of an extreme degree. In the case of *gush out*, the particle verb implies that a large number of secrets are (unintentionally) known to the public quite suddenly. In the case of *come out*, on the other hand, the option is binary, whether a new movie is published or not. According to my informants, this difference in extreme degree is correlated with whether they co-occur with the evaluative/extreme modifier *just*.

(33) a. The secrets just gushed out.

b. ?? A new movie just came out.

The contrast above shows that the particle verb *gush out*, but not the particle verb *come out,* is an expressive particle verb; in this case, the sentence implies that a large number of specific secrets (that the speaker wants to keep) are known to the public so suddenly. My informants also reported that the difference in extreme degree connotation between the two verb particles crucially affects their acceptability as a reply to the sentence-focus *wh*-question, as shown below:

(34) [Context] The speaker A, as a narrator, is trying to introduce an exclamatory statement after making the sentence-focus *wh*-question.

A: Guess what?

a. Out gushed the secrets!

b. ?? Out came a new movie!

In the case of the sentence in (34a), the speaker's statement is interpreted as conveying that she or he is emphasizing that the secrets are known to the public so suddenly. The suddenness value (the extreme connotation) is ascribed to the lexical meaning of the particle verb *gush out*, and that value is emphasized by fronting the particle in question. In the case of the sentence in (34b), on the other hand, the particle verb *come out* lexically means "something is published," without any additional extreme degree connotation. For this reason, the particle verb provides the binary option (e.g., be published or not), which can be enriched by certain contextual information indicating that the publication of some movie is delayed for some particular reason, and after a certain period, the movie is finally published. The lack of an extreme degree connotation renders the sentence with particle fronting in (34b) less acceptable as an exclamatory statement introduced by the sentence-focus *wh*-question. These facts suggest that the acceptability of particle fronting in English depends on the presence of the expressive (degree-intensifying) meaning of a particle verb. The expressive status of the verb particle *gush out* can be independently shown by the fact that the expressive meaning can be intensified by repeating the particle *out* (e.g., *The secrets gushed out and out*. / *Out and out gushed the secrets*.). In the case of the non-expressive particle verb *come out*, it is impossible to repeat the particle (e.g., ?? *New movies came out and out*. / ?? *Out and out came new movies*.).

Finally, let us consider the set of particle verbs with [+ predicative, +contrastive].

(35) a. go (up, down) [+contrastive]

b. The shares went up/down = The shares were up/down. [+predicative]

(36) a. Up went the shares, not down. (Cappelle (2002: 53), with modifications)

b. ?? On the wall hung canvasses, but not on the easels.

(Bresnan (1994: 86))

The particle *up* in the particle verb *go up* is [+predicative, +contrastive] because the particle functions as the predicate of the subject and has the alternative particle (i.e., *down*) while keeping the verbal meaning unchanged. If the particle *up* undergoes particle fronting, the resulting sentence requires a contrastive context. For example, the sentence in (36a) is acceptable only if the speaker's previous expectation (e.g. the shares should go down) is violated. In this case, the negative tag may indicate the speaker's previous expectation. According to my two informants, (36a) is marginal as CFoc (i.e., corrective focus) on the preposed particle.[9] A similar observation is reported on LI by Bresnan (1994), who states that CFoc on the preposed locative PP is marginal. This fact suggests that fronting of a [+ contrative] verb particle results in a (non-contrastive) counter-expectation interpretation (cf. Gary (1976) for a similar observation on LI).

3. 2. 4. The Derivation of Particle Fronting in English

The preceding two subsections have identified the following three properties concerning particle fronting in English: the presentational function, the subject-hood of the preposed particle, and the (non-contrastive) focal nature of the preposed particle (i.e., the degree-intensifying function). Among these three properties, the third property speaks for

[9] In this case, according to one of my informants, adding the negative tag to the end of the sentence contributes to emphasizing the violation of the speaker's expectation. My informants also reported that CFoc on the verb particle is more natural in the following cases:

(i) a. The shares went UP (, not DOWN).
b. UP the shares went, (not DOWN).

These patterns naturally fit well with CFoc (CFoc in situ or CFoc fronting without SAI).

the possibility that particle fronting is derived by fronting the verb particle to [Spec, IFocP]. However, the IFoc fronting approach needs additional assumptions to account for the other two properties. This section provides a detailed analysis of the derivation of particle fronting in English.

3. 2. 4. 1. The Presentational Function as a Clause Type

Let us begin with the presentational function of particle fronting. The present study follows Hasegawa's (2008, 2010) cartographic analysis of presentational sentences including LI. Hasegawa argues that thetic judgment sentences (e.g., *Inu ga hasitte iru* 'A dog is running' (Kuroda (1979: 8))) in Japanese constitute an independent syntactic representation which shares the characteristics of presentationals such as LI in English. [10] The core assumption of Hasegawa's proposal is that the Force-Fin system is responsible for clause typing and tense interpretation. For instance, the declarative complementizer *that* requires the clause to be finite; this fact is captured by assuming that the Force head communicate with the Fin head and specifies the value of the Fin head as finite (cf. (37a)). The finite Fin head further selects the I head that is consistent with the finiteness interpretation of the

[10] For the sake of discussion, I will focus on LI here. Hasegawa (2008, 2010) discusses thetic judgment sentences in Japanese and presentational sentences such as LI and the Presentational-*there* construction in English. Hasegawa characterizes Japanese thetic judgment sentences as follows:

(i) a. *Typical Predicate types*: (i) of temporal-existence and emergence, such as *i-ru*, *a-ru* 'be, exist,' *ku-ru* 'come,' *tuk-u* 'arrive'; (ii) of sudden obvious change of state or temporal state, such as *koware-ru* 'break-intr.,' *oti-ru* 'drop,' *byooki-da* 'be sick'; (iii) activity/process predicates with *te-iru* 'be-stative.'
b. *Person restriction on the subject*: Neither the 1st person nor the 2nd person.
c. *Tense interpretation*: the 'non-perfect' *-(r)u* form of activity/change predicates → the immediate perfect or the on-going aspect; the 'perfect' *-ta* form of activity/change predicates → the immediate perfect, not the simple past.
(Hasegawa (2010: 11))

These characteristics are also attributed to the Force-Fin system, which is reviewed in what follows.

sentence. This system means that the Force head determines the clause type of a sentence in tandem with the Fin head.

(37) a. [$_{\text{ForceP}}$ that$_{[+\text{decl}]}$ ... [$_{\text{FinP}}$ Ø$_{[+\text{fin}]}$ [$_{\text{IP}}$ …]]]

b. [$_{\text{ForceP}}$ into the room$_{j[\text{presentational}]}$ ... [$_{\text{FinP}}$ came$_{[\text{thetic}]i}$ [$_{\text{IP}}$ ... [$_{v\text{P}}$ t$_i$ a cat t$_j$]]]

Adopting the Force-Fin system, Hasegawa proposes that the presentational function of a sentence belongs to the set of clause types, and that it is syntactically realized by checking the presentational feature on the Force head and the thetic feature on the Fin head (cf. (37b)). Here, "thetic" is used as a cover term for the finiteness/tense feature that is compatible with the presentational function (e.g., the preference for the simple present/past tense (cf. (28)). The presentational feature is checked off by preposing a locative phrase to [Spec, ForceP], and the latter is checked off by the finite verb fronted to the Fin head (or through some AGREE relation between the Fin head and the finite verb). As a result of these syntactic operations, LI is derived; furthermore, the tense restriction on the finite verb is also accounted for as a consequence of checking the thetic feature off at the Fin head.

By slightly modifying Hasegawa's (2008, 2010) analysis, I propose that the verb particle with the presentational feature fronts to [Spec, IFocP]; then, the Force head searches and agrees with the fronted verb particle. As a result of this searching operation, the clause type of the sentence is determined as 'presentational.'[11] In this modified analysis, the fronted verb particle occupies [Spec, IFocP] and obeys the focus-verb adjacency.

[11] This assumption departs from Hasegawa's (2010) condition on clause typing:

(i) Sentence types, or Force, must be morphologically identifiable, which is to be discernible either at a Spec of or at a Head of the C system.
(Hasegawa (2010: 17))

(38) a. Out gushed the secrets!

b. [$_{ForceP}$ ... [$_{EvalP}$ [$_{IFocP}$ [$_{PartP}$ out]$_i$ [$_{IFoc'}$ gushed$_j$ [$_{FinP}$ [$_{Fin'}$ t_j [$_{IP}$ t_i [$_{I'}$ t_j [$_{vP}$ [$_{v'}$ t_j [$_{SC}$ [$_{DP}$ the secrets] t_i]]]]]]]]]]

The post-verbal DP remains at its base position throughout the derivation. Here, it is assumed that the presentational focus is assigned to the DP in the SC.

By adopting and modifying Hasegawa's (2008, 2010) analysis, the present study has shown that the presentational function of particle fronting and the (non-contrastive) focus nature of the preposed particle are accounted for.[12] The next subsection introduces a mechanism which is responsible for the duality status of the preposed particle in particle fronting.

3. 2. 4. 2. The Dual Status of the Preposed Verb Particle

In Subsection 3.2.3.2, we have seen that the preposed particle in particle fronting plays a dual role: that is, the subject and the (non-contrastive) focus property. What the present analysis needs is a syntactic mechanism which accounts for the dual status of the preposed particle.

On the theoretical side, the dual status of the preposed particle means that it satisfies the EPP (Extended Projection Principle) requirement and the IFoc-criterial requirement. In other words, the preposed particle satisfies the EPP requirement, and it is forced to front to [Spec, IFocP] for some grammatical reason. In connection with this, I propose that the preposed particle is forced to move to [Spec, IFocP] due to the Thematic Resistance Principle proposed by Koopman (1984: 111).

[12] An open issue is whether the preposed PP in LI is a topic or a focus. Traditionally, the preposed PP in LI has been treated as a topic (Bresnan (1994)).

(39) Thematic Resistance Principle

Only [-V] categories may be θ-marked.

Intuitively, this principle states that predicative constituents cannot occupy the subject position. More precisely, the (thematic) subject position can by occupied by a [-V] constituent (e.g., a DP and a PP); no [+V] constituent can remain at the subject position. In the context of particle fronting, the thematic resistance principle prevent the [+V] verb particle from remaining at the subject position, and hence it obligatorily fronts to [Spec, IFocP].

Having the proposed derivation in mind, let us turn to auxiliary reduction (cf. (30)). If auxiliary reduction (AR) is momentarily understood as an instance of cliticization (cf. Kaisse (1983)), the auxiliary (at the I head) will be allowed to cliticize onto the (structurally adjacent) subject in [Spec, IP] at PF. Kaise (1983: 99) proposes that "AR may not apply if the element following the auxiliary [at S-structure] is not the same as the element that follows it at NP-structure," to which *wh*-movement is applied.[13] The AR rule excludes the example in (40):

(40) I wonder where the party {is / * 's} Ø tonight. (Kaisse (1983: 93))

(41) a. I wonder [$_{CP}$ [$_{C'}$ [$_{IP}$ the party [$_{I'}$ is$_i$ [$_{vP}$ [$_{v'}$ t$_i$ [$_{PP}$ where]]]]]]]

b. I wonder [$_{CP}$ [$_{PP}$ where]$_j$ [$_{C'}$ [$_{IP}$ the party [$_{I'}$ is$_i$ [$_{vP}$ [$_{v'}$ t$_i$ t$_j$]]]]]]

In (41a), the auxiliary is followed by the *wh*-phrase *where*, but in (41b), *wh*-movement has

[13] Kaisse (1983) adopts the syntactic model in which NP-structure is sandwiched between D-structure and S-structure. In this model, Move NP is applied to D-structure, which leads to NP-structure. NP-structure is the representational level to which *wh*-movement (Move *wh*) is applied. Thus, (41a) is the representation at NP-structure, and (41b) is the representation at S-structure, to which the AR rule is applied.

removed the *wh*-phrase from its original position after the auxiliary. Therefore, the AR rule is not applied in (41b). Having the AR rule in mind, let us consider the following contrast:

(42) a. Which dog's been jumping on the sofa?

b. * Which dog's he buying?

(Kaisse (1983: 103))

It is well known that AR can apply in subject *wh*-questions, but not in object *wh*-questions. Assuming that *wh*-movement and SAI are applicable to subject/object *wh*-questions, let us consider the following configurations:

(43) a. $[_{CP}$ Which dog_i $[_{C'}$ has_j $[_{IP}$ t_i $[_{I'}$ t_j $[_{VP}$ been jumping on the sofa]]]]]? (= (42a))

b. * $[_{CP}$ Which dog_i $[_{C'}$ was_j $[_{IP}$ he $[_{I'}$ t_j $[_{VP}$ buying t_i]]]]]? (= (42b))

In (43a), there is no intervening overt lexical subject between the inverted auxiliary *has* and its trace. If one stipulate that traces are invisible, what follows the auxiliary *has* will be the VP element throughout the derivation.[14] Therefore, the AR rule can be applied to the subject *wh*-question in (42a). In (43b), the overt lexical subject in [Spec, IP] intervenes between the inverted auxiliary and its trace; in this case, what follows the auxiliary changes from the VP element to the overt lexical subject in [Spec, IP]. Hence, the AR rule cannot be applied to the object *wh*-question in (43b).

Basically, the same AR mechanism will account for the AR pattern observed in the context of particle fronting in English (cf. (30)). The AR rule can be applied to the inverted auxiliary *will* at the IFoc head because what follows the auxiliary is the verb throughout the

[14] This stipulation must be derived from some principle or theoretical concept.

derivation (under the stipulation that traces are invisible).

(44) a. ... and in 5, 10, or 15 seconds ..., out'll come your answer. (= (30a))

b. [$_{ForceP}$ ... [$_{EvalP}$ [$_{IFocP}$ [$_{PartP}$ out]$_i$ [$_{IFoc'}$ will$_j$ [$_{FinP}$ [$_{Fin'}$ t$_j$ [$_{IP}$ t$_i$ [$_{I'}$ t$_j$ [$_{vP}$ [$_{v'}$ come [$_{SC}$ [$_{DP}$ your answer] t$_i$]]]]]]]]]]]

This section has proposed the IFoc fronting analysis of particle fronting in English. If it is possible to show that the proposed analysis can be extended to another linguistic phenomenon, it will receive additional independent evidence. The next section aims to extend the proposed analysis to comparative substitution, which is argued to be an instance of preposing around BE (Emonds (1976)).

3. 2. 5. Further Extension to Comparative Substitution

The previous section has shown that emphatic IFoc fronting is substantiated from particle fronting in English. Particle fronting has traditionally been seen as a type of main clause phenomenon which ends up yielding emphasis. The proposed analysis implies that the yielded emphasis in particle fronting is associated with a (non-contrastive) degree-intensifying reading.

Limiting our focus to the emphatic aspect stated above, this section aims to extend the proposed analysis to the linguistic phenomena produced by the comparative substitution rule proposed by Emonds (1976).[15] Emonds (1976: 35) defines the comparative substitution rule as "the rule by which predicate adjective phrases whose heads are compared by means of *more*, *less*, *most*, *least*, or *as* are permuted with the subject NP."

[15] Comparative substitution is subsumed under the term Preposing around BE. Other instances of preposing around BE include participle preposing and PP substitution.

(45) a. Most important has been the establishment of legal services.

b. Just as surprising was his love for clothes.

c. Most embarrassing of all was losing my keys.

d. No less corrupt was the ward boss.

e. Equally difficult would be a solution to Russell's paradox.

(Emonds (1976: 35), with modifications)

According to Fukuchi (1985: 112-113), comparative substitution is acceptable in a certain degree-comparison context, as shown by the facts in (45a-e). One related issue is what type of degree comparison is involved in comparative substitution. The present section provides supportive arguments for the claim that comparative substitution, as well as particle fronting, is associated with a degree-intensifying function.

Let us begin our discussion with the following example:

(46) a. Losing my keys was (absolutely) most embarrassing of all.

b. Most embarrassing of all was losing my keys. (= (45c))

The neutral sentence in (46a) includes an adjectival predicate taking the superlative form as its predicate. In this case, the sentence neutrally states that losing one's keys was most embarrassing of all; the superlative meaning can be intensified by the degree modifier *absolutely*, which also functions as the extreme-degree modifier (cf. (7)). According to my informants, the sentence with comparative substitution in (46b) conveys the same propositional content as the neutral sentence in (46a) does; however, (46b) functions to intensify the superlative meaning.[16] On the structural side, comparative substitution is

[16] According to my informants, basically, the same is true of the other examples in (45b-

similar to particle fronting in the sense that the inverted predicative element is followed by the verbal auxiliary. This structural similarity will motivate the idea that comparative substitution is reduced along with particle fronting to emphatic IFoc fronting. Traditionally, comparative substitution, as well as particle fronting, is said to be an instance of root transformation which yields "emphasis." An important issue is what the nature of the "emphasis" in comparative substitution is, but there are few previous studies conducted to explore it in detail. What follows shows that the emphasis involved in comparative substitution is also characterized under the notion of the degree-intensifying function.

Before proceeding further, let us recall Morzycki's (2012) classification of extreme-degree adjectives and non-extreme degree adjectives. According to Morzycki, an adjective like *gigantic* is lexically extreme (i.e., an implicit superlative), and it combines with an extreme-degree intensifier such as *downright*. By contrast, an adjective like *big* does not carry such an extreme degree reading, and it cannot be modified by the same extreme degree modifier.

(47) Your shoes are downright (^{OK} gigantic, $^{??}$ big). (= (6))

(48) simply, just, positively, absolutely, flat-out, full-on, out-and-out, downright, outright, straight-up, balls-out (= (7))

The previous section has shown that particle fronting in German and English comes in two flavors. When particle fronting is applied to an expressive particle verb (e.g., *gush out*), the resulting sentence carries an intensified extreme-degree reading. When particle fronting is applied to a non-expressive verb particle (e.g., *come out*), the resulting sentence

e). In these examples, each of the comparative meanings is intensified as a result of comparative substitution.

requires a pragmatic context which pragmatically enriches a binary option. If comparative substitution is an instance of emphatic IFoc fronting, then it will be predicted that the same interpretive pattern is observed in comparative substitution.

The prediction stated above is borne out in the following example:

(49) [Context] Mary is talking to Bill about the Akita dog that her cousin has kept for three years.

Mary: After arriving at my cousin's house at around 10:00 a.m., he first led me to his nice garden. I found an Akita dog sleeping in the garden, Shelby. Guess what?

a. Humongous was Shelby!

b. ?? Big was Shelby!

cf. Shelby is just (^{OK} humongous, $^{??}$ big).

In this event-reporting context, the speaker (= Mary) is trying to convey to the interlocutor that she found so big an Akita dog in her garden. According to my informants, the comparative substitution sentence with the preposed expressive adjective in (49a) is acceptable; in this case, comparative substitution contributes to intensify the extreme-degree meaning of the extreme adjective. It should be noted here that extreme adjectives are also called implicit superlatives (Cruse (1986)); thus, the superlative meaning is intensified as a result of comparative substitution (cf. (49a), (46b)). By contrast, they found that the one with the preposed non-expressive adjective in (49b) is unacceptable in this context. If the same non-expressive adjective is modified by intensifiers such as *so* and *too*, then the sentence naturally fits well with the event-reporting context in (49).

(50) (Too big, So big) is Shelby!

The discussion provided so far indicate that comparative substitution, as well as particle fronting, functions to intensify the extreme-degree meaning that extreme adjectives carry. Before concluding this section, I would like to mention that the relevant degree intensifying function is not concerned with CFoc, whose primary function is correction. The following example illustrates this point:

(51) A: I heard that Taro's Akita dog is small.

B: ?? No, humongous is his Akita dog, not small.

B': No, his Akita dog is HUMONGOUS, not small.

According to my informants, the discourse flow in (51) is unacceptable; in this case, the comparative substitution sentence uttered by B is used to correct the assertion by A. However, the comparative substitution sentence does not work as a corrective statement.

To summarize, this subsection has shown that comparative substitution, as well as particle fronting, contributes to a (non-contrastive) degree-intensifying function. This implies that comparative substitution and particle fronting have structural and semantic similarities. On the structural side, the preposed predicative element serves as the source of the degree-intensifying function, and it is followed by the verbal auxiliary. On the semantic side, both comparative substitution and particle fronting contribute to a similar degree-intensifying function which correlates with Moryzcki's (2012) extreme-degree intensification. These syntactic and semantic similarities are naturally accounted for by extending the emphatic IFoc fronting analysis to comparative substitution.

3. 2. 6. Consequences

I have argued that emphatic IFoc fronting is substantiated from particle fronting and comparative substitution in English. This section argues some consequences of the present analysis for linguistic theories concerning the presentational function and mirativity.

3. 2. 6. 1. The Presentational Function, Focus Fronting, and Emphasis

In the literature, it has been argued that directional adverbial preposing and preposing around BE carry the presentational function and emphasis. For instance, Fukuchi (1985) argues that these two linguistic phenomena are compatible with the thetic judgment (all-sentence focus) context. According to Fukuchi, the source of the emphasis is associated with the post-verbal DP, which carries presentational focus. Thus, under this view, the emphatic property is derived from the notion of presentational focus. Another important insight gained from his study is that the fronting operation does not result in bipartite-information structures.

Hasegawa's (2008, 2010) proposal seems to imply that the presentational function is characterized in terms of clause typing. Within the cartographic framework, clause typing is syntactically encoded in the Force-Fin system. Therefore, if the Force head is specified as the presentational clause type, the Fin head (and the I head) must specify a certain limited tense interpretation that is consistent with the presentational function. These two requirements are satisfied by fronting a syntactic element to [Spec, ForceP] and applying SAI to the finite verb. Under Hasegawa's approach, the emphatic meaning seems to be associated with the presentational function.

The present approach to particle fronting is different from the two previous studies in that the emphatic nature of particle fronting is derived by fronting a verb particle to [Spec, IFocP]. Therefore, the satisfaction of the IFoc criterion yields the emphatic meaning (i.e.,

degree-intensification). The Force head searches and agrees with the fronted constituent in [Spec, IFocP], and determines the clause type of the sentence as presentational. The post-verbal DP remains in the *v*P domain and carries presentational focus at the base-position. Under the present approach, the emphatic meaning, the presentational function and the presentational focus carried by the post-verbal DP are independently encoded in the syntactic structure.

The present approach also implies that the two focus elements, the fronted IFoc element and the post-verbal DP with presentational focus, may co-occur in particle fronting in English; it should be noted here that in this case, the two focus elements do not co-occur in the CP domain. This situation is different from what we have observed in Section 2.7.

(52) * Quali d'i tà figi **schettu** jè? [Sicilian]
which of-the your sons single be.PRES.3SG
'Which of your sons is single?' (Cruschina (2011: 162))

Cruschina (2011) argues that under the two-layered focus hypothesis, IFoc fronting and CFoc fronting cannot co-occur in the same CP domain. In other words, the principle of one focus per sentence is sensitive to the syntactic configuration in which the CP domain includes more than one focus element. If this understanding is correct, it will be the case that the uniqueness condition does not hold for the case in which the CP domain includes a fronted IFoc element and the *v*P domain contains a DP with presentational focus.

Another crucial point is that the source of the emphasis is identified with the fronted constituent occupying [Spec, IFocP] in the present approach. Furthermore, IFoc fronting of the verb particle contributes to the unified assertive unit; since the propositional content is not presupposed in the case of IFoc fronting, the presentational focus assigned to the post-

verbal DP is allowed to occur in the sentence. It should be noted here that Rizzi's (1997) Focus criterion (i.e., the CFoc criterion) does not allow such a possibility. If we adopt the original Focus criterion, the Focus criterion will be satisfied by the fronted verb particle in [Spec, FocP (CFocP)] and the fronted finite verb at the Foc head in the derivation of particle fronting; the rest of the sentence is analyzed to be a presupposition. In this case, the post-verbal DP with presentational focus (i.e., new information) will occur in the presupposed propositional content (i.e., old information); this syntactic configuration potentially leads to a semantic contradiction. Thus, IFoc fronting serves as a useful theoretical tool in exploring and capturing the information structure of particle fronting. These conceptual findings will present a new approach to exploring what "emphasis" means in terms of the degree-intensifying function.

3. 2. 6. 2. Mirativity

The present proposal seems to have an important consequence for the research on mirativity in English. As briefly overviewed in Chapter 2, the notion of mirativity is proposed in the linguistic typology field on the basis of the observation that certain (agglutinative) languages have certain past-tense markers specialized for conveying new information that is unexpected. DeLancey (1997) defines mirativity as follows:

(53) The fundamental function of the category [i.e. mirativity] is to mark sentences which report information which is new or surprising to the speaker.

(DeLancey (1997:33))

For example, DeLancey argues that Sunwar, a Tibeto-Burman language, has two types of existential copulas, */tshə/* and */'baak-/*, which encode the distinction between established and new knowledge, respectively.

(54) a. Tangka Kathmandu-m tshaa.
Tangka Kathmandu-LOC TSHA.3SG
'Tangka is in Kathmandu.'

b. Tangka Kathmandum 'baa-tə.
Tangka Kathmandu-LOC exist-3SG.PAST
'Tangka is in Kathmandu.'

(DeLancey (1997: 41-42))

The existential copula, */tshə/*, in (54a) indicates the speaker's familiarity with the situation described in the propositional content, while the other one, */'baak-/*, in (54b) conveys that, because the speaker had not known that Tanga is Kathmandu, it is a recent, unexpected discovery. Thus, mirative markers indicate that a proposition is new to the speaker but is not yet integrated into his or her overall worldview. On the other hand, English is argued to have no tense markers dedicated to mirativity; more specifically, it is argued that in this language, prosody, lexical elements and certain constructions (e.g., it turns out S) are used to express mirativity (DeLancey (2001)).

Adopting the term mirativity as a cover term for a certain set of non-contrastive focus fronting phenomena observed in Romance languages, Cruschina (2011) proposes that focus fronting (i.e., emphatic IFoc fronting) contributes to a mirative meaning. Under his proposal, IFoc fronting will be seen as a grammatical means to express mirativity. Therefore, under Cruschina's view, there is no syntactic category specialized for expressing mirativity. Given this point, the unification of particle fronting and comparative substitution in English into IFoc fronting implies that this language also has recourse to IFoc fronting operations in expressing a mirative meaning.

Another important insight gained from the present approach (and Trotzke and Quaglia

(2016)) is that the notion of mirativity is associated with (at least) the degree-intensification function that is compatible with sentence focus (or thetic judgments). Mirativity is a relatively new research field, and hence more investigations will be needed to reach a better understanding of what kind of evaluation is involved in mirativity and how it is approached in linguistic theories.

3. 2. 7. Summary

Extending Trotzke and Quaglia's (2016) approach to particle fronting in English, this subsection has provided supportive evidence for the hypothesis that emphatic IFoc fronting is licensed by fronting (non-contrastive) evaluative verb particles. A non-contrastive verb particle is judged as evaluative/expressive if it naturally co-occur with evaluative (extreme) degree modifiers such as *just* and *downright*. If the fronting operation is applied to an evaluative verb particle, the resulting sentence with particle fronting naturally stands on its own. This section has also argued that the proposed analysis can be extended to comparative substitution.

3. 3. Negative Inversion in English[17]

3. 3. 1. Introduction

In the literature, the following contrast has been studied in terms of syntax and semantics:

(55) a. With no job would Mary be happy. [Negative Inversion]

b. With no job, Mary would be happy. [Adverbial Preposing]

(Haegeman (2012: 21))

[17] This section is a revised and extended version of Honda (2017a, c).

The two examples in (55) show that the negative PP *with no job* is preposed; however, the preposed PP is followed by the inverted auxiliary in (55a). Hence, a sentence like (55a) with Subject-Auxiliary-Inversion (henceforth SAI) is usually referred to as Negative Inversion (hereafter NI) and a sentence like (55b) without SAI is called adverbial PP preposing, which is similar to topicalization. In the literature, the contrast in (55) has been considered in terms of scope of negation (e.g., Klima (1964), Büring (2005)). The negative quantifier in (55a) takes sentential scope, while that in (55b) has its scope restricted to the preposed PP (i.e., constituent negation). As a result of the scope differences between (55a) and (55b), (55a) can be paraphrased by a negative sentence like "There is no such job that Mary would be happy with it."; (55b) is equivalent to a positive sentence like "Mary would be happy without a job." In addition, NI has been argued to be an instance of root transformation which yields "emphasis" (Hooper and Thompson (1973)). Since the early stage of generative grammar, many questions have arisen as to what the notion "emphasis" involved in NI actually means and what syntactic/semantic mechanism is needed to account for "emphasis" (cf. Akatsuka (1977)).

In connection with this, by adopting the cartographic approach proposed by Rizzi (1997), Haegeman (2000, 2012) provides an important step in exploring the nature of emphasis involved in NI from the perspective of focus fronting. Within the cartographic approach, discourse-related features (e.g., topic, focus) play a fundamental role in motivating the fronting of constituents to dedicated functional projections such as TopicP and FocusP in the left periphery of the sentence (cf. (56)). Haegeman proposes that NI is unified with *wh*-movement and CFoc fronting into the Focus-criterion, which requires a phrase with the focus feature [foc] to be in a Spec-Head configuration with the Focus head bearing the same feature.

(56) Force … Topic* … Focus … Topic* … Fin IP …

(57) a. ... [$_{FocP}$ What$_{[foc]}$ [$_{Foc'}$ did$_{[foc]}$ ... [$_{IP}$ you give _ to Paul]]]

b. ... [$_{FocP}$ YOUR BOOK$_{[foc]}$ [$_{Foc'}$ Ø$_{[foc]}$ ... [$_{IP}$ you should give _ to Paul]]].

(Rizzi (1997: 285), with modifications)

Hoping to contribute to a better understanding of the emphatic nature of NI, the present study aims to explore the emphasis involved in NI in terms of polarity focus, which serves to emphasize the polarity component of the sentence. A recent study by Leonetti and Escandell-Vidal (2009) indicate the possibility that NI in English, as well as QP-fronting in Spanish, should be treated as (non-contrastive) polarity focus fronting, which avoids information partitioning: in other words, the fronted negative phrase does not result in the Focus-Presupposition articulation (cf. (57a, b)). Basis on their claim, I will empirically demonstrate that the fronted negative phrase and the rest of the sentence constitute a unified assertive information-structural unit in NI. This fact raises conceptual and empirical problems regarding the unification of NI into focus fronting because it is assumed that focus fronting contributes to the bipartite Focus-Presupposition articulation, which NI does not. I will argue that the conceptual and empirical problems are solved under Cruschina's (2011) two-layered focus hypothesis, which is proposed on the basis of non-contrastive focus fronting phenomena in Romance languages (e.g., Sicilian). According to Cruschina's hypothesis, there are two focus projections in the CP domain: Contrastive Focus (CFoc) and Information Focus (IFoc). He also points out that IFoc fronting yields syntactic structures with no information partition. I will propose that NI in English is derived by fronting negative phrases to [Spec, IFocP]. Therefore, the alternative proposal enables us to sophisticate the unification of NI into focus fronting.

This section is organized as follows. Section 3.3.2 reviews Haegeman (2000, 2011) and Leonetti and Escandell-Vidal (2009), both of which attempt to capture the

syntactic/semantic properties of NI from the perspective of Rizzi's (1997) original split CP hypothesis. Section 3.3.3 provides some arguments for the claim that certain instances of NI must be reduced to IFoc fronting. Section 3.3.4 proposes an analysis on the basis of Cruschina's (2011) two-layered focus hypothesis, and Section 3.3.5 provides some supportive evidence for it. Section 3.3.6 mentions some remaining issues. Section 3.3.7 concludes by leaving a remark on the consequence of the present proposal.

3. 3. 2. Previous Studies

3. 3. 2. 1. Haegeman (2000)

Adopting Rizzi's (1997) split CP hypothesis, Haegeman (2000) proposes that NI must satisfy the Focus criterion; the fronted negative phrase and the inverted auxiliary establishes a Spec-Head agreement configuration and shares the *neg*-feature (see also Haegeman (2012)):

(58) a. … [$_{FocP}$ With what job$_{[wh]j}$ [$_{Foc'}$ would$_{[wh]i}$ [$_{FinP}$ [$_{IP}$ Mary t$_i$ be happy t$_j$]]]] ?

b. … [$_{FocP}$ With no job$_{[neg]j}$ [$_{Foc'}$ would$_{[neg]i}$ [$_{FinP}$ [$_{IP}$ Mary t$_i$ be happy t$_j$]]]]

On the syntactic side, her analysis naturally captures the formal similarity between NI and *wh*-movement in that the preposed operator and the inverted auxiliary result in the adjacent configuration (cf. Culicover (1991)).[18] On the semantic side, the established Spec-Head agreement relationship between the preposed negative element with the negative feature and the inverted auxiliary with the (covert) negative feature accounts for the sentential scope of

[18] Culicover (1991) proposes a similar analysis by assuming "Polarity Phrase," which is sandwiched between the CP domain and the IP domain. Culicover proposes that the negative element targets [Spec, PolP] and the auxiliary the Pol head; as a result, they establish a Spec-Head agreement relationship. Culicover's analysis is similar to Haegeman's (2000, 2011) analysis, but these two analyses are independently motivated in different frameworks.

negation, under the assumption that the auxiliary with the (covert) negative feature is responsible for the sentential scope of negation.[19] In what follows, some of the other consequences of Haegeman's analysis are reviewed.

First, the prosodic differences between NI and adverbial PP preposing is accounted for.

(59) a. With no job would John be happy.

b. With no job, John would be happy.

(Haegeman (2000: 33))

In NI, the preposed negative PP and the rest of the sentence is not separated by the comma intonation break, while in adverbial PP preposing, the preposed PP is separated from the rest of the sentence by the comma intonation break. The presence of the comma intonation break is typical of topicalization, and hence the treatment of NI as focus fronting naturally captures the absence of the comma intonation break in NI.

Second, the preposed negative PP in NI must be interpreted as a focus (roughly speaking, new information), and therefore, cannot behave as a topic (see also Culicover (1991)). This property is indicated by the following contrast:

(60) How would you feel with no job?

a. With no job, I would feel relieved.

b. # With no job would I feel relieved.

(Haegeman (2000: 34))

[19] Haegeman's (2000) analysis reviewed here can be (or needs to be) more sophisticated by considering how the negative feature is introduced in the syntactic derivation and is attached to the auxiliary.

The negative PP in the *wh*-question is established as a topic in this mini-discourse. The *wh*-question can be answered by the sentence with adverbial PP preposing, but not by the one with NI. This fact shows that the preposed negative PP cannot behave as a topic in NI. Instead, the preposed negative PP, Culicover (1991) and Haegeman (2000) argue, can serve as an answer to a *wh*-question (in this case, the yes-no question with narrow focus on the object position occupied by the negative polarity item is regarded as an equivalent to a *wh*-question (Culicover (1991)):[20]

(61) a. Did you see anyone?

b No, NOT A SINGLE PERSON did I see.

(Haegeman (2000: 34))

Under the assumption that yes-no questions with NPIs have an operator-variable configuration (Rochemont (1978, 1986)), they are seen as an instance of *wh*-question. According to Culicover and Haegeman, the question/answer pair given above shows that the preposed negative element functions to provide an answer to the *wh*-question (i.e. satisfies the unknown value of the *wh*-phrase). If their observation is correct, the unification of NI into focus fronting will enable us to capture the focus status of the preposed negative element.[21]

[20] Culicover (1991: 30) states that "a fronted negative … can serve as the answer to a *wh*-question," but, as we will discuss later, this mini-discourse seems to need careful considerations. First, the interrogative is not a pure instance of *wh*-question, but a yes-no question with a negative polarity item. More precisely, the question "Did you see anyone?" is a yes-no question with narrow focus on the object. Thus, the answer with NI should be interpreted to convey two pieces of new information; one is the new information (negative) for the polarity focus (positive or negative), and the other is the secondary new information for the narrow focus (i.e. "(not) a single person" for "anyone"). Among these two pieces of new information, the primary one is the polarity focus for the yes-no question.

[21] As we will see later, their argument that NI is used to provide an answer to a *wh*-question is proved to be incorrect because the preposed negative element does not provide any

Third, NI and *wh*-movement does not co-occur in the same clausal domain because they compete for the single focus position in the split CP domain (i.e. the one-focus-per-sentence principle). This is shown by the following examples:

(62) With no job, where can we go? (Haegeman (2000: 47))

(63) a. * On no account where should I go?

b. * Where on no account should I go?

(Haegeman (2000: 46))

The example in (62) shows that the preposed adverbial PP is compatible with the *wh*-interrogative, while the ones in (63) suggest that NI and *wh*-movement must be in complementary distribution. This fact naturally follows from Haegeman's (2000) analysis because NI and *wh*-movement both target the unique FocP in the CP domain.

This subsection has reviewed Haegeman's (2000, 2012) analysis of NI and the three main consequences.[22] Haegeman does not clearly mention what the exact focus status NI has, but the unification of NI into the Focus criterion opens the possibility that NI carries some focus-related interpretation. In this connection, Leonetti and Escandell-Vidal (2009) attempt to consider the focus property of NI in terms of polarity focus (i.e., non-contrastive focus on the polarity component of a sentence). The next subsection reviews their analysis.

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value to the *wh*-question.

[22] Another (potential) consequence concerns WCO effects. Koizumi (1995:143, n.3) observes that the FOCUS operator status of the preposed negative constituent is confirmed by WCO effects, as shown below:

(i) * No book$_i$ would I expect its$_i$ author to praise t$_i$ publicly.

As discussed in Chapter 2, WCO effects are sensitive to focus fronting, but not to topicalization.

3. 3. 2. 2. Leonetti and Escandell-Vidal (2009)

Observing the syntactic and pragmatic behaviors of QP-fronting phenomena in Spanish, Leonetti and Escandell-Vidal (2009) propose that polarity focus is involved in Spanish QP-fronting, as well as NI in English. Let us consider the following examples:

(64) a. **Nada** tengo que añadir, (*no algo).
Nothing have.PRS.1SG to add not something
'Nothing more can be added (* not something).'

b. **Algo** debe saber, (* no nada).
Something must.PRS.3SG know not nothing
'(There) must be something she knows (* not nothing).'

(Leonetti and Escandell-Vidal (2009: 161))

According to Leonetti and Escandell-Vidal (2009: 159-160), Spanish QP-fronting must satisfy the adjacency requirement between the fronted QP and the verb. This syntactic property seems to be similar to the structural relationship between the fronted negative phrase and the inverted auxiliary in NI in English. However, Spanish QP-fronting is different from NI in English in that it is freely applied to a positive quantifier or a negative quantifier.[23] In the literature, the pragmatic effect of QP-fronting is discussed under the broad term of "emphasis" (e.g., Zubizarrera (1998), Quer (2002)). Leonetti and Escandell-Vidal claim that what the term "emphasis" means is well-understood in terms of polarity

[23] By observing that QP-fronting in Spanish does not co-occur with a clitic, Leonetti and Escandell-Vidal (2009) first exclude the possibility that QP-fronting is assimilated into topicalization (CLLD).

They argue that polarity focus is also related to the following two cases: the fronting of definite nominals (e.g., *lo mismo* 'the same') and that of demonstratives (e.g., *eso* 'this'). For the sake of this discussion, I will not discuss these two cases here.

focus, which results in a discourse structure where the polarity component of a sentence is in focus and the rest of the sentence is seen as a background; that is, the preposed QP is not interpreted as a CFoc constituent.[24] Therefore, the preposed QP itself does not contribute to the bipartite Focus-Presupposition articulation which CFoc fronting creates. What follows will show some details of their claim.

First, Leonetti and Escandell-Vidal (2009) point out that QP-fronting in Spanish always lack the focal stress which characterizes CFoc fronting in this language. Second, QP-fronting does not indicate that the fronted QP should be singled out from a discourse set of competing alternatives, and cannot co-occur with an explicit mention of the discarded alternative indicated by a negative tag (cf. (64a, b)). These observations lead Leonetti and Escandell-Vidal to conclude that QP-fronting cannot be reduced to CFoc fronting.

Third, Leonetti and Escandel-Vidal (2009) argue that the preposed quantifier in QP-fronting does not work as an answer to the *wh*-question. This means that the preposed quantifier itself does not carry a new piece of information. To see this point, let us consider the following examples:

[24] More precisely, Leonetti and Escandell-Vidal (2009) adopt the notion of verum focus in order to consider the focus properties of QP-fronting in Spanish. Verum focus is originally coined by Höhle (1992) on the basis of the observation that the focal stress on the finite verb (or the complementizer) functions to put an emphasis on the truth of the propositional content in German. In the literature, verum focus has been observed and discussed under the notion of polarity focus, but its theoretical implementation seems to vary (e.g., Romero and Han (2004) for the treatment of verum as a conversational epistemic operator; Lornstein (2016) for a sentential mood approach to verum focus; Gutzmann and Castroviejo-Miró (2011) for the analysis of verum as a (speaker-oriented) expressive function that operates in the use-conditional dimension). Thus, a sentence involving verum focus (e.g., John **does** write a book.) is roughly translated as "**I (= the speaker) am sure that we should add** the proposition *p* **to the common ground**," wherein the part in bold is the reflex of verum focus as a conversational epistemic operator that is "used not to assert that the speaker is entirely certain about the truth of *p*, but to assert that the speaker is certain that *p* should be added to the Common Ground (CG)." (Romero and Han (2004: 627)).

In connection with this, it is important to consider whether and how the speaker's commitment to the truth of the propositional content is involved in NI, but I would like to open this question for future research.

(65) A: ¿Qué me puedes decir? [Spanish]

what me.OBL can.PSR.2SG say

'What can you tell me?'

B: # **Nada** te puedo decir.

Nothing you.OBL can.PRS.1SG say

'I can tell you NOTHING.'

(Leonetti and Escandell-Vidal (2009: 185))

According to Leonetti and Escandell-Vidal, the answer with QP-fronting in (65B) is strange because the *wh*-question requires an answer in which the preposed quantifier can be understood as carrying focus on the newly presented information. This fact suggests that the fronted quantifier in QP-fronting does not satisfy the unknown value of the *wh*-question. A sentence with QP-fronting, on the other hand, is acceptable as a reply (a response, but not an answer) to the *wh*-question in the following context:

(66) A: ¿Qué sabes?

what know.PSR.2SG

'What do you know?'

B: **Nada** te puedo decir.

Nothing you.OBL can.PRS.1SG say

'I can tell you NOTHING.'

(Leonetti and Escandell-Vidal (2009: 185))

In this case, the preposed quantifier does not provide any information about the variable introduced by *what*, but rejects the underlying prerequisite of the act of questioning itself

(i.e., the prerequisite as to whether the interlocutor B can give an answer or not). This pragmatic function can be satisfied by other possible replies such as *I don't want to talk about it*, *you know it better than I do*, *No comments*, etc. These observations exclude the possibility that the preposed quantifier constitutes a syntactic unit which carries IFoc.

Third, QP-fronting can be used as an answer to a yes-no question (or a polar interrogative which includes the unknown variable concerning the polarity).

(67) A: ¿Encontrarás a alguien?
find.FUT.2SG to someone
'Will you find someone?'
B: A alguien encontraré, (estroy seguro).
to someone find.FUT.1SG (be.PRS.1SG sure)
'I WILL find someone.'
(Leonetti and Escandell-Vidal (209: 182), glosses mine)

This mini-discourse shows that the yes-no question by Person A introduces a possibility that the interlocutor B can find someone (to help her/him), without asserting any of the available alternative persons. The sentence with QP-fronting is used to choose the affirmative possibility and to emphasize that this is the proposition that the speaker definitely considers to be true. This fact shows that sentences with QP-fronting are used as answers to yes-no questions; in other words, they convey a new piece of information concerning the polarity component of the sentence, with the speaker's strong commitment to the polarity value.

The discussions reviewed so far lead Leonetti and Escandell-Vidal (2009) to make the following two-fold claim. First, QP-fronting is triggered to meet the polarity focus requirement. Second, the preposed quantifier does not carry narrow focus (i.e., CFoc or

IFoc) as a syntactic unit and does not contribute to the Focus-Presupposition articulation. This means that QP-fronting cannot be reduced to CFoc fronting; instead, the fronted quantifier indicates that the polarity of the propositional content is in focus. They, furthermore, mentions the possibility that the notion of polarity focus can be extended to NI in English, though they do not discuss the details of their proposal.

This subsection has reviewed Leonetti and Escandell-Vidal's (2009) analysis of QP-fronting from the perspective of polarity focus. On the basis of their argument, the next section reconsiders NI in English and points out some empirical and conceptual problems within Rizzi's (1997) original split CP hypothesis.

3. 3. 3. Some Conceptual and Empirical Problems: Treatment of Polarity Focus

Within Rizzi's (1997) original split CP hypothesis, it is assumed that focus fronting contributes to the focus-presupposition articulation, as shown below:

(68) [$_{FocP}$ New Information [$_{Foc'}$ [$_{FinP}$ Presupposition]]]

This means that the fronted focus element (i.e., new information) and the rest of the sentence (i.e., presupposition) is separated from each other, resulting in a bipartite information structure. Adopting Rizzi's split CP hypothesis, Haegeman (2000) proposes that NI in English satisfies the Focus criterion by establishing the Spec-Head agreement relationship between the preposed negative element with the negative feature and the inverted auxiliary with the same feature. Under this view, the preposed focus element is seen as a syntactic unit which may carry a new piece of information.[25] In support of her proposal, she refers

[25] Culicover's (1991) original intention is to compare NI to *wh*-movement from the viewpoint of the Spec-Head agreement in the CP domain. Adopting the general assumption that *wh*-movement is derived by the Spec-Head agreement between the fronted *wh*-phrase and

to Culicover's (1991) observation that NI can be used as an answer to a *wh*-question (for convenience, (61) is repeated below.

(69) a. Did you see anyone? (= (61))

b No, NOT A SINGLE PERSON did I see.

This fact, however, needs careful considerations because NI cannot be used as a direct answer to a *wh*-question like '*Who did you see?*,' as shown in (70).[26]

(70) a. Who did you see?

b # No, NOT A SINGLE PERSON did I see.

In this context, answering with NI is actually unacceptable because the *wh*-question requires an answer in which the preposed quantifier can be understood as satisfying the unknown value of the *wh*-question. In this respect, NI patterns like QP-fronting in Spanish (cf. (66)). Given this point, what the unacceptable *wh*-question/answer pair in (70) tells us is that NI can be used as answers to yes-no questions, not to *wh*-questions. This fact means that the preposed negative element in NI, as well as the preposed quantifier in Spanish QP fronting, does not carry a new piece of information which satisfies the unknown value of a *wh*-phrase.

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the inverted auxiliary, he proposes that NI also establishes a similar type of Spec-Head agreement between the preposed negative element and the inverted auxiliary. In order to argue for the parallelism between *wh*-movement and NI, he provides the *wh*-question/answer pair as supportive evidence. In contrast, my point here is that the preposed element itself does not serve to carry a new piece of information that could satisfy the unknown value of the *wh*-phrase; rather, it presents a new piece of information to the yes-no question, with the speaker's strong commitment to the negative polarity of the sentence.

[26] My informants reported that NI cannot be used as direct answers to *wh*-questions, but they also found that NI can be used as an answer to yes-no questions.

This turns out to be an empirical problem for Haegeman's analysis based on Rizzi's original split CP hypothesis.

On the conceptual side, the unification of NI into the Focus criterion also raises a potential problem in the sense that NI does not naturally fall into the typical case of the Focus-Presupposition articulation; rather, the fronted negative element functions to avoid the information partitioning in (68) and contributes to the emphasis on the polarity value of the sentence as a whole. If one allows this possibility, then she or he will need to assume that the satisfaction of the Focus criterion allows two information structural patterns, according to the different types of focus; one with the bipartite Focus-Presupposition articulation (e.g., *wh*-movement and CFoc) and the other with no such articulation (e.g., polarity focus).

In the next section, I propose an alternative analysis in order to solve the empirical and conceptual problems, by adopting Cruschina's (2011) two-layered focus hypothesis.

3. 3. 4. Proposal

Section 3.3.2 has reviewed Haegeman's (2000) analysis of NI, and under her analysis, the obligatoriness of SAI (i.e., head movement/verb raising) is accounted for by assuming that the preposed negative phrase and the inverted auxiliary satisfies the Focus criterion (i.e., the Spec-Head agreement in the Focus layer). The previous section, furthermore, pointed out that the preposed negative element does not constitute the Focus-Presupposition articulation, avoiding informational partitions. As we have seen in Chapter 2, the two properties (i.e., head movement of a verbal element/SAI and the lack of informational partition) are typical of IFoc fronting under Cruschina's (2011) two-layered hypothesis. In what follows, I will propose the details of the derivation of NI.[27]

[27] For the sake of simplicity, in what follows, I will omit the Evaluative layer selecting the IFoc layer as its complement.

3. 3. 4. 1. Basic Clause Structure

In order to make clear the syntactic process involved in SAI, adopting Cruschina's (2011) two-layered focus hypothesis, I assume the sigma (Σ) phrase proposed by Laka (1990). Laka assumes that the sigma projection is responsible for encoding the polarity of a sentence as affirmative (AFF) or negative (NEG). According to Laka, the sigma projection is located below IP in English, as illustrated below:

(71) a. (... FinP) IP ... ΣP ... *v*P ... VP ...

b. [$_{IP}$ John [$_{I'}$ did [$_{\Sigma P}$ [$_{\Sigma'}$ NEG (= not) [$_{vP}$ meet Mary]]]]]

Then, it is assumed that the sigma head possesses the covert affirmative feature or the overt negative feature (indicated by NEG realized as 'not'). When the sigma head is endowed with the negative feature, the auxiliary *do* is inserted at the I head to realize the tense feature, as well as the φ feature agreement with the subject.

In the case of NI, I assume that the sigma head is endowed with the covert counterpart of the negative feature indicated by NEG. Under this assumption, the NI sentence in (72a) has the base structure in (72b), in which the negative adverb *never* is generated at [Spec, SigmaP] (for the sake of exposition, copies are denoted by angle brackets).

(72) a. Never has Mary lied.

b. [$_{IP}$ Mary [$_{I'}$ has [$_{\Sigma P}$ never$_{[neg]}$ [$_{\Sigma'}$ NEG [$_{vP}$ lied]]]]]

c. [$_{IFocP}$ [$_{IFoc'}$ Ø [$_{FinP}$ [$_{Fin'}$ Ø [$_{IP}$ Mary [$_{I'}$ has+NEG [$_{\Sigma P}$ never$_{[neg]}$ [$_{\Sigma'}$ <NEG> [$_{vP}$ lied]]]]]]]]

d. [$_{IFocP}$ [$_{IFoc'}$ Ø [$_{FinP}$ [$_{Fin'}$ Ø+has+NEG [$_{IP}$ Mary [$_{I'}$ <has+NEG> [$_{\Sigma P}$ never$_{[neg]}$ [$_{\Sigma'}$ <NEG> [$_{vP}$ lied]]]]]]]]

e. [$_{IFocP}$ never$_{[neg]}$ [$_{IFoc'}$ Ø+Ø+has+NEG [$_{FinP}$ <never$_{[neg]}$> [$_{Fin'}$ Ø+has+NEG [$_{IP}$ Mary [$_{I'}$ <has+NEG> [$_{\Sigma P}$ <never$_{[neg]}$> [$_{\Sigma'}$ <NEG> [$_{vP}$ lied]]]]]]]]]

The covert negative feature undergoes head movement to the I head and adjoins to it, as in (72c). Then, putting aside the adjunction process, the complex head <has+NEG> undergoes head movement to the IFoc head via the Fin head, as in (72d-e). The negative adverb moves to [Spec, IFocP] through [Spec, FinP], and as a result, the negative adverb and the complex head with the covert negative feature establish a Spec-Head agreement in the Focus layer, satisfying the Focus criterion, more precisely, the IFoc criterion.

The proposed analysis maintains Haegeman's (2000) analysis of NI in the sense that that the formal property (i.e. SAI) is accounted for. The next subsection considers how the syntactic configuration is interpreted at LF.

3. 3. 4. 2. Semantic Configuration

The previous subsection proposed that the syntactic derivation of NI results in the following simplified syntactic configuration:

(73) [$_{IFocP}$ never$_{[+neg]}$ [$_{IFoc'}$ has+NEG$_{[+neg]}$ [$_{FinP}$ [$_{IP}$ Mary ... lied]]]]

IFocus *Assertion*

This syntactic configuration is read off at LF as follows. First, the preposed negative element and the inverted auxiliary share the neg feature by establishing the Spec-Head agreement relationship in the IFoc layer. As well as emphatic IFoc fronting in Romance languages, NI does not create the Focus-Presupposition partition; rather, the preposed IFoc element and the rest of the sentence are interpreted as a unified assertion. This explains the

lack of the information partition in NI in English.

In addition, the fronted negative element in [Spec, IFocP] shows that the speaker's emphasis is involved in the polarity component of the sentence. This captures Leonetti and Escandell-Vidal's (2009) claim that 'emphasis' is the result of focus on sentence polarity; on the one hand, focus overtly and strongly marks the assertion of a negative propositional content, and at the same time, it excludes or greatly weakens the possibility to assert the alternative (positive) proposition, which is lexically implied by the presence of negation (as in the case of yes-no question answer pairs). As a consequence, the negative propositional content is asserted in a very strong way. Therefore, NI can be used as an answer to the yes-no question in an "emphatic" way (cf. (61)).

According to my informants, the semantic effect in NI is similar to the one expressed in a sentence like "Mary (has) *absolutely* never lied"; in this case, the negative statement is reinforced by the intensifying modifier *absolutely*, which also functions to modify extreme adjectives such as *huge* (see Section 3.2). This will imply that NI is also associated with the (non-contrastive) degree-intensifying function. It should be also noted that the apparently contrastive meaning of NI is derived from the lexical meaning of negation in the present proposal. As Lambrecht (1994: 63-64) argues, negative sentences are ordinarily uttered only if the speaker assumes that the interlocutor believes, or at least entertains the possibility, that the corresponding affirmative sentence is true. Due to this lexical property, NI seems to carry a contrastive meaning, but this contrastive meaning is triggered by the lexical meaning of negation; the information structure of NI itself is different from the one observed in CFoc fronting, in which the preposed focus element serves to correct the wrong piece of information.

On the basis of Cruschina's (2011) two-layered focus hypothesis, this section has proposed the alternative analysis to Haegeman's (2000) analysis of NI. Under the present

analysis, the use of NI as answers to yes-no questions and the lack of informational partition (i.e. the Focus-Presupposition articulation) are naturally accounted for. The next section provides some supportive evidence for the present proposal.

3. 3. 5. Supportive Evidence

3. 3. 5. 1. Focus-Verb Adjacency

The first supportive evidence comes from the focus-verb adjacency. As we have seen in Chapter 2, since the preposed emphatic IFoc element and the raised verb must establish a Spec-Head agreement relationship in the IFoc layer, emphatic IFoc fronting must keep to the focus-verb adjacency. The same syntactic condition, however, is not imposed on CFoc fronting, and hence the CFoc element can be followed by a lower topic element. Thus, the focus-verb adjacency serves as a diagnostic for emphatic IFoc fronting.

(74) Force … Topic* … CFoc … Topic* … IFoc … Fin IP …

(75) [Sicilian: emphatic IFoc fronting]

a. … [$_{\text{IFocP}}$ **N'articulu**$_i$ [$_{\text{IFoc'}}$ scrissi$_j$ [$_{\text{FinP}}$ [$_{\text{IP}}$ *pro* [$_{\text{I'}}$ t$_j$ [$_{v\text{P}}$ t$_j$ [$_{\text{VP}}$ … t$_i$ …]]]]]]]

b. … [$_{\text{CFocP}}$ N'ARTICULU$_i$ [$_{\text{CFoc'}}$ Ø [$_{\text{TopicP}}$ … [$_{\text{FinP}}$ [$_{\text{IP}}$ *pro* scrissi t$_i$]]]]] (no na littra)

(76) [Italian: emphatic IFoc fronting]

* Ma guard ate! **In bagno**, *le chiavi*, ha messo!

but look.IMP.2SG you in bathroom the keys have.PRES.3SG put.PP

'Look at that! He put the keys in the bathroom!'

(Cruschina (2011: 122), with modifications)

(77) [Sicilian: CFoc fronting]

A SALVO *i chiavi* I detti (, no a Pinu.).

to Salvo the keys them.CL give.PAST.1SG not to Pinu

'I gave the keys to SALVO, but not to Pinu.'

(Cruschina (2011: 106)) [Pir.I: 151]

If NI is derived by IFoc fronting, then it will be predicted that the preposed PP and the inverted auxiliary must be adjacent to each other.

Before proceeding, it is necessary to make clear how the focus-verb adjacency is tested in English, because in this language, multiple topics are not allowable in the CP domain, as we have already seen in Chapter 2 (the relevant points and data are reproduced below):

(78) a. English Argument Topicalization

A topic element and its trace forms a (non-quantificational) A-bar chain by fronting a unique anaphoric null operator to [Spec, FinP].

b. Italian CLLD

A topic element and its trace forms a (non-quantificational) A-bar chain with recourse to the occurrence of the (IP-internal) clitic; no fronting of an anaphoric null operator is involved in the derivation.

(79) Higher Topic vs. Lower Topic

a. * This book, to Robin, I gave. (Culicover (1991: 36))

b. Il libro a Gianni, glielo daro senz'altro.
the book, to Gianni, him-it give-FUT-1SG for sure
'The book, to John, I'll give it to him for sure.' (Rizzi (1997: 290), with modifications)

(80) $[_{\text{TopicP}}$ Robin$_i$ $[_{\text{Topic'}}$ Ø ... $[_{\text{FiniteP}}$ OP$_i$ $[_{\text{IP}}$ his$_i$ mother really appreciate t$_i$]]]]

According to Haegeman's (2011) system, an argument topic is licensed by fronting the corresponding null anaphoric operator to [Spec, FinP]. The null anaphoric operator must

be unique in the CP domain, and hence only one topic chain can be formed (cf. (79a)). As a result, multiple topics are prohibited in English (cf. (80a)). Haegeman, however, argues that the co-occurrence of higher Topic and lower Topic can be attested only when one of them is a topicalized adverbial clause, but not an argument which requires fronting of the null anaphoric operator. To see this, let us consider the following examples:

(81) a. I stress that if you call, whatever I find, I will keep.

b. ? I stress that whatever I find, if I call, I will keep.

(Culicover (1996: 453))

The examples above suggest that the argument topicalization and the adverbial clause topicalization may co-occur. Under Haegeman's approach, these patterns are allowed because the topicalized adverbial clause is assumed to be base-generated at [Spec, (higher/lower) TopP] and there is no anaphoric binding relation with the IP domain through an anaphoric operator in [Spec, FinP].

(82) a. [$_{\text{TopP}}$ if you call ... [$_{\text{TopP}}$ whatever I find$_i$ ... [$_{\text{FinP}}$ OP$_i$ [$_{\text{IP}}$ I will keep ...t$_i$ ...]]]]

b. [$_{\text{TopP}}$ whatever I find$_i$ ... [$_{\text{TopP}}$ if you call ... [$_{\text{FinP}}$ OP$_i$ [$_{\text{IP}}$ I will keep ...t$_i$ ...]]]]

If these assumptions are taken together with the derivation of NI, it will be predicted that NI in English does not allow the interpolation of the topicalized adverbial clause between the preposed negative phrase and the inverted auxiliary because NI must satisfy the focus-verb adjacency. According to my informants, this prediction is borne out (cf. (82b)):

(83) a. I stress that if you call, never will I keep anything that I find.

b. * I stress that never, if you call, will I keep anything that I find.

cf. * I stress that if you call, never, whatever I find, will I keep.

It should be noted here that CFoc fronting does not require such a focus-verb adjacency; hence, the acceptability of the following sentences (cf. (83b)):[28]

(84) a. I stress that if you don't call, YOUR FURNITURE I will keep (, not mine).

b. I stress that YOUR FURNITURE, if you don't call, I will keep (, not mine).

These facts suggest that the CFoc element is able to occupy a higher position than the lower Topic position and the IFoc element (i.e., the negative element)

This subsection has provided supportive evidence for the present proposal that NI is reduced to IFoc fronting and therefore must keep to the focus-verb adjacency.

3. 3. 5. 2. Non-Contrastive Use of NI

The second piece of evidence comes from the interpretation of the preposed negative element in NI. As we have already seen, Spanish QP-fronting does not indicate that the fronted QP should be singled out from a discourse set of competing alternatives, and in fact, cannot co-occur with an explicit mention of the discarded alternative (cf. (64)). It seems that this point has not been discussed in the previous studies on NI in English, but basically, the same is true of NI in English, as shown below:[29]

[28] According to one of my informants, it is not so easy to add negative tags to the ends of these two examples. One possibility is that the co-occurrence of a topic and a focus induces a contrastive topic reading (i.e. one proposition is contrasted with some other propositions).

[29] According to my informants, it is impossible to add a negative tag to NI.

(85) a. Not a single person did I meet on the street (* not someone).

b. Little did I know about javascript (* not a lot).

One of my informants (from Canada) also reported that if these sentences do not include an inverted auxiliary, they will naturally allow a CFoc interpretation (e.g. No, NOT A SINGLE PERSON/NOBODY I have spoken to in the room.), and the negative tag may, though rare, occur at the end of the sentence (e.g. No, NOT A SINGLE MAN/NO ONE I met on the street (, though I met some students in the bookstore.)).[30] Thus, the data above will be naturally accounted for if it is assumed that the preposed negative element in NI targets [Spec, IFocP], but not [Spec, CFocP].

The lack of a CFoc reading in NI can be also supported by the examples in (86) and (87).

(86) [Context] The speaker is watching a huge hippopotamus.

Never have I seen such a hippopotamus.

(87) [Context] The author is writing about her impression about a hotel which she stayed for five nights.

I stayed here for 5 nights, and guess what? Never did they change the bed linen.

Intuitively, the NI sentence in (86) expresses the speaker's on-the-spot reaction to a given situation, and can be interpreted as "the speaker is surprised at the situation in which there

[30] A negative (minimizer-like) NP like "not a (single) man" behaves like the bare quantifier *nobody* because it allows modification by a relative clause (e.g. {nobody/not a (single) man} that I met yesterday). Though I am not sure what kind of internal structure it has, the negative form *not a* (single) *NP* behaves as a bare quantifier, and therefore it may create a lexical contrast with existential/cardinal quantifiers (e.g. *not a man* vs. *someone*, *not a single man* vs. *some two men*).

exists a (huge) hippopotamus such that she or he has never seen it before." The NI sentence in (87) seems to work in a similar way. In this context, the NI sentence is interpreted as follows: given all the facts and assumptions concerning hotel stays available to the speaker, there is no process of reasoning by which the speaker predicts that there is a possible situation such that hotel staff do not change the bed linen for five days. Contrary to this speaker's expectation, she or he actually experienced such an unexpected situation in the real world. Under this type of speaker's evaluative interpretation, the NI sentence can be used to introduce a surprising statement in the event reporting context after the sentence-focus *wh*-question.[31] In the literature, the type of emphatic interpretation that is tied to polarity focus is referred to as scalar focus, which is defined as "[a proposition] *p* is something not expected in the context, or assumed by the speaker to be unexpected for the hearer; in this case, Pol [= focus associated to the polarity component] bears emphatic focus [= scalar focus]" (Giurgea and Remberger (2012: 21)).[32] The scalar effect is not typical of CFoc, because it primarily functions to correct a wrong piece of information that has already introduced in the previous discourse.

To summarize, the impossibility to add a negative tag to NI and the scalar focus interpretation will support the present proposal that NI should be reduced to IFoc fronting.

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[31] As Lambrecht (1994: 63-64) argues, negation lexically presupposes that the interlocutor believes that the positive proposition may be true. For this reason, negative sentences do not easily allow a sentence-focus construal. This, however, does not mean that all negative sentences are not used to make an event report. As Lambrecht argues, a negated sentence can have a sentence-focus construal in the appropriate discourse in which the speaker and the interlocutor both entertains a certain possibility:

(i) Guess what! My STEREO didn't explode! (Lambrecht (1994: 314))

Thus, the presupposed component of negative sentences will be independent of the notion of "presupposition" that is applied to CFoc fronting.

[32] As we will see in Chapter 5, this scalar effect is different from the exclamative illocutionally force. Interested readers are referred to Giurgea and Remberger (2012).

3. 3. 6. Remaining Issues

Having discussed the pragmatic properties of NI, let us turn to some remaining issues. As we have already seen, the obligatoriness of SAI is one of the defining characteristics of NI. In contrast, Büring (2005) reports that some speakers allow an NI sentence without SAI when the preposed negative element is an argument, as shown below:

(88) a. None of them did he find useful.

b. % None of them he found useful.

(Büring (2005: 3))

He also reports that those who accept argument NI sentences without SAI strongly reject adjunct NI examples without SAI:

(89) a. Nowhere does he mention my book.

b. * Nowhere in there he mentions my book.

(Büring (2005: 3))

Büring tentatively assumes that examples with preposed negative argument have the semantic properties of those with SAI, whether SAI takes place or not.

Büring's (2005) observation seems to suggest that certain instances of NI allow optional SAI. According to my informants, the optional application of SAI is actually possible in certain cases, especially when NI involves fronting of a complex negative operator which indicates the connection of its referent with the previous discourse (e.g., no such task, no other students, and so on).

My informants also noticed that the referential status of the preposed negative element

is sensitive to the so-called *wh*-island effects. As observed by Postal (1998), NI may form an unbounded dependency (across the *wh*-island) when the preposed negative element is a complex negative operator.

(90) a. [No such chemicals]$_1$ did he know that there were t$_1$ in the bottle.

b. [No other colours]$_1$ did he think they had ever painted their cars t$_1$.

(Postal (1998:26))

Simple negative phrases (e.g., *not a bite*), on the other hand, do not denote any particular referent in the discourse, while complex negative phrases do. This difference in referentiality reminds us of Pesetsky's (1987) D-Linking effects. My informants found that this difference also affects extraction from *wh*-islands, as shown below:

(91) a. ?? [Not a bite]$_1$ did they ever ask whether I had eaten t$_1$.

b. [No such car]$_1$ did they ever ask whether I had seen t$_1$. (Postal (1998:46))

cf. * Never$_i$ did they ask whether I had t$_i$ eaten beans.

(Intended: *Never* modifies the embedded propositional content.)

From these observations, it will be tentatively concluded that NI is primarily reduced to IFoc fronting; when the preposed negative element includes an anaphoric element which implies its connection to the preceding discourse, the NI sentence does not show the typical syntactic properties of NI. Fronting of simple negative words including adjunct negative words (i.e., non-D-linked negative phrases) is seen as a typical case of NI (i.e., IFoc fronting) which requires SAI and is sensitive to *wh*-islands. Fronting of complex negative phrases (i.e., D-linked negative phrases), on the other hand, does not show the obligatoriness of SAI

and forms a long-distance dependency across the *wh*-island. This difference may indicate the possibility that certain instances of NI are ambiguous between IFoc fronting and CFoc fronting, but I would like to leave open this question for future research.

3. 3. 7. Summary

Within the cartographic framework, it has been argued that NI in English is derived by satisfying the Focus criterion (i.e., the Spec-Head agreement relationship between the negative element at [Spec, FocP] and the inverted auxiliary) (Haegeman (2000, 2012)). A potential problem for Haegeman's approach is that NI does not contribute to the bipartite Focus-Presupposition information structure. In contrast, adopting Cruschina's (2011) two-layered focus hypothesis, this study has argued that NI in English is derived by fronting the negative element to [Spec, IFocP]; the IFoc layer contributes to the unified information structure in which the preposed focus element and the rest of the sentence constitute a unified assertive unit. As a result, the fronted negative phrase at [Spec, IFocP] signals (non-contrastive) polarity focus while keeping the propositional content assertive, which is the source of emphasis involved in NI. By virtue of polarity focus, NI conveys the speaker's strong commitment to the negative assertion. Further, the pragmatic function of polarity focus in NI is not concerned with the correction of a previously-mentioned assumption or presupposition.

The present proposal has the following two consequences. First, it maintains Haegeman's core idea that NI is unified into focus fronting. Second, the conceptual and empirical problems that polarity focus involved in NI does not contribute to the Focus-Presupposition articulation are solved under the assumption that NI is unified into fronting to [Spec, IFocP] in Cruschina's (2011) sense. This unification implies that the emphatic

nature of NI has its origin in (non-contrastive) IFoc fronting, which serves to realize polarity focus and to keep assertive the rest of the propositional content.

3. 4. Conclusion

This chapter has argued that the presence of IFoc fronting is empirically supported by the following focus-related phenomena in English: particle fronting, comparative substitution, and negative inversion. Furthermore, this chapter has shown that the emphasis involved in these three focus-related phenomena is associated with the degree-intensifying function (cf. Morzycki (2012)), which reflects the speaker's evaluation. Particle fronting functions to intensify the extreme degree meaning of particle verbs (e.g. *Out gushed the secrets!*), and the same degree-intensifying pattern is observed in comparative substitution (e.g., *Humongous was that Akita dog!*). Negative inversion serves to reinforce the negative statement (e.g., *Never has Mary lied!*).

Chapter 4

Extension of IFoc Fronting to the Nominal Domain

4. 1. Introduction

This chapter aims to provide empirical support for Cruschina's (2011) two-layered focus hypothesis by extending it to the information structure of the nominal domain. Within the generative framework, symmetry has been seen as one of the key guidelines in exploring the parallelism between the clausal domain (CP) and the nominal domain (DP). The recent developments of the cartographic framework, furthermore, has led researchers to explore the possibility that the parallelism between the clausal domain and the nominal domain extends to information structure (e.g., Corver and van Koppen (2007), Aboh, Corver, Dyakonova and van Koppen (2010)). If such an approach is combined with Cruschina's two-layered hypothesis, then the following new possibility presents itself: the nominal domain includes a functional projection dedicated to (emphatic) IFoc.

Cruschina's (2011) comparative study on Romance languages is conducted with reference to focus-related phenomena in the clausal domain (see also Cruschina (2016), Bianchi, Bocci and Cruschina (2016)). According to his two-layered focus hypothesis, the CP domain includes two functional projections dedicated to CFoc and IFoc. If his two-layered focus hypothesis is combined with the single engine hypothesis that syntax (i.e., external/internal merge) produces words and phrases, then it will be expected that both the clausal and nominal domains include the two focus projections. By exploring this possibility, this chapter attempts to provide independent support to the two-layered focus hypothesis. After reviewing previous studies on the information structure of the nominal domain, I will argue for the new hypothesis by observing binominal NPs, demonstrative double genitives, and negative inversion in the English DP.

This chapter is organized as follows. Section 4.2 reviews previous studies which attempt to explore the symmetrical properties observed between the clausal domain and the nominal domain; it also reviews Shimada and Nagano's (2016) emphatic IFoc approach to Japanese *kantaiku* nominals. Sections 4.3-4.5 are dedicated to three case studies: comparative binominal NPs (e.g., *That idiot of a man!*), demonstrative double genitives (e.g., *That nose of John's!*), and negative inversion in the DP (e.g., *Not very difficult* (*of*) *a task!*). I argue that these three nominals lend support to the presence of IFoc fronting in the DP. Section 4.6 concludes this chapter.

4. 2. Exploration of Symmetry in the Clausal and Nominal Domains

4. 2. 1. Basic Arguments for Symmetry

Since the earlier stage in the development of generative grammar, several symmetries and asymmetries have been pointed out between clauses (CPs) and nominals (DPs). In this line of research, one of the central issues is how the symmetries and asymmetries should be captured within the framework of generative grammar. For the sake of discussion, I will confine my attention to the symmetrical properties observed between clauses and nominals.

As mentioned earlier, generative grammar has explored symmetry across grammatical categories. Some classical and relatively new examples illustrating this search for symmetry are shown below:

(1) Grammatical functions such as subjects and objects (e.g., Chomsky (1970a))

a. The enemy destroyed the city.

b. the enemy's destruction of the city

(2) Transformational rules such as passivization (e.g., Chomsky (1970a))

a. The city was destroyed by the enemy.

b. the city's destruction by the enemy

(3) INFL/AGR (e.g., Szabolcsi (1984), Abney (1987), Takano (1989))

a. as en-φ vendeg-e-m [Hungarian]

the I-NOM guest-POSS-1sg

'my guest'

b. a te-φ vendeg-e-d [Hungarian]

the thou-NOM guest-POSS-2sg

'thy guest'

c. (a) Mari-φ vendeg-e-φ [Hungarian]

the Mary-NOM guest-POSS-3sg

'Mary's guest'

(Szabolcsi (1984: 89), underlines mine)

(4) Subordinator Roles (Szabolsci (1987, 1994), Aboh (2004a))

a. C introduces a sentential argument as a subordinator.

(e.g.) John said [$_{CP}$ [$_{C'}$ **that** Mary visited his office]].

b. D introduces a nominal argument as a subordinator.

(e.g.) John bought [$_{DP}$ [$_{D'}$ **the** [$_{NP}$ book]]].

(5) Predicate Inversion (e.g., Den Dikken (1998, 2006))

a. John considers [$_{SC}$ [John] [the criminal]].

b. John considers [$_{XP'}$ [the criminal]$_i$ [$_{X'}$ *(to be) [$_{SC}$ [John] t$_i$]]]

a'. [$_{SC}$ [a man] [idiot]]

b'. [$_{XP}$ [idiot]$_i$ [$_{X'}$ *(of) [$_{SC}$ [a man] t$_i$]]]

Chomsky (1970a) proposes that phrases of different categorial types (i.e., NP, VP, AP, PP) have the same internal structural make-up. For example, Chomsky points out that the distribution of grammatical functions such as subjects and objects is basically the same between the sentence in (1a) and the nominal phrase in (1b). Besides this symmetry in phrase structural organization, Chomsky, furthermore, observes cross-categorial symmetry in phrase-internal displacement phenomena. For example, the phenomenon of passivization is observed both in the sentence in (2a) and the nominal in (2b), which implies that the passivization rule is applied across clauses and nominals. These arguments have encouraged generative researchers to explore the search for symmetry in phrase structure and transformational rule applications across phrasal domains. Another aspect of symmetry comes from inflection/agreement. Szabolcsi (1983) observes that the agreement relationship between a pre-nominal possessor and the possessed noun is formally identical to the agreement relationship between a subject NP and a finite verb, as illustrated in (3a-c) (see Abney (1987) for other languages which exhibit a similar agreement pattern in DP and Takano (1989) for some extensions of the DP hypothesis to nominals in English). This parallelism in agreement is argued to constitute evidence for the presence of the nominal counterpart of INFL/AGR in the syntactic structure of nominals. A further parallelism is concerned with the role of the C/D head in introducing a sentential/nominal argument selected by the matrix predicate in a sentence. These previous studies have contributed to the understanding of symmetry between clauses and nominals in terms of phrase structure and transformational rule applications. Besides the symmetries mentioned above, some previous studies argue that the phenomenon of predicate inversion occurs both in clauses and nominals, as shown in the so-called binominal NPs like “that idiot of a man” (Kayne (1993, 1994), Bennis, Corver and Den Dikken (1998), Den Dikken (2006)). In this approach, the embedded small clause in (5a) corresponds to a predicative sentence, and the

specificational counterpart in (5b) is derived by applying predicate inversion to (5a). The obligatory occurrence of the copula (*to*) *be* signals the application of predicate inversion and serves to connect the inverted predicate with the small clause subject (i.e., 'linker' in Den Dikken's (2006) term). A similar syntactic derivation process is assumed for binominal NPs, as shown in (5a', b'). What these studies imply is that there seems to be strict symmetry between the clausal and nominal domains, not only with respect to the phrase structure of these two domains, but also with respect to the set of syntactic operations that they allow.

With these quests for symmetry as a background, a further question will arise as to whether the parallelism between the clausal domain and the nominal domain extends to the so-called information structure (e.g., Topic and Focus). At this point, one may wonder whether the parallelism between the clausal and nominal domains extends to information structure, but, in principle, there does not seem to be any particular reason for not assuming information packaging both in the clausal and nominal domains. In fact, Lambrecht (1994: 35) makes the following remarks: "[...] information structure contrasts may in principle be expressed within any syntactic domain which expresses a predicate-argument relation, for example within the noun phrase (see the information-structure contrast between *my CA*R and *MY car* or *ma VOITURE* and *ma voiture* à *MOI*)." The next subsection reviews previous studies on the information structure of the nominal domain, with particular reference to focus.

4. 2. 2. Focus on Further Exploration of Symmetry in Information Structure

In the literature, the notion of contrastive focus (CFoc) has been well-discussed as an illustration of word order alternation in the nominal domain (Giusti (1996), Ntelitheos (2004), Bernstein (2001). In what follows, we will review some attested examples from different languages.

The first illustration comes from AP-reorderings. Adopting the cartographic approach, Scott (2002: 102) proposes a universal hierarchy of AP-related functional projections, as shown below:[1]

(6) [$_{DP}$ the/this [$_{Subjective.CommentP}$ nasty/magnificent [$_{SizeP}$ big/small … [$_{ColourP}$ dark brown/white [$_{Nationality/OriginP}$ German/Parisian [$_{NP}$ ...

The universal hierarchy above shows the neutral AP ordering in the nominal domain: these stacked adjectives are generated as lexical maximal projections and are licensed by hierarchically ordered projections that are endowed with their semantic interpretation. With the universal AP hierarchy in mind, let us consider the following pair, which is originally observed by Andrews (1983: 696)):

(7) a. an alleged English baron

b. an ENGLISH alleged baron

(Scott (2002: 113), with modifications)

The AP-ordering in (7a) obeys the universal AP hierarchy hypothesis because the subjective comment AP *alleged* precedes the nationality AP *English*, whereas the AP-ordering in (7b)

[1] For the sake of discussion, the simplified version of Scott's original AP hierarchy is cited here (cf. Scott (1998)). The original exhaustive list of AP projections is cited below:

(i) [$_{DP}$ the/this [$_{Subj.CommentP}$ nasty/magnificent [$_{SizeP}$ big/small [$_{LengthP}$ long/short [$_{HeightP}$ tall/high [$_{SpeedP}$ fast/slow [$_{WidthP}$ fat/thick/thin [$_{WeightP}$ light/heavy [$_{TempertureP}$ hot/cold [$_{AgeP}$ Edwardian/modern [$_{ShapeP}$ round/triangular [$_{ColourP}$ dark brown/white [$_{Nationality/OriginP}$ German/Parisian [$_{MaterialP}$ rosewood/brass [$_{NP}$ ...

(Scott (2002: 102))

I will not refer to the revised version of the universal AP hierarchy, which also includes some functional projections dedicated to noncomplex and result nominals. Interested readers are referred to Scott (2002: 47).

does not. Scott observes that the AP-ordering in (7b) is possible, but the fronted nationality AP *English* receives contrastive and focal stress. Based on this observation, Scott assumes a functional projection dedicated to (contrastive) focus just below the DP layer, as shown below:

(8) a. [$_{DP}$ an [$_{SpecSubj.CommentP}$ alleged … [$_{SpecNationality/OriginP}$ English [$_{NP}$ baron]]]]

b. [$_{DP}$ an [$_{FocusP}$ English$_j$ [$_{Spec.Subj.CommentP}$ alleged … [$_{SpecNationality/OriginP}$ t$_j$ [$_{NP}$ baron]]]]]

(Scott (2002:113))

A similar effect is also observed in standard Dutch (Corver and van Koppen (2009)). Let us consider the following examples from standard Dutch:

(9) a. de roze Amerikaanse auto's [Standard Dutch]
the pink American cars
'the pink American cars'

b. de AMERIKAANSE roze auto's
the AMERICAN$_{STRESS}$ pink cars
'the AMERICAN pink cars'

(Corver and van Koppen (2009: 3-4))

The AP-ordering in (9a) is neutral in the sense that it follows the universal AP hypothesis in (6), while the fronted nationality adjective in (9b) receives a CFoc interpretation. Corver and van Koppen, furthermore, argue that the ellipsis of a head noun (i.e., the presupposition part) is licensed by contrastive focus in standard Dutch, as illustrated below:

(10) Jan heft [een BRUINE worm] ingeslikt, niet [een WITTE ~~worm~~]

Jan has a brown worm swallowed, not a white one

(Corver and van Koppen (2009: 14), with slight modifications)

The second illustration comes from possessor-possessum alternations. Cardinaletti (1998), for example, observes that the pragmatic status of the Italian possessor pronoun *sua* 'his/her' is different between (11a) and (11b):

(11) a. la sua casa [Italian]

the his/her house

b. la casa **SUA** (,non tua)

the house his/her (,not yours)

cf. * la SUA casa, non tua

the his/her house, not yours

The possessive NP in (11a) consists of the definite marker *la* 'the,' the possessive marker *sua* "his/her," and the host nominal part *casa* "house." In the prenominal position in (11a), the possessive pronoun typically receives a neutral (non-CFoc) interpretation, but in the postnominal position in (11b), the possessive pronoun carries a CFoc interpretation. This example shows that the rightmost nominal element receives a CFoc interpretation as a result of fronting the host nominal part to the middle field of the DP. Thus, there are some word order alternation patterns in which the fronted element itself does not receive a discourse-related interpretation.[2]

[2] As we will see later, the possessor-possessum alternation phenomenon illustrated in (11) is different from double genitives in English (e.g., *That nose of John's!*). I will argue that possessor-possessum alternations must be divided into two different types from a cross-linguistic

Unlike CFoc, IFoc has not been well explored in the literature of the information structure of nominal expressions (Corver and van Koppen (2009), Aboh et al. (2010)). In connection with this, Corver and van Koppen (2009) argue that IFoc of nominals must be discussed with careful consideration because their information structure is overridden by that of sentences. Thus, they indicate that root nominals (i.e., nominals that are not embedded within a sentence/proposition) convey their own information structure, without being affected by other factors. Corver and van Koppen (2009: 14) cite the following examples as potential examples of root nominals:

(12) a. Aspects of the theory of SYNTAX (books by Noam Chomsky)
b. The logical structure of linguistic THEORY
c. Portrait of an old MAN (paintings by Rembrandt)
d. the return of the prodigal SON
e. Dear friends of HOLLAND!

According to Corver and van Koppen (2009: 14), '[t]he normal way to pronounce these titles and vocatives is with pitch accent on the rightmost, i.e. the most deeply embedded, constituent (on the recursive side). Since titles are typically assigned to books, poems, paintings *et cetra* in isolation, i.e. not in (a contextual) relation of opposition to some other object, these titles typically have an information focus reading; i.e. the title represents new information in its entirety.' The same is true of the vocative expressions in (12e). The key point here is that the information structure of nominal expressions is identified when they are used as root nominals (or vocatives).

This subsection has reviewed several examples which suggest that information

perspective.

structure (i.e., CFoc/IFoc) is attested at the nominal level. The previous studies mentioned above, however, have not explored the further possibility that IFoc fronting is attested in the nominal domain. The next subsection reviews Shimada and Nagano (2016) because they attempt to empirically attest the presence of emphatic IFoc in the nominal domain.

4. 2. 3. Toward the Exploration of IFoc Fronting in the Nominal Domain

In Chapter 2, we have reviewed Cruschina's (2011) two-layered focus hypothesis. If the parallelism between the clausal and nominal domains extends to information structure, his hypothesis will imply that the nominal domain also includes a functional projection for emphatic IFoc, as shown below:

(13) a. … Force … Topic* ... CFoc … Topic* ... IFoc … Fin IP …

b. … DP …Topic* ... CFoc … Topic* ... IFoc … NP …

As we have seen in Section 2.5.4, if we adopt Shimada and Nagano's (2016) hypothesis, the Eval(uative) layer will take the IFoc layer as its complement. Although there is few research which tries to empirically motivate the two-layered focus hypothesis in (13b), Shimada and Nagano (2016) argue that emphatic IFoc in the nominal domain is substantiated from Japanese *kantaiku* nominals (cf. Yamada (1936)). Let us consider the following examples:

(14) a. Kono wain-wa taka-i.
this wine-TOP expensive-COP
'This wine is expensive.'

b. taka-i wain
expensive-COP wine
'expensive wine'

c. Taka-i wain!
expensive-COP wine
'Expensive wine!'

The declarative sentence in (14a) involves the adjectival predicate, and the nominal phrase in (14b) consists of the head noun and the relative clause formed by the adjectival predicate. The Japanese *kantaiku* nominal in (14c) shares a similar syntactic form with the nominal phrase in (14b); however, the Japanese *kantaiku* nominal in (14c) differs from the nominal phrase in (14b) in that the former is used as an emotional vocative, or a root nominal which expresses the speaker's on-the-spot emotional reaction to a given situation. On the phonological side, the *kantaiku* nominal in (14c) is characterized by a peculiar intonation (i.e., a high tone on the head noun). Nobuko Hasegawa (p.c.) also points out to me that vowel fusion may take place in *kantaiku* nominals. According to Hasegawa (1979: 129), vowel fusion is a process in which "[i]n men's vulgar speech only ai, oi, and ae are fused into a long vowel ē." Let us consider the following example:

(15) Takai-wain → Takē-wain 'Expensive wine!' (cf. (14c))

The resulting nominal above exclusively expresses the speaker's on-the-spot emotional reaction to the expensive wine. These semantic and phonological properties can be accounted for by assuming that Japanese *kantaiku* nominals are derived by covertly (string-

vacuously) moving the predicative relative clause to [Spec, IFocP], as illustrated below:[3]

(16) a. $[_{DP} \ldots [_{IFocP} [_{NP} [_{Rel} \textit{pro}_i$ taka-i] $\text{wain}_i]]]$

b. $[_{DP} \ldots [_{IFocP} [_{Rel} \textit{pro}_i$ taka-i$]_j [_{NP} t_j \text{wain}_i]]]$

Their analysis seems to imply that predicate fronting is one of the key factors involved in IFoc fronting in the DP domain.

Shimada and Nagano's (2016) study is of theoretical and empirical importance in exploring the hypothesis in (13b) (see also Shimada and Nagano (2017) for other types of Japanese mirative expressions; cf. Konno (2012)). However, they cannot provide evidence enough to show the word order alternation effects in Japanese *kantaiku* nominals. Thus, further research will be necessary to empirically support the presence of emphatic IFoc in the nominal domain.

Having these backgrounds in mind, the next section argues that the emphatic IFoc fronting hypothesis is supported by comparative binominal NPs.

4. 3. Comparative Binominal NPs

4. 3. 1. Introduction

Recent syntactic studies has tried to explore the symmetry between the clausal domain and the nominal domain in terms of the application of predicate inversion (e.g., Den Dikken (1998, 2006)). Sentential predicate inversion is illustrated as shown below (Moro (1997)):

(17) a. I consider John (to be) the best candidate. [Predicative]

[3] Here, it is assumed that the predicative relative clause includes the null pronoun which is coreferential with the head noun.

b. I consider the best candidate *(to be) John. [Specificational]

The embedded small clause (SC) in (17a) corresponds to a predicative sentence like "John is the best candidate." In (17b), the predicative NP is inverted, and as a result, the embedded SC take a syntactic configuration similar to a specificational sentence like "The best candidate is John." Moro (1997) observes that the specfication SC requires the obligatory occurrence of the copula (*to*) *be* in the embedded context A series of works by Bennis, Corver and Den Dikken (1998) and Den Dikken (1998, 2006) interpret the obligatory occurrence of the copula as a syntactic marker indicating predicate inversion (i.e., "linker" in Den Dikken's (2006) sense).[4] According to Den Dikken, the copula plays a syntactic role in connecting the inverted SC predicate with the SC subject. Den Dikken argues that predicate inversion is an instance of A-movement (in this case, the categorial status of the inverted SC predicate is an NP, and hence it can occupy an A-position).

Den Dikken's (1998, 2006) predicate inversion approach is extended to the so-called binominal NPs (see also Bennis, Corver and Den Dikken (1998)). Let us consider the following example:

(18) a. that idiot *(of) a man

b. [SC [man] [idiot]]

It is a traditional observation that binominal NPs reflects a potential predication relationship between the first noun as the predicate and the second noun as the subject (e.g., Bolinger

[4] Throughout this chapter, I will adopt the original predicate inversion approach proposed by Bennis, Corver and Den Dikken (1998) and Den Dikken (1998). The analyses to be proposed in this chapter can be sophisticated under the up-dated version of the predicate inversion analysis (see Den Dikken (2006) for the revised approach on the basis of *relators* and *linkers*).

(1972)). The underlying base structure is shown in (18b), in which *man* is generated as the SC subject and *idiot* as the SC predicate. One of the crucial points is that binominal NPs require the obligatory occurrence of the preposition-like *of*. Den Dikken argues that the preposition-like *of* is the nominal counterpart of the copula as a linker. Den Dikken's treatment of binominal NPs implies that predicate inversion (as an instance of A-movement) is applied both to the clausal domain and the nominal domain.

However, this section argues that this is not the ending of the whole story. The predicate inversion pattern observed in (17) shows that the predicate inversion sentence carries a specificational interpretation. By contrast, it has been argued that binominal NPs are closely associated with a certain evaluative (often negative) connotation (Austin (1980), Aats (1998)). In connection with this, Austin (1980) argues that binominal NPs carry a figurative meaning in that a simile or metaphor is involved. For example, intuitively, "that idiot of a man" can be paraphrased as a metaphorical/comparative sentence like "that man is <u>like</u> an idiot." For this reason, I will use the term "comparative binominal NPs" in what follows. This descriptive property opens up a possibility that emphatic IFoc fronting in the nominal domain is substantiated from comparative binominal NPs.[5] This section first shows that they behave as an emotional vocative in the sense of Shimada and Nagano (2016) (i.e., the speaker's on-the-spot emotional reaction to a given situation), and proposes that the inverted predicate (i.e., the second noun) targets [Spec, IFocP] in the nominal domain.

[5] Den Dikken (2006) argues that binominal NPs are decomposed into two types: those which require the occurrence of the preposition-like *of* and those which do not. The former is referred to as comparative binominal NPs, and the latter is called attributive binominal NPs. Den Dikken (2006) argues that comparative binominal NPs are derived by predicate inversion, while attributive binominal NPs are not. For the sake of discussion, I will confine my attention to comparative binominal NPs.

4. 3. 2. Binominal NPs as Emotional Vocatives

Before proceeding, a word is in order about the structure of comparative NPs. For the sake of discussion, this study refers to the first noun part as "N1," and the second noun part as "N2."

(19) a. That idiot of a man!

b. (that) [$_{N1}$ idiot] of [$_{N2}$ a man]

The first point to be mentioned here is that the binominal NP in (19a) is used as an emotional vocative, or the speaker's on-the-spot reaction to a given situation/entity. In this case, the speaker is mocking at the referent of the whole NP by using the binominal NP.[6] The rest of this section attempts to provide arguments for the claim that they show some properties indicating focus and the speaker's evaluation. This section begins with Den Dikken (2006), who argues that comparative binominal NPs are an instance of the nominal counterpart of predicate inversion.

4. 3. 2. 1. N1 as Small Clause Predicate

Den Dikken (2006) points out that comparative binominal NPs and the two nouns juxtaposed without the preposition-like *of* differ from each other, by observing the following contrast:

(20) a. a jewel of a village (Den Dikken (2006: 162))

b. (*) a jewel village (Den Dikken (2006: 163))

[6] In this case, the demonstrative *that* functions to intensify the speaker's evaluative meaning. The intensifying function of the demonstrative *that* will be discussed in detail in Section 4.4.2.

(20a) is an instance of comparative binominal NPs.[7] Although Den Dikken (2006) does not mention the focal accent pattern in (20a), my informants reported that the N1 in the comparative binominal NP, *jewel*, receives focal stress. On the other hand, the NP in (20b) is ambiguous between an attributive NP or a root compound NP. If the main stress is put on *village* in (20b), *jewel* in (20a) will be interpreted as an attributive modifier; however, the resulting NP is unacceptable under the attributive interpretation. The NP in (20b) is acceptable as a root compound which denotes "a village with a lot of jewels" or "a village where jewels are made." This fact suggests that comparative binominal NPs are different from attributive NPs and root compounds; therefore, it is impossible to assume a derivational relationship between the binominal NP in (20a) and the NP in (20b).

Furthermore, Den Dikken (2006) characterizes the semantic property of the binominal NP in (20b) as a comparison (metaphorical) meaning (cf. Austin (1980)). In the binominal NP in (20a), the property denoted by the N1 is taken to apply not just to the N2 but to the referent of the entire binominal NP. For example, *jewel* (N1) is used as a metaphor for the village (N2) here, and thereby the metaphorical meaning further applies to the referent of the whole NP. Thus, at the propositional content level, the comparative binominal NP in (20b) is translated as the simile sentence with the comparative predicate *like* in (21b) (cf. Den Dikken (2006: 174)):

(21) a. a jewel of a village

b. That village is *like* a jewel.

[7] Other examples of this type are illustrated below:

(i) a. a horror of a story ≠ a horror as a story
≠ a horror story
b. a beauty of a parlor ≠ a beauty as a parlor
≠ a beauty parlor

(Den Dikken (2006: 173))

This interpretive similarity motivates Den Dikken (2006) to propose that comparative NPs share with their sentential counterparts an SC structure like the following as its base.

(22) [$_{SC}$ [$_{NP}$ village] [$_{Pred}$ (like) a village]]

Therefore, it follows from Den Dikken's (2006) SC assumption that the comparative meaning in binominal NPs is always evaluative because the SC predicate involves the overt/covert simile predicate.

To summarize, the N1 in comparative binominal NPs corresponds to the SC predicate involving a comparative predicate *like*. The comparative predicate is not overtly realized in comparative binominal NPs, but it follows from the comparative SC assumption that both comparative binominal NPs and their sentential counterparts reflects evaluation (i.e, the comparative meaning).

4. 3. 2. 2. More on the Comparative Meaning and Its Degree-Relatedness

According to Den Dikken's (2006) SC analysis, comparative binominal NPs share the same SC structure with their sentential counterparts. An important question here is whether and how the fronting of the SC predicate contributes to a certain discourse-related meaning. This question has not been addressed in a series of previous studies (cf. Bennis, Corver, and Den Dikken (1998) and Den Dikken (1998, 2006)).

In connection with this, let us begin the discussions with the following contrast:

(23) a. That village is (just) like a jewel.

b. Like a jewel is that village.

Section 3.2 has argued that particle fronting and comparative substitution contributes to a degree-intensifying meaning. According to my informants, basically, the same is true of the predicate inversion sentence in (23b). As well as extreme adjectives (such as *huge*), comparative predicates such as *like a jewel* allow extreme-degree modification, as shown in (23a). By adding the degree-intensifying modifier *just* to the comparative predicate, the comparative relationship between the property denoted by the comparative predicate and the referent of the subject NP is reinforced. This amounts to saying that the evaluative (comparative) meaning in binominal NPs is (non-contrastively) intensified. The crucial point is that a similar degree-intensifying effect shows up in (23b) with predicate inversion. Thus, it is concluded that sentential predicate inversion contributes to a degree-intensifying function (i.e., the intensified comparative reading).

Although Den Dikken (2006) does not discuss the potential semantic similarity between sentential predicate inversion and nominal predicate inversion, according to my informants, both of them function to yield a degree-intensifying interpretation without changing their propositional meaning.

(24) [$_{SC}$ [$_{NP}$ village] [$_{Pred}$ (like) a jewel]]

(25) a. Like a jewel is that village.

b. a jewel of a village

cf. That village is like a jewel.

In both cases, *jewel* is used as a metaphor for *village*; thus, the property of a *jewel* is compared to that of a village, and sentential/nominal predicate inversion serves to intensify the comparative meaning, as in a sentence like "That village is *just* like a jewel," with the speaker's intention to intensify the comparative reading. This interpretive parallelism

constitutes an argument for the present hypothesis that the CP and DP domains contain a functional projection dedicated to IFoc.

Furthermore, the fronted predicate in comparative binominals receive focal stress (cf. (20a)). This phonological property will be naturally explained if it is assumed that the fronted predicate targets [Spec, IFocP] in the nominal domain. The next subsection proposes an analysis of comparative binominal NPs as emotional vocatives.

4. 3. 3. The Derivation of Binominal NPs as Emotional Vocatives

4. 3. 3. 1. Predicate Inversion

Let us review the predicate inversion approach proposed by Bennis, Corver, and Den Dikken (1998) and Den Dikken (1998, 2006). They propose that the clausal and nominal domains show symmetry in predication and predicate inversion. To see this, let us consider the following examples:[8]

(26) a. I consider John (to be) the best candidate.

b. I consider the best candidate *(to be) John.

In (26a), the embedded small clause (SC) corresponds to a predicative sentence like 'John is the best candidate,' whereas in (26b), the SC is seen as a specificational sentence (e.g. *The best candidate is John*.). One crucial difference between (26a) and (26b) concerns the occurrence of the infinitival copula *to be*: while in (26a), the infinitival copula can freely

[8] It should be noted that the pattern given here is irrelevant to heavy NP shift (cf. Larson (1988)):

(i) a. I would consider John the best candidate.
b. I would consider the best candidate [the man who passed the entrance exam to the University of Tsukuba in the first place].

be omitted, it cannot be left out in (26b). Following Moro (1997), Bennis, Corver, and Den Dikken and Den Dikken propose that (26b) is derived from (26a) by applying predicate inversion to (26a): this amounts to saying that the specificational SC is derived from the predicative one, as shown below:

(27) a. $[_{FP}\ [_{F'}\ [_{F}\ F]\ [_{XP}$ John $[_{X'}$ X $[_{YP}$ the best candidate]]]]]

b. $[_{FP}\ [_{YP}$ the best candidate$]_j\ [_{F'}\ [_{F}$ F(= *to* ***be***)+X_i] $[_{XP}$ John $[_{X'}$ t_i t_j]]]]

(27a) is the base structure for (27b), in which *John* functions as the subject and *the best candidate* is the predicate in the SC indicated by XP. Then, the SC head X raises to the upper functional head F, and the SC predicate moves up to [Spec, FP], as shown in (27b).[9] In this configuration, the head F (with the raised head X) serves as a linker which has a syntactic role in connecting the inverted predicate to its subject. This syntactic operation shows up as the obligatory occurrence of the infinitival copula *to be* on the phonological side.

Bennis, Corver, and Den Dikken (1998), furthermore, extend their predicate inversion analysis to comparative binominal NPs:

(28) a. (an) idiot *of* a man

b. $[_{FP}\ [_{YP}$ (like) idiot$]_j\ [_{F'}\ [_{F}$ F (= *of*)+X_i (= *a*)] $[_{XP}$ man $[_{X'}$ t_i t_j]]]]

According to their analysis, the N2 *man* is generated as the SC subject, and the N1 *idiot* is generated as the SC predicate with the covert simile predicate. This underlying structure

[9] Under the assumption that the small clause is a phase in its own right, the raising of the X head to the F head grammatically extends the phase to FP (cf. Chomsky (1995)). This head raising process ensures that movement of the predicate to [Spec, FP] will not illegitimately cross a phase boundary. An independent study will be required to identify the exact nature of the functional head F here, but [Spec, FP] is assumed to be an A-position.

corresponds to a predicative sentence like '[The] man is (like) an idiot.' Then, the SC head X undergoes head movement, followed by the movement of the SC predicate to [Spec, FP]. The resulting configuration in (28b) shows that the inverted predicate *idiot* is connected to its subject *man* by the linker F (with X). As a result, the head *F* is phonologically realized as *of*, with the raised X head realized as the indefinite article *a*.

The present study adopts the predicate inversion approach to comparative binominals, but I will slightly modify it by assuming that the inverted predicate targets [Spec, IFocP] in the DP domain.

4. 3. 3. 2. Predicate Inversion as IFoc Fronting

By slightly modifying the predicate inversion analysis reviewed in the previous subsection, I propose that the inverted predicate targets [Spec, IFocP], wherein the emphatic IFoc interpretation (i.e., the degree-intensifying meaning) is obtained.[10]

(29) a. $[_{DP} \ldots [_{IFocP} \ldots [_{FP} \ldots [_{XP}$ [man] $[_{X'}$ [idiot]]]]]

b. $[_{DP}$ that $[_{IFocP}$ idiot$_j$ $[_{IFoc'}$ IFoc+F$_k$(=of)+X$_i$(=a) $[_{FP}$ t$_j$ $[_{F'}$ t$_k$+t$_i$ $[_{XP}$ [man] $[_{X'}$ t$_i$ t$_j$]]]]]]]

In the revised version of the predicate inversion analysis, the obligatory presence of the preposition-like *of* is seen as a reflex of the IFoc criterion. At the sentential level, the IFoc criterion is satisfied by a fronted IFoc element and a fronted auxiliary element, resulting in the focus-verb adjacency relationship. In the case of comparative binominal DPs, the fronted predicate and the inverted complex head satisfy the IFoc criterion, establishing the focus-verb adjacency relationship. Thus, the formal similarity between IFoc fronting in the

[10] Here, the Evaluative projection selecting the IFoc projection is omitted.

sentential domain and the nominal domain is also captured (cf. (25a, b). It should be noted here that the preposition-like *of* does not occur in the case of AP-reordering, which Scott (2002) argues to be an instance of CFoc fronting in the DP (cf. (7), (8b)).[11]

(30) a. an alleged English baron (= (7a))

b. an ENGLISH alleged baron (= (7b))

c. * an ENGLISH of alleged baron

4. 3. 4. Summary

Building on Den Dikken's (1998, 2006) predicate inversion analysis of comparative binominal NPs, this section has argued that the presence of the IFoc projection is substantiated from comparative binominal NPs. The crucial point is that comparative binominal NPs and their clausal counterpart share a degree-intensifying function: in both cases, the fronted predicate functions to intensify a comparative reading (cf. (25a, b). This semantic similarity is naturally captured in the present approach because the fronted predicate targets [Spec, IFocP] in the CP/DP domain. On the syntactic side, the fronted predicate keeps to the focus-verb adjacency. In sentential predicate inversion, the fronted predicate is followed by the fronted auxiliary, and in nominal predicate inversion, the fronted predicate precedes the preposition-like *of*, which is seen as a nominal copula (Den Dikken (1998, 2006)). This syntactic similarity is also accounted for the present approach as a consequence of the IFoc criterion (i.e., the Spec-Head agreement relationship between the IFoc element and the copula element).

[11] My informants rejected the possibility that the preposition-like *of* is inserted after the focalized nationality adjective.

4. 4. Double Genitives[12]

4. 4. 1. Introduction

This section argues that IFoc movement in the DP is also substantiated from a certain class of nominals which seem to include two possessive markers, the preposition *of* and the possessive enclitic *'s*. In the former case, a possessor NP can be introduced after the head noun, as in the phrase *the funnel of the ship*. In the latter case, a possessor NP is accompanied with the possessive enclitic *'s*, as in *John's dog*. These two types of possessive marker can co-occur in the so-called double genitive, as illustrated below:

(31) a. a book of Bill's [Indefinite Double Genitive]
b. that book of Bill's [Demonstrative Double Genitive]
cf. Bill's book

The double genitive in (31a) includes the indefinite article *a*, while the one in (31b) involves the demonstrative *that*. In what follows, I call the former type "indefinite double genitive" and the latter type "demonstrative double genitive."

In the literature, it has been argued that double genitives are derived from definite possessive NPs (e.g., *John's book*) by fronting the possessum over the possessor (e.g., [(a) book]$_i$ of John's e$_i$) (e.g., Kayne (1993, 1994), Den Dikken (1998)). Following this line of analysis, this section will argue that fronting of the possessum is triggered in order to meet different semantic requirements in these two types of double genitives. In the case of indefinite double genitives, the fronting operation is triggered to meet the indefiniteness requirement (Kayne (1993, 1994)), while in the case of demonstrative double genitives, the fronting operation is required to meet a different requirement: namely, emphatic IFoc. In

[12] This section is a revised and extended version of Honda (2018b) and Honda (2016).

order to show the distinct properties of indefinite and demonstrative double genitives, the next section provides some basic syntactic/semantic properties of indefinite double genitives and propose an analysis of them which is also crucial for the derivation of demonstrative double genitives.

4. 4. 2. Indefinite Double Genitives

4. 4. 2. 1. Basic Properties of Indefinite Double Genitives

It has been observed in previous studies that double genitives behave like partitive NPs (Barker (1998); cf. Jackendoff (1968, 1977)). This property is indicated by two facts. First, they cannot occur with the definite article:

(32) a. * the one of John's books [Partitive NP]

b. * the one of John's [Double Genitive]

These examples suggest that indefinite double genitives cannot refer to a unique referent that has been presented in the discourse, which is also known as the anti-uniqueness condition. Second, the head noun of indefinite double genitives, as well as that of partitive NPs, cannot encompass the entire set:

(33) a. # two of John's parents [Partitive NP]

b. # two parents of John's [Double Genitive]

In a standard partitive DP like "two of John's books," there is an implication that there are at least three books in the larger set of John's books. The three-book requirement is necessary so that *two books* can constitute a proper subset of the books, without

encompassing the entire set. By contrast, in the examples in (33a, b), the use of the lexical item *parents* implies that John can have at most two (biological) parents, and thus the entire set of parents is encompassed. Intuitively speaking, these examples are odd because they seem to express that John has more than two biological parents, which contradict the (lexically-induced) meaning that each person has (at most) two biological parents. Barker (1998: 703) attributes these two observations to the proper partitive hypothesis, which states that "elements in the extension of the head nominal [= the possessum part] must all be proper subsets of the referent of the object NP [= the possessor part]."[13] If the definition of proper partitivity is applied to the examples in (33a, b), their unacceptable status can be accounted for: that is, the unacceptability in (33a, b) arises because the entire set of parents is denoted rather than a proper subset.

Indefinite double genitives behave similarly to partitive NPs, but they show different semantic properties. For example, Kayne (1993) observes that indefinite double genitives, unlike possessive NPs, does not exhibit the so-called definiteness effect (cf. Milsark (1974)).

(34) a. * There is (exists) John's sister.
b. There is (exists) a sister of John's. (Kayne (1993: 4))
c. * There is (exists) one of John's sisters.

As argued by Milsark (1974), weak quantifiers, unlike strong quantifiers (including possessive NPs), can occupy the post-copular position of the existential-*there* sentence. Since the post-copular position introduces a new referent in the existential-*there* sentence (i.e., the definiteness effect), this position cannot be occupied by strong quantifiers which

[13] Logically speaking, proper partitivity is defined as $y \subset x$ rather than $y \subseteq x$; the former requires the set of y to be less than the set of x, while the latter also allows the set of y to be equal to the set of x.

denote a connection to some pre-existing referent in the discourse. Taken together with the definiteness effect, the contrast in (34) suggests that possessive NPs behave like strong quantifiers (definites), while double genitives pattern like weak quantifiers (indefinites).[14]

Another semantic difference between possessive NPs, partitive NPs and double genitives comes from the interpretation of the possessive NPs included in the whole NPs. As pointed out by Anderson (1984), the semantic (thematic) relationship between a genitive NP and its head noun in possessive NPs is quite variable: that is, the semantic relationship between them is determined on the basis of a certain pragmatic relationship. For example, a possessive NP like *John's book* will be used to refer to the book that he read, the book that he wrote, the book that he has been told to read to someone, etc (cf. Kempson (1977)). These examples suggest that the interpretation of possessive NPs can be (somehow) determined by their context of use, thereby the sematic relation holding between possessor and possessum is specified. I will call the relevant interpretation a "discourse/context-dependent" reading. Having this property in mind, let us consider the following paradigm provided by Storto (2000):

(35) Yesterday, John and Paul were attacked by (different) groups of dogs;

a. ... unfortunately John's dogs were pitbulls.

b. ... unfortunately, some of John's dogs were pitbulls.

c. # ... unfortunately some dogs of John's were pitbulls.

(Storto (2000: 206))

According to Storto, *John's dog* and *some of John's dogs* can be easily interpreted as denoting

[14] The absence of the definiteness effect in indefinite double genitives needs more detailed investigations. It has been pointed out that not all partitive NPs show the definiteness effect (e.g., kind/type partitives).

the set of dogs that attacked John which is introduced in the context-setting sentence. *Some dogs of John's*, however, does not carry the contextual interpretation in question. Rather, it must be interpreted as denoting a subset of the dogs owned by *John*; hence, the unacceptability of (35c). These facts suggest that the possessor of indefinite double genitives must be interpreted as an owner and does not receive a context-dependent interpretation (see also Anderson (1983)).

To summarize, indefinite double genitives show the following three semantic properties: anti-uniqueness, indefiniteness, and the ownership interpretation of the possessor.

Having seen the semantic properties of indefinite double genitives, let us turn to some formal properties of them. First, indefinite double genitives do not allow the overt spell out of the "missing" NP in the possessor part, though they apparently share a similar syntactic configuration with partitive NPs:

(36) a. I met two students of John's.
b. * I met two students of John's students.
cf. I met two of {John's students / them}.

Second, indefinite double genitives does not allow the extraction of the possessor part, as shown below (cf. Kayne (1993)):

(37) a. ?? What woman were you talking to a friend of's? (Kayne (1993: 5))
b. ** What woman's were you talking to a friend of? (Kayne (1993: 5))
cf. I bought a book of John's.

This subsection has shown the syntactic/semantic properties of indefinite double

genitives. The next section proposes an analysis of them on the basis of Kayne (1993).

4. 4. 2. 2. The Derivation of Indefinite Double Genitives

In order to explain the definiteness effect of indefinite double genitives, Kayne (1993, 1994) first assumes that the clausal domain and the nominal domain share the same syntactic structure which includes T(AGR)P, as shown below:

(38) a. [$_{CP}$ ... [$_{T(AGR)P}$ ... [$_{T(AGR)'}$ *'s* [$_{vP}$ ...]]]]

b. [$_{DP}$ ... [$_{TP(AGR)P}$ ... [$_{T(AGR)'}$ *-s* [$_{QP/NP}$ ...]]]]

The apostrophe *s* in the nominal domain is seen as a singular number marker which is the same as the morpheme *-s* found on verbs and requires a singular antecedent.[15] Assuming the nominal structure in (38b), Kayne proposes that definite possessive NPs consist of the (overt/covert) definite article, the possessor marker, and the possessum nominal part. His proposal is made on the basis of the fact that certain European languages (and Hungarian) realizes the definite article overtly.

(39) a. il mio libro (lit. the my book) [Italian]

b. Ø my book

English does not realize the definite article overtly, and hence he assumes that English

[15] According to Kayne (1993:6), "*'s* is not only AGR, but actually substantially the same as the morpheme *-s* found on verbs, and like the latter it requires a singular antecedent." The fundamental idea here is that the parallelism between the clausal and nominal domains extends to the T(AGR) projection by regarding the apostrophe *s* as the same as the tense morpheme realizing the present tense and the singular number.

One open issue is whether the status of the apostrophe *s* in genitive compounds (e.g., a women's magazine) is the same as that of the inflectional -'*s* assumed here.

possessive nominals have the covert definite article indicated by Ø, as shown in (39b).[16] Kayne assumes (40a) for the base structure of possessive NPs and double genitives; in this case, the possessor *John* is generated at [Spec, TP], and the possessum (*a*) *sister* is generated either as an NP or a QP as the complement of the T(AGR) head; the T(AGR) head is analyzed as a "possessive" inflectional head. In his analysis, the D head is invisible (as indicated by Ø) when it carries the [+definite] feature. When the D head carries the [-definite] feature, the possessum QP/NP undergoes movement to [Spec, DP]; then, the indefinite D head is filled with *of*, and the indefinite double genitive is derived, as shown in (40c):

(40) a. $[_{DP}$ ... $[_{T(AGR)P}$ John $[_{T(AGR)'}$ *'s* $[_{QP/NP}$ sister]]]]

b. $[_{DP}$ $[_{D'}$ Ø $[_{T(AGR)P}$ John $[_{T(AGR)'}$ *'s* $[_{QP/NP}$ sister]]]]] [Possessive NP]

c. $[_{DP}$ $[_{QP/NP}$ a sister $]_i$ $[_{D'}$ of $[_{TP(AGR)P}$ John $[_{T(AGR)'}$ *-s* t_i]]] [Double Genitive]

Here, *of* is analyzed as the nominal counterpart of the complementizer *that* and case-marks the possessor NP *John*. In this case, fronting of the possessum can be seen as a movement rule similar to the relativization process: this amounts to saying that indefinite double genitives are the nominal counterparts of indefinite relative clauses (cf. Zribi-Hertz (1997: 534)).[17]

Since the fronted NP/QP determines the definiteness of the whole DP as [-definite] in the derivation of indefinite double genitives, Kayne's (1993) analysis directly captures the indefiniteness status of double genitives. Another direct consequence is that the definite article cannot occur in indefinite double genitives because the D head is occupied by *of*.

[16] Kayne's (1993, 1994) assumption greatly departs from Fukui's (1986) general assumption that the possessive NP is licensed at [Spec, DP] by establishing a Spec-Head agreement relationship with the D head.

[17] More concretely, the indefinite double genitive "a sister of John's" has the sentential counterpart corresponding to the restrictive relative clause "a sister that John has."

Though Kayne (1993, 1994) does not discuss how the structure in (40c) contribute to the possessive meaning in indefinite double genitives, we can say that the structure in (40c) will allow an indefinite possessive reading. In this structure, the T(AGR) head is analyzed to be a "possessive" inflectional head, and the complementizer-like *of* signals that the whole DP is [-definite]. The resulting structure corresponds to a sentential expression "a sister that John has." If this analysis is correct, an infelicitous example like "# a mother of John's" will be treated on a par with the corresponding infelicitous sentential expression "# a mother that John has" (cf. (33)).[18] Thus, the "partitive-like" property can be accounted for without assuming that *of* is a partitive marker.

In a nutshell, what I would like to preserve from his analysis is the following three-fold assumption:

(41) a. The possessor NP remains at [Spec, T(AGR)P] throughout the derivation

b. [Definite Possessive DPs] (= (40b))

If the null definite article with the [+definite] feature appears at the D head, the definiteness of the whole DP is marked as definite.

c. [Indefinite Double Genitives] (= (40c))

If the null definite article does not occur at the D head, then the possessum NP/QP with the [-definite] feature fronts to [Spec, DP]; as a result, the definiteness of the whole DP is encoded as indefinite.

In the present proposal, the occurrence of the preposition-like *of* is sensitive to the fronting operation of the possessum NP/QP: in other words, *of* functions to indicate the

[18] Intuitively, both examples imply that John has more than one biological mother. The infelicitous status needs a detailed explanation, but I would like to leave this question open for future research.

fronting of the possessum NP/QP. This fronting operation will be seen as an instance of predicate inversion. Den Dikken (1998, 2006) interprets the function of *of* as an instance of "linker," a grammatical marker which indicates predicate inversion and serves to connect the fronted possessum NP/QP (i.e., the predicate) to the possessor (i.e., the subject). Under his view, the preposition-like *of* functions to establish a structurally-adjacent relationship between the fronted possessum NP/QP and the possessor remaining in [Spec, T(AGR)P].

In the derivation of indefinite double genitives (cf. (40c)), the possesser NP (John) remains at [Spec, T(AGR)P], and the possessum QP moves to [Spec, DP]. It is assumed that the indefinite D head agrees with the possessum QP at [Spec, DP]; as a result, the definiteness of the whole DP is specified as indefinite. Therefore, indefinite double genitives do not show the definiteness effect (cf. (34)).[19] In the case of definite partitive NPs, on the other hand, the *of*-phrase appears as a PP complement to the DP, as shown in (42c) (cf. Jackendoff (1977)). Since the DP in the PP complement is definite, the whole partitive DP is also definite. Therefore, the definite partitive DP shows the definiteness effect (cf. (34c)).

(42) a. * There is (exists) [$_{DP}$ Ø [$_{TP}$ John [$_{T'}$ -'s [$_{NP}$ sister]]]].

b. There is (exists) [$_{DP}$ [$_{NP}$ a sister]$_i$ [$_{D'}$ of [$_{TP}$ John [$_{T'}$ -'s t$_i$]]]]

c. * There is (exists) [$_{DP}$ one [$_{PP}$ of [$_{DP}$ Ø [$_{TP}$ John [$_{T'}$ -'s [$_{NP}$ sister]]]]]].

Another consequence of the indefiniteness marking is that the possessive part only allows the ownership interpretation and does not allow a discourse-dependent reading (cf. (35) reproduced below):

[19] One interesting issue is to compare indefinite double genitives with type/kind partitives, but I would like to leave this issue for future research.

(43) Yesterday, John and Paul were attacked by (different) groups of dogs;

a. ... unfortunately John's dogs were pitbulls.

b. ... unfortunately, some of John's dogs were pitbulls.

c. # ... unfortunately some dogs of John's were pitbulls.

Along with Storto (2000), the present study argues that the lack of a discourse-dependent reading of the possessor is attributed to the indefiniteness of the possessor part. In general, indefinites introduce a new referent into the discourse at the pragmatic level (Lambrecht (1994)), and therefore it cannot establish an anaphoric relation to a pre-existing referent in the discourse. Therefore, the possessor does not allow a discourse-dependent interpretation.[20]

Next, let us turn to the formal properties of indefinite double genitives. In the present analysis, the fronted possessum QP leaves its trace at the original position. In this case, the moved element is a QP, and therefore its trace behaves as a variable. Hence, indefinite double genitives does not allow the overt spell-out of the possessum part at its original position (cf. (36)).

(44) a. I met two students of John's.

b. * I met two students of John's students.

cf. I met two of {John's students / them}.

[20] One may wonder how the ownership interpretation is syntactically encoded in possessive DPs and indefinite double genitives. One possibility is to assume that there is a null/covert predicate which corresponds to *have/own* between the possessor and the possessum NP/QP. Another possibility is to assume that the apostrophe 's has an additional grammatical function as a predicate which takes the possessor and the possessum as its arguments. I would like to leave this issue open for future research.

Another consequence of the proposed derivation is that the possessor part *John* at [Spec, T(AGR)P] and the apostrophe *-s* in the T(AGR) head do not form a single constituent; hence, the possessor part does not allow *wh*-extraction (cf. (37)).

(45) a. ?? What woman were you talking to a friend of's?

b. ** What woman's were you talking to a friend of?

To summarize, indefinite double genitives are derived by applying the fronting operation of the possessum NP/QP to [Spec, DP]. The crucial assumption adopted in this subsection is that the possessor NP may remain at its original position (i.e., [Spec, T(AGR)P])). Furthermore, the occurrence of the preposition-like *of* is contingent upon fronting of the possessum NP/QP, and it establishes a structurally-adjacent relationship between the fronted possussem and the possessor at [Spec, T(AGR)P] (i.e., linker). These two assumptions are crucial in the derivation of demonstrative double genitives, as we will see next.

4. 4. 3. Demonstrative Double Genitives

Having seen the basic properties of indefinite double genitives and their derivation, let us turn to demonstrative double genitives. As we have seen in the previous section, indefinite double genitives behaves like partitive NPs. In contrast, Barker (1998) observes that double genitives with demonstratives do not show a clear violation of the proper partitivity constraint, as illustrated below:

(46) That mother of his! (Barker (1998: 713))

cf. * A mother of his!

In this example, the possessum part is occupied by the NP *mother*, which refers to a unique entity in the discourse because each person has only one biological mother. The acceptable status of (46) suggests that demonstrative double genitives, unlike indefinite double genitives, do not have to meet the proper partitivity requirement.

Another important semantic aspect of demonstrative double genitives is associated with the speaker's (often negative) evaluative connotation toward the referent. The relevant semantic property is discussed by Barker (1998), who attributes the original observation to Narita (1986).

(47) "Basically, there must be something unusual or noteworthy about the referent of the collocation, or at least some aspects of the situation that provokes an emotional response in the speaker." (Barker (1998: 713))

For example, a demonstrative double genitive like "*That mother of John's*!" (as a root nominal) strongly implies that the speaker has a certain negative attitude toward the referent, namely, John's mother (e.g. the speaker dislikes or mocks at the personal characteristics of *John's mother*, the physical appearance of her, etc.). The speaker's negative connotation of this type is closely tied to the use of demonstrative double genitives as root nominals, but not to those of possessive NPs nor indefinite double genitives.

(48) a. That NOSE of his! (Barker (1998: 713))

b. His nose.

c. [A] sister of John's.

The observations provided above motivate the hypothesis that a demonstrative double genitive behaves as an emotional vocative which functions as the speaker's on-the-spot emotional reaction to a given situation or entity. The next subsection provides supportive evidence for this hypothesis.

4. 4. 3. 1. Demonstrative Double Genitives as Emotional Vocatives

Shimada and Nagano (2016) claim that Japanese *kantaiku* nominals (e.g., Takai yama! "So high a mountain is!") are derived by emphatic IFoc fronting in the DP domain. Their claim is supported by the fact that *kantaiku* nominals behave as emotional vocatives, namely, root nominals which indicate the speaker's on-the-spot emotional reaction to a given situation (i.e., the speaker's newly discovered information with a concomitant of her/his evaluation/emotion). If demonstrative double genitives behave similarly to Japanese *kantaiku* nominals (i.e., emotional vocatives), then it will be predicted that they show the following two semantic effects: the (non-contrastive) focus effect on the possessum part and the speaker's evaluative meaning. In what follows, on the basis of the observations made by previous studies, the present study argues that the hypothesis is empirically supported.

The first piece of evidence comes from the focal nature of the possessum part (Abel (2006); cf. Barker (1998)). Barker (1998) observes that in the rhetorical vocative usage, demonstrative double genitives must receive focal accent on the possessum part, but not on the possessor part. If the possessor part carries a relatively heavy piece of information, then the demonstrative double genitive becomes unacceptable, as shown below:

(49) a. That NOSE of his!

b. ? Those mothers of HIS AND BILL'S!

c. * That mother of THE TALL MAN'S!

d. * That mother of THE JACK-ASS'S!

(Barker (1998: 714), with modifications)

Thus, Barker admits that some form of focus is involved in demonstrative double genitives. He seems to suggest that the focus property is associated with CFoc; thus, there must be some other items with which the possessum can be contrasted. In contrast, by observing a range of the corpus data, Abel (2006) argues that the use of demonstrative double genitives does not necessarily require a CFoc context (e.g., the context in which the speaker intends to correct a wrong piece of information or makes a contrastive statement).[21] Instead, she mentions the possibility that demonstrative double genitives are used to introduce a new referent (i.e., new information) into the discourse (cf. Prince (1981)). Her interpretation of the focal nature involved in demonstrative double genitives seems to be compatible with the fact that a demonstrative double genitive can be used as the speaker's on-the-spot reaction to a given situation (or entity):

(50) [Context] The speaker met John's father for the first time and found that he was so mean a man.

That FATHER of John's!

In this context, the placement of focus on the possessum part does not imply any contrast; rather, it indicates (the speaker's emotional response to) the high degree of John's father's meanness.[22] The arguments provided so far indicates that the possessum part of

[21] On the basis of the corpus-based survey, Abel (2006) argues that demonstrative double genitives do not easily allow a CFoc reading in the sentential context (i.e. the context in which they are embedded in a sentence).

[22] One may wonder whether this property indicates the extreme degree meaning that is observed in exclamatives (e.g. What a mean man John's father is!). Demonstrative double

demonstrative double genitives carries a non-CFoc interpretation.

The second piece of evidence comes from the fact that demonstrative double genitives convey the speaker's evaluative meaning in the emotional vocative usage. Some previous studies argue that the speaker's evaluative meaning in demonstrative double genitives is concerned with the semantics/pragmatic functions of demonstratives. In connection with this, Keizer (2005) propose that demonstratives play the following two semantic roles: indicating [± proximity] and intensifying the evaluative judgment by the speaker. The former semantic property reflects the deictic interpretation which is the primary function of demonstratives (i.e., the spatio-temporal distance between the speaker and an entity); the latter "extra function of the demonstrative is to strengthen the force of the speaker's judgment" (Keizer (2005: 305)). According to Keizer, the demonstrative *that* can have this function even in the absence of an evaluative adjective, in which case some kind of negative judgment is clearly implied (e.g. Tell *that brother of yours* that he's not welcome anymore). Keizer's observation seems to indicate that the speaker's evaluative meaning has its origin in the occurrence of demonstratives in the rhetorical use of demonstrative double genitives. The fact that demonstratives are used to express the speaker's evaluative meaning is also discussed independently of demonstrative double genitives, as shown below:[23]

(51) a. Shut that flaming door! (Cruse (2011: 414))

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genitives, however, are different from exclamatives in that the former, but not the latter, can be used as an answer to *wh*-questions:

(i) A: Who did you meet yesterday?
B: John's mother / That MOTHER of John's.
B':# What a mean mother.

These facts show that demonstrative double genitives, unlike exclamative-*wh*-phrases, are informative as they are able to satisfy the value of the *wh*-phrase.

[23] In this case, "flaming" works as an f-word, and its negative connotation is intensified by the demonstrative *that*.

b. "..., certain other aspects of what is meant fall outside the bounds of what is said, and thus are to be considered implicatures. This is true, for instance, of expressive meaning. Somebody uttering [(51a)] undoubtedly expresses anger, but does not *say* that they are angry:" (Cruse (2011: 414))

Thus, the occurrence of demonstratives contributes to the speaker's evaluative meaning in the rhetorical use of demonstrative double genitives.[24]

This subsection has provided evidence for the hypothesis that demonstrative double genitives can behave as emotional vocatives by observing the following two points; first, the possessum part receives a non-CFoc interpretation, and second the speaker's evaluative meaning is expressed by means of demonstratives. It should be noted here that these two semantic properties are not independent of each other in the emotional vocative use of demonstrative double genitives, since the indefinite counterpart does not behave as an emotional vocative even if focal stress is placed on the indefinite possessum part, as shown below:

(52) a. That MOTHER of his! (Barker (1998: 713))

b. * A MOTHER of his!

This fact suggests that the emotional vocative use is licensed by the combination of the evaluative function of demonstratives and the obligatory placement of (non-contrastive)

[24] In connection with this, one may wonder whether and how the choice of a demonstrative leads to the difference in the speaker's evaluative meaning/connotation in the rhetorical use of demonstrative double genitives. For instance, Barker (1998) points out that the following four types of demonstratives occur in demonstrative double genitives: this/that and these/those. This issue is beyond the scope of this study, and therefore I would like to leave it open for future research.

focus on the possessor part. Hence, it is concluded that they are derived by emphatic IFoc fronting. The next subsection proposes the derivation of demonstrative double genitives.

4. 4. 3. 2. Proposal: The Derivation of Demonstrative Double Genitives

The present study has made the following two assumptions (See Subsection 4.4.2.2.). First, the possessor NP/QP remains at [Spec, T(AGR)P], and second, the preposition-like *of* occurs only when the possessum NP/QP undergoes fronting to [Spec, DP]; the preposition-like *of* functions as a case-marker and a linker (i.e., a grammatical element which connects the fronted possessum with the possessor).

(53) a. [$_{DP}$ [$_{D'}$ of [$_{T(AGR)P}$ John [$_{T(AGR)'}$ *'s* [$_{QP}$ a sister]]]]]

b. [$_{DP}$ [$_{QP}$ a sister]$_i$ [$_{D'}$ of [$_{TP(AGR)P}$ John [$_{T(AGR)'}$ -*s* t$_i$]]]]

In addition, I assume that the parallelism between the clausal domain and the nominal domains extends to information structure (Aboh et al. (2011)). Under Cruschina's (2011) two-layered focus hypothesis, it is hypothesized that the DP domain includes two functional projections for focus: CFoc and IFoc. According to Shimada and Nagano (2016), the IFoc projection is selected by the Evaluative head, and emphatic IFoc fronting is licensed by sharing two discourse-related features through the Spec-Head agreement relationship: the Evaluative feature and the IFoc feature. Combining these three assumptions, I propose the following derivation for the emotional vocative use of demonstrative double genitives:

(54) a. [$_{DP}$ [$_{EvalP}$ [$_{IFocP}$ [$_{IFoc'}$ of [$_{FinP}$ [$_{T(AGR)P}$ John [$_{T(AGR)'}$ *'s* [$_{AP}$ Ø nose]]]]]]]]

b. [$_{DP}$ that [$_{EvalP}$ [$_{Eval'}$ [$_{IFocP}$ [$_{AP}$ Ø nose]$_i$ [$_{IFoc'}$ of [$_{FinP}$ t$_i$ [$_{Fin'}$ [$_{TP(AGR)P}$ John [$_{T(AGR)'}$ -*s* t$_i$]]]]]]]]]

In the base structure in (54a), the possessum is generated as an AP including a null adjective (indicated by Ø) which corresponds to *big* or *huge*. It is assumed that the possessum AP bears the IFoc feature and the Evaluative feature, the latter of which is endowed with the null adjective. The possessum AP undergoes fronting to [Spec, IFocP], and establishes a Spec-Head agreement with the IFoc head (and also agrees with the Eval head). As a result of this Spec-Head agreement, the preposition-like *of* is inserted at the IFoc head and case-marks the possessor *John*. Finally, the (evaluative) demonstrative *that* occurs at the D head and agrees with the fronted AP at [Spec, IFocP]. As a result, the demonstrative *that* serves to intensify the degree of the null adjective.

The feature-sharing mechanism through the Spec-Head agreement directly accounts for the (non-contrastive) focus effect on the possessum part and the obligatory occurrence of demonstratives. It should be noted here that neither the indefinite article nor the definite article has the evaluative function which demonstratives carry; hence the unacceptability of the following examples:

(55) a. * A MOTHER of John's!

b. * The MOTHER of John's!

Furthermore, the obligatory occurrence of the preposition-like *of* in demonstrative double genitives is also captured as a consequence of the Spec-Head agreement.

(56) That MOTHER *(of) his!

Recall that the preposition-like *of* can be treated as a linker whose function is to connect the fronted possessum (i.e., the predicate) to the possessor (i.e., the subject) (cf. Den Dikken

(1998)). Under the present proposal, the preposition-like *of* is seen as a linker which relate the fronted emphatic IFoc element (the possessum NP/DP) to the rest of the nominal element including the possessor. This structurally-adjacent relationship between the fronted IFoc element and the preposition-like *of* resembles the focus-verb adjacency requirement which is imposed on the IFoc layer in the CP domain.

(57) [Sicilian: emphatic IFoc fronting]

a. … [$_{IFocP}$ **N'articulu**$_i$ [$_{IFoc'}$ scrissi$_j$ [$_{FinP}$ [$_{IP}$ *pro* [$_{I'}$ t$_j$ [$_{vP}$ t$_j$ [$_{VP}$ … t$_i$ …]]]]]]]

b. … [$_{CFocP}$ N'ARTICULU$_i$ [$_{CFoc'}$ Ø [$_{TopP}$ … [$_{FinP}$ [$_{IP}$ *pro* scrissi t$_i$]]]]]] (no na littra)

In the case of emphatic IFoc fronting, the fronted IFoc element and the raised verb establish a Spec-Head agreement relationship; hence, they must be adjacent to each other. Thus, the structural similarity between demonstrative double genitives in the DP domain and emphatic IFoc fronting in the CP domain is naturally captured as a consequence of the structural requirement imposed on the IFoc layer.

Finally, I would like to discuss the definiteness/indefiniteness status of demonstrative double genitives. In Subsection 4.2.2.2, the present study proposes that the indefinite status of indefinite double genitives is structurally ensured as a result of fronting a possessum to [Spec, DP].

(58) a. [$_{DP}$ [$_{D'}$ of [$_{T(AGR)P}$ John [$_{T(AGR)'}$ *'s* [$_{QP}$ a sister]]]]]

b. [$_{DP}$ [$_{QP}$ a sister]$_i$ [$_{D'}$ of [$_{TP(AGR)P}$ John [$_{T(AGR)'}$ -*s* t$_i$]]]]

In the case of indefinite double genitives, the D head agrees with the fronted indefinite QP, and as a result of this, the whole DP behaves as an indefinite. Therefore, indefinite double

genitives may occur in the existential-*there* construction (cf. (34)). Having this point in mind, let us turn to demonstrative double genitives. The present proposal treats the possessum constituent (e.g., *mother* in "That MOTHER of John's!") as an AP involving an indefinite NP/QP. Hence, it is predicted that demonstrative double genitives are also allowed to occur in the existential-*there* construction. One may wonder whether demonstratives are compatible with the indefinite context because they are often grouped together with the definite article in terms of notions such as definiteness/specificity (Abney (1987)). In contrast with this general view, according to my informants, the prediction is borne out.

(59) a. * There is (exists) Mary's sister.

b. There is (exists) a cat of Mary's.

c. There is (exists) that CAT of Mary's.

This fact suggests that demonstratives can be used in the indefiniteness context when they have the evaluative function. The point that evaluative demonstratives may occur in the indefinite context is independently argued for by Lakoff (1974: 347):

(60) There was {*the / a / this} traveling salesman, and he …

According to Lakoff (1974: 347), the demonstrative used in (60) "give[s] greater vividness to the narrative, to involve the addressee in it more fully." Lakoff's observation points to the fact that demonstratives do not necessarily behave like the definite article whose primary function is to refer to a uniquely identifiable referent in the discourse.[25]

[25] Evaluative demonstratives seem to imply that the speaker is familiar with the referent,

This subsection has proposed the analysis of demonstrative double genitives on the basis of Cruschina's (2011) two-layered focus hypothesis. Under the present proposal, the possessum NP/QP with the demonstrative fronts to [Spec, IFocP], and as a result, demonstrative double genitives behave as emotional vocatives.

4. 4. 4. Summary

According to Kayne (1993, 1994), indefinite double genitives are derived by fronting a possessum NP (QP) to [Spec, DP]. Combining Kayne's analysis with Den Dikken's (1998) predicate inversion analysis, this section has argued that demonstrative double genitives as emotional vocatives are derived by fronting a possessum NP (QP) to [Spec, IFocP]; as a result, the IFoc head is filled with the preposition-like *of*, which serves to connect the inverted predicate with the rest of the nominal part including the possessor.

4. 5. Negative Inversion in the DP as IFoc Movement[26]

4. 5. 1. Negative Inversion and Degree Inversion: A Comparison

In the literature, it has been argued that the nominal domain shows certain similarities with the clausal domain as to fronting operations. For example, it is a well-known observation that certain degree intensifiers obligatorily trigger predicate fronting within the nominal domain. For example, Corver (1997) identifies the following five degree intensifiers as fronting triggers: *too*, *how*, *as*, *that*, *so*. Let us observe the following contrasts (Troseth (2009: 47-48)):

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while the hearer is not. In this sense, evaluative demonstratives could be different from the definite article because the latter, in general, functions to denote a uniquely-identifiable referent in the discourse.

[26] This section is a revised and extended version of Honda (2018a) and Honda (2017b, c).

(61) a. The Seventh Seal is too serious (of) a movie.

b. * The Seventh Seal is a too serious movie.

(62) a. Green is as becoming (of) a color.

b. * Green is an as becoming color.

(63) a. Willie Nelson is that talented (of) a songwriter.

b. * Willie Nelson is a that talented songwriter.

(64) a. Holding all 50 states' primary erections on the same day is as reasonable (of) a proposal.

b. * Holding all 50 states' primary elections on the same day is an as reasonable proposal.

In all cases, the adjective undergoes obligatory leftward pied-piping, and the pied-piped adjective is optionally followed by the preposition-like *of*. In the standard analysis based on feature checking (Chomsky (1995)), the D head possesses the uninterpretable degree feature [*u*Deg], and it is checked off by fronting to [Spec, DP] an adjectival phrase with the interpretable [Deg] feature [*i*Deg]; otherwise, the [*u*Deg] feature in the D head remains to be checked off, and the derivation crashes at LF. It should be also noted here that other degree modifiers such as *very* and *extremely* do not trigger AP-fronting, as shown below:

(65) a. John is a very/extremely good student.

b. * John is very/extremely good a student.

This is, however, not the whole picture of AP-fronting in the DP; in fact, degree inversion also occurs in the context of negation. Among the five fronting triggers mentioned above, the degree intensifier *that* is also known to behave similarly to NPIs (e.g.,

Giannakidou (1997)). For example, the occurrence of the degree phrase *all that Adj* is licensed in the presence of negation.

(66) a. * He was all that intelligent.

b. He wasn't all that intelligent.

Giannakidou (1997) explains the distribution of *all that Adj* by proposing that it is an NPI. Borroff (2006: 515, fn. 3) also notes that the same degree phrase can participate in AP fronting in the DP:

(67) a. * He was all that intelligent a man.

b. He wasn't all that intelligent a man.

This contrast shows that the degree intensifier *that* undergoes the fronting operation under the scope of negation in the nominal domain.

Borroff (2006) and Troseth (2009), furthermore, observe that negation may trigger fronting operations in the absence of fronting triggers within the DP domain in certain dialects.[27] Let us consider the following examples:

(68) a. John is not [a very good student].

b. John is not [very good a student].

cf. * John is [very good a student]. (Borroff (2006: 515))

[27] Borroff (2006) notes that the use of the form in (68b) cuts across dialect and register lines on the basis of age and geographical location; the nominal with negative inversion in (68b) is generally part of a more informal register, and some speakers judge it ungrammatical. Two of my consultants also reported that a pattern like (68b) is limited to the informal speech style and acceptable only under a particular interpretation, which I will make explicit later.

(69) a. John is not a very good (*of) student.

b. John is not very good (of) a student. (Borroff (2006: 519))

(68a) without AP fronting and (68b) with AP fronting are both acceptable for certain native speakers of English. According to Borroff (2006: 514, fn. 2), "NDI [= Negative Degree Inversion] involves movement of DegPs headed by *very*, *real*, *that*, and *too*, though an anonymous LI reviewer notes that forms with *very* and *real* may be most widely accepted." As well as degree inversion, negative inversion also allows the optional interposition of the preposition-like *of* between the fronted predicate and the NP part *a*(*n*) *NP*. It should be noted here that if the adjective does not undergo pied-piping, then the preposition-like of does not occur, as shown in (69a). In other words, the occurrence of the preposition-like *of* is sensitive to the presence of the pied-piped adjective.

The next subsection focuses on the semantics of nominals with negative inversion.

4. 5. 2. The Semantics of Negative Inversion in the DP

Observing the distribution of nominals with negative inversion (hereafter NI), Borroff (2006) characterizes it in terms of the presence of negation.[28] More precisely, Borroff

[28] Adopting the notion of veridicality (Giannakidou (1997)), Borroff (2006) attempts to provide a formal account of the distribution of negative inversion in the DP. For the sake of discussion, I will simplify Borroff's analysis here. According to Borroff, NPIs can be licensed in the non-veridical context (e.g. conditional clauses).

(i) An operator OP is veridical just in case OP p → p is logically valid. Otherwise, OP is non-veridical. (Borroff (2006: 515))

Nominals with negative inversion require the presence of negation. Therefore, Borroff argues that negative inversion in the DP is subject to the anti-veridicality constraint, which is defined as follows:

(ii) An operator OP is anti-veridical just in case Op p → ¬ p is logically valid. (Borroff (2006: 516))

(2006) claims that nominals with negative inversion do not behave like NPIs (cf. (67b)). First, Borroff points out that nominals with NI do not occur in conditional clauses.

(70) a. If you were anyone famous, who would you be?

b. Before anyone arrives at my party, I will have cleaned the house.

c. Everyone who is anyone will be at my party.

(Borroff (2006: 516))

(71) a. * If John were [very diligent a student], he wouldn't party all the time.

b. * Before he became [very good a student], John was a very bad student.

c. * Everyone who is [very good a student] should pass the final.

(Borroff (2006: 516))

Conditional clauses, in general, do not strongly imply the false of their propositional content. The contrast between (70) and (71) shows that nominals with NI, unlike NPIs, are not licensed when the falsity of the propositional content is not strongly implied. This fact suggests that nominals with NI are acceptable only under negation.

Borroff (2000), furthermore, points out another semantic aspect of NI in the DP by observing the following contrast (see also Troseth (2009: 58-60)):

(72) a. John is not a very good student.

b. John is not very good a student.

Simply put, the definition of anti-veridicality says that an operator is defined as anti-veridical if it entails the falsity of their complement, beyond simply failing to entail the truth of their complement. Negation is able to satisfy the definition of anti-veridicality, and therefore licenses negative inversion in the DP.

Borroff notes that (72a) and (72b) are interpreted in different ways, sentential negation or constituent negation. Borroff's argument is based on the cleft test illustrated below:

(73) a. What John is not, is a very good student. [Sentential Negation]

b. What John is, is a not very good student. [Constituent Negation]

The cleft involving sentential negation in (73a) gives rise to the following alternatives: John could be an excellent student, a very good student, just a good student, or even a bad student. When the post-copular position is occupied by *a very good student*, the cleft sentence entails that John is any sort of student, except for a very good one. In contrast, the constituent negation in (73b) takes the adjectival part as its scope; as a result, the only interpretation available is that John is a bad student. According to Borroff, the nominal with NI in (72b) only receives the constituent negation interpretation in (73b), whereas the normal nominal in (72a) either carries the sentential negation interpretation or the constituent negation interpretation.

To sum up, Borroff (2000, 2006) identifies NI in the DP as independent of NPIs (cf. Giannakidou (1997)): that is, NI is licensed in the negative context in which the falsity of the propositional content is strongly entailed. Borroff and Troseth (2009) argue that NI in the DP is triggered by negation, but they do not mention a further possibility that NI in the DP, as well as sentential NI, carries a sense of polarity focus. The next section explores this possibility and proposes an alternative analysis.

4. 5. 3. NI in the DP from the Perspective of Polarity Focus

The previous studies we have reviewed seem to speak for the potential relationship between NI in the DP and polarity focus in the following two senses. First, negative

elements trigger fronting of an adjectival element within the DP domain; sentential NI is also triggered due to the presence of a negative element. Second, NI in the DP is restricted to the negative context in which the falsity of the propositional content is strongly entailed. The next question is whether there are additional evidence for the proposal that NI in the DP be seen as an instance of polarity focus.

The first piece of evidence comes from the following contrasts:

(74) a. John is not a very good student.

b. John is not very good (of) a student.

(75) a. * John is an all that good student.

b. John is not all that good (of) a student.

According to my informants, the nominal with NI has a semantic effect that is similar to the polarity focus in sentential NI (e.g., *Never has John lied!*). The negative sentence in (74a) is a neutral negative statement, while the one with NI in (74b) carries the speaker's emphasis on the negative part of the statement that John is a not very good student. As a result of the speaker's emphasis, the sentence in (74b) means that John is a bad student. In other words, the fronted adjective with negation entails the opposite scale of the polarity (e.g., good ⇔ bad); this entailment does not create a contrast between different polar scales (e.g., good *vs*. strange). Basically, the same is true of (75b), though fronting of *all that* is obligatory under negation, contrary to the case in (74a, b). In this case, the speaker emphatically denies the contextually-provided degree of John's goodness (as a student).

The second piece of evidence comes from the emotional vocative use of nominals with NI. For example, the following root nominals can be used as emotional vocative expressions, or the speaker's on-the-spot evaluative responses to a given situation (cf. (14c)):

(76) [Context] A is explaining a new marketing plan to B, and B replies:

a. Not very easy (of) a task!

b. Not all that easy (of) a task!

The two facts provided above suggest that nominals with NI functions to carry (non-contrastive) new information with the speaker's evaluative meaning. Taken together with Japanese *kantaiku* nominals, the facts in (76a, b) suggest that nominals with NI involves overt IFoc fronting within the DP domain.

This subsection has argued that NI in the DP contributes to a polarity focus interpretation. By combining Troseth's (2009) predicate inversion analysis and IFoc movement, the next section considers the derivation of NI in the DP.

4. 5. 4. Proposal

4. 5. 4. 1. Troseth (2009)

Let us recall Bennis, Corver, and Den Dikken's (1998) predicate inversion analysis of comparative binominal NPs.

(77) a. (an) idiot *of* a man

b. $[_{FP}\ [_{YP}\ \text{idiot}]_j\ [_{F'}\ [_{F}\ F(=\textit{of})+X_i\ (=\textit{a})]\ [_{XP}\ \text{man}\ [_{X'}\ t_i\ t_j\ ]]]]]$

According to their analysis, the host noun *man* is generated as the small clause (SC) subject, and *idiot* is generated as the SC predicate. This underlying structure corresponds to a predicative sentence like '[The] man is an idiot.' Then, the SC head *X* undergoes head movement, followed by the movement of the SC predicate to [Spec, YP]. The resulting configuration in (77b) shows that the inverted predicate *idiot* is connected to its subject *man*

by the linker F with X; as a result, the F head is phonologically realized as *of*, with the raised X head realized as the spurious indefinite article *a*.

By slightly modifying the predicate inversion approach reviewed above, Troseth (2009) proposes the derivations of NI in the DP, as illustrated below:

(78) a. $[_{DP}$ not very good$_{[i\text{Neg}]j}$ $[_{D'[u\text{Neg}]}$ D(= *of*) $[_{FP}$ t_j $[_{F'}$ F+X_i(= *a*) $[_{XP}$ student $[_{X'}$ t_i $t_j]]]]]]$

b. $[_{DP}$ not very good$_{[i\text{Neg}]j}$ $[_{D'[u\text{Neg}]}$ D+F+X_i(= *a*) $[_{FP}$ t_j $[_{F'}$ t_i $[_{XP}$ student $[_{X'}$ t_i $t_j]]]]]]$

In the simplified structure in (78a), the adjective with negation is generated as the SC predicate, and it undergoes predicate inversion to [Spec, DP], wherein the moved AP with negation check off the [*u*Neg] feature in the D head; as a result of this operation, the preposition-like element *of* is realized at the D head (cf. (69b)). Alternatively, the derivation in (78b) shows that the SC head X undergoes head movement to the D head through the F head; this derivation process results in the nominal with NI without the occurrence of the preposition-like *of*. Under Troseth's analysis of NI in the DP, the moved adjective with negation enters the feature checking relationship either with the D head with the [*u*Neg] feature or the raised SC head X(with the head F); as a result of this operation, the D head is lexically filled either with the preposition-like *of* or the indefinite article *a*.

Combining Troseth's (2009) analysis with the two-layered focus hypothesis, the next subsection proposes an alternative analysis in order to account for the polarity focus effect of NI in the DP.

4. 5. 4. 2. Predicate Fronting as IFoc Fronting in the DP

By slightly modifying Troseth's (2009) analysis, I propose that the inverted adjective with negation occupies [Spec, IFocP], wherein the emphatic IFoc (polarity focus) interpretation is obtained.[29]

(79) a. $[_{DP} \ldots [_{IFocP}$ not very good$_j$ $[_{IFoc'}$ IFoc(= *of*) $[_{FP}$ t$_j$ $[_{F'}$ F+X$_i$ (=a) $[_{XP}$ [student] $[_{X'}$ t$_i$ t$_j$]]]]]]

b. $[_{DP} \ldots [_{IFocP}$ not very good$_j$ $[_{IFoc'}$ IFoc+F+X$_i$(= *a*) $[_{FP}$ t$_j$ $[_{F'}$ F+X$_i$ (=a) $[_{XP}$ [student] $[_{X'}$ t$_i$ t$_j$]]]]]]

What I would like to preserve from Troseth's analysis here is the idea that the moved adjective in [Spec, DP] and the D head establishes a feature checking relation either with the inserted preposition-like *of* or with the inverted indefinite article *a* (cf. (78a, b)) (i.e., the IFoc criterion). As a consequence, the focalized negative predicate in [Spec, IFocP] is always adjacent to the preposition-like *of* (or the fronted indefinite article *a*). This type of adjacency is reminiscent of the focus-verb adjacency (SAI) in sentential NI.

To summarize, sentential NI and nominal NI show similar syntactic and semantic properties. This parallelism provides an argument for the hypothesis that there is an IFoc projection in the left periphery of the DP domain.

4. 5. 5. Remaining Issues

Having considered the parallelism between NI in the DP/CP domain, let us turn to degree inversion. As we have already seen, degree inversion is characterized by the

[29] Here, for the sake of simplicity, the Evaluative projection selecting the IFoc projection is omitted.

obligatory occurrence of a degree intensifier and the optional occurrence of the preposition-like *of* (for convenience, the examples in (61a), (62a), (63a) and (64a) are repeated below).

(80) The Seventh Seal is too serious (of) a movie.

(81) Green is as becoming (of) a color.

(82) Willie Nelson is that talented (of) a songwriter.

(83) Holding all 50 states' primary erections on the same day is as reasonable (of) a proposal.

In the previous section, by assuming that the preposition-like *of* in nominals with NI results from the satisfaction of the IFoc criterion, I have proposed that NI in the DP is derived by emphatic IFoc fronting. Since degree inversion also allows the optional occurrence of the preposition-like *of*, it will be expected that the IFoc fronting approach can be extended to degree inversion.

In connection with this, degree inversion in the DP seems to share similar syntactic and semantic properties with comparative substitution (see Section 3.2.5).

(84) a. Most important has been the establishment of legal services.

b. Just as surprising was his love for clothes.

c. Most embarrassing of all was losing my keys.

d. No less corrupt was the ward boss.

e. Equally difficult would be a solution to Russell's paradox.

(Emonds (1976: 35), with modifications)

On the syntactic side, the fronted AP with a degree intensifier co-occurs with the (optional)

preposition-like *of* in degree inversion in the DP. A similar configuration is observed in comparative substitution because the fronted AP with a degree intensifier is followed by the auxiliary. This structural parallelism will be naturally accounted for if they are derived by satisfying the IFoc criterion. On the semantic side, the fronted AP carries a degree-intensifying interpretation in degree inversion in the DP. A similar interpretation is also yielded by comparative substitution. This semantic parallelism will be also explained if we assume that degree inversion in the DP and comparative substitution are derived by IFoc fronting.

The discussions provided in this subsection speak for the further possibility that degree inversion in the DP is the nominal counterpart of comparative substitution in the clausal domain. The corresponding relationship needs more independent evidence, and therefore I would like to leave this issue for future research.

4. 5. 6. Summary

To summarize, this section has shown that NI is observed in the DP domain. By observing that NI in the CP domain and the DP domain carries polarity focus, this section has argued that NI empirically supports the hypothesis that the IFoc layer exists in the left periphery of the DP domain. Extending the proposed IFoc fronting analysis to degree inversion in the DP, this section has discussed another potential syntactic and semantic parallelism which holds across the DP domain and the CP domain: namely, the correspondence between degree inversion in the DP and comparative substitution in the CP.

4. 6. Conclusion

Extending Cruschina's (2011) two-layered focus hypothesis to the nominal domain, this chapter has argued that the presence of IFoc fronting in the DP domain is empirically

supported by the following three types of nominals: comparative binominal NPs (e.g., *That idiot of a man!*), demonstrative double genitives (e.g., *That mother of John's!*), and negative inversion in the DP (e.g., *not very difficult a task* vs. *not a very difficult task*). Cruschina does not discuss whether his two-layered focus hypothesis is extended to the nominal domain. Therefore, the findings provided in this chapter will independently support his two-layered focus hypothesis.

Chapter 5

Wh-Exclamatives as CFoc Fronting

5. 1. Introduction[1]

It has been argued in the literature that *wh*-exclamatives are used to perform the speech act of expressing the speaker's surprise (Austin (1962), Sadock and Zwicky (1985)).

(1) a. What a (very) beautiful flower it is!

b. How (very) beautiful a flower it is!

cf. How beautiful a flower is it?

Roughly speaking, *wh*-exclamatives in English are characterized by the following formal properties (Elliot (1974), Imai and Nakajima (1978)). First, operators such as *what a/an NP* and *how very Adj* (hereafter, Excl-operators) are exclusively used to express the speaker's surprise. Second, *wh*-exclamatives do not allow Subject-Auxiliary-Inversion (SAI).

Previous studies on *wh*-exclamatives have focused on the following empirical and theoretical issues (Elliot (1974), Imai and Nakajima (1978); Michaelis and Lambrecht (1996); Zanuttini and Portner (2003)): first, whether and how *wh*-exclamatives syntactically/semantically differ from *wh*-questions, and second, how the exclamative clause type is syntactically/semantically characterized. Dealing with these two issues, Zanuttini and Portner (2003) propose that the exclamative clause type syntactically realizes the following two semantic components: scalar implicature and presupposition.

Within the cartographic framework, one important issue is how Zanuttini and Portner's

[1] This chapter is a revised and extended version of Ikarashi and Honda (2017) and Honda (2012).

(2003) analysis and insights are reflected in an analysis based on the split CP hypothesis (cf. Radford (2018)). In connection with this, comparing emphatic IFoc fronting with *wh*-exclamatives, Cruschina (2011: 71) remarks that "[h]owever, if a stricter definition of exclamatives is adopted (see Zanuttini and Portner (2003)), the same sentences [= those sentences with emphatic IFoc fronting] do not represent canonical exclamative sentences, but correspond instead to declarative sentences with a rough exclamative intonation and interpretation." However, he does not compare emphatic IFoc fronting with *wh*-exclamatives in detail from an empirical and conceptual viewpoint. Thus, there are two crucial issues concerning *wh*-exclamatives in relation to Cruschina's two-layered focus hypothesis: first, whether emphatic IFoc fronting empirically differs from *wh*-exclamatives, and second, if so, how the relevant differences are accounted for under the two-layered focus hypothesis. With the background provided above in mind, the present chapter aims to provide answers to the two empirical and conceptual questions. In doing so, this study claims that *wh*-exclamatives are reduced to CFoc fronting; as a theoretical consequence, *wh*-exclamatives are treated as different from emphatic IFoc fronting from the perspective of Cruschina's two-layered focus hypothesis.

This chapter is organized as follows. After observing the syntactic and semantic properties of *wh*-exclamatives in Section 5.2, Section 5.3 proposes that *wh*-exclamatives are reduced to CFoc fronting under the two-layered focus approach. Section 5.4 rejects possible alternative analyses for *wh*-exclamatives. Section 5.5 discusses some consequences of the proposed analysis. Section 5.6 concludes this chapter.

5. 2. Toward Reduction of Wh-Exclamatives to CFoc Fronting

5. 2. 1. Syntactic Properties

Wh-exclamatives in English are syntactically characterized by the following four

properties: (i) the occurrence of an operator which is specialized for the exclamative illocutionally force (i.e., Excl-operator), (ii) weak-crossover effects, (iii) no SAI, and (iv) the lack of the focus-verb adjacency.

First, English have the following two types of Excl-operators: *what an NP* and *how very Adj*. These two operators are used in *wh*-exclamatives, but not in *wh*-questions, as shown below (Elliott (1974)):

(2) a. What an attractive woman she is! (Elliott (1974: 232))

b. * What a fast car does John drive? (Elliott (1974: 235))

(3) a. How {very/unbelievably/extremely} long he can stay under water.

b. ?? How {very/unbelievably/extremely} long can he stay under water?

The point that Excl-operators do not function as *wh*-operators is also shown by the following contrast (see also Grimshaw (1979)):

(4) a. It's amazing how {very/unbelievably/extremely} long he can stay under water.

b. * I wonder how {very/unbelievably/extremely} long he can stay under water.

(Elliott (1974: 234))

It is well known that the matrix predicate *wonder* takes an indirect question (i.e., a [+wh] interrogative clause) as its complement, while the matrix emotional predicate *it's amazing* introduces a factive proposition as its complement. The contrast above suggests that the Excl-operator *how very long* cannot be used to introduce a *wh*-interrogative clause; however,

it can be selected by the factive predicate.[2] The two types of Excl-operators are similar in that they allow extreme-degree modification (i.e., modification by those expressions which indicate extremeness):[3]

(5) a. How {very/unbelievably/extremely} long he can stay under water.

b. What a(n) {very/unbelievably/extremely} good swimmer he is!

Therefore, Excl-operators, in general, form (extreme-)degree-oriented sentences; on the other hand, a *wh*-phrase like *what* indicates the quantification of individuals and asks for a certain value of the *wh*-phrase.

Second, *wh*-exclamatives exhibit weak-crossover (WCO) effects, as shown below:[4]

(6) a. * What an interesting project$_i$ its$_i$ members try to complete t$_i$!

b. * What an interesting book$_i$ its$_i$ author sent t$_i$ to us.

cf. * Who$_i$ does his$_i$ father love t$_i$?

This fact suggests that *wh*-exclamatives behave similar to *wh*-questions in showing WCO effects. In other words, both of them involve *wh*-quantification (i.e., focus); the former involve the *wh*-quantification of degrees of some property, and the latter quantify individuals.

[2] Huddleston (1993) points out that a simple *wh*-operator like *how old* may behave either as a *wh*-operator or an Excl-operator even when it is embedded under the predicate *believe*. For the sake of this discussion, I will not consider why simple *wh*-operators have such a dual status.

[3] The Excl-operator *what a (Adj) NP* may lack the prenominal gradable adjective part (e.g., *what a man* vs. *what a strange man*), but it always carries an extreme-degree interpretation (Zanuttini and Portner (2003), Rett (2011)). The same semantic effect is also observed in Japanese exclamatives (e.g., Ono (2006), Yamato (2010)).

[4] Although there seems to be no previous research on whether WCO effects are observed in *wh*-exclamatives or not, my informants reported that *wh*-exclamatives show WCO effects.

Third, *wh*-exclamatives, unlike *wh*-questions, cannot allow SAI, as shown below:[5]

(7) a. What lovely teeth you have, my deer!

b. * What lovely teeth do you have, my dear!

(Elliott (1974: 233))

The absence of SAI is also associated with the lack of the focus-verb adjacency. The following contrast shows that Excl-operators cannot be followed by lower topics which correspond to arguments:[6]

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[5] Throughout this section, I follow the general consensus that exclamatives do not tolerate SAI. Especially, the inversion of the auxiliary *do* is more unacceptable than that of other auxiliaries such as the copula *be*. I appreciate Robert Levine (p.c.) for bringing this point to my attention.

In connection with this, Quirk et al. (1986: 834) point out that SAI can be applied to *wh*-exclamatives in literary English, though rare.

(i) a. How often have I bitterly regretted that day!
b. How strange is his appearance!
c. What magnificent characters does she present in her latest novel!
(ii) How rarely do I see you! <rare and rhetorical>

According to them, these sentences are restricted to certain registers. Therefore, independent research will be needed to consider what type of stylistic factor is associated with SAI in exclamatives.

Furthermore, Nye (2009) observes that the Excl-operator "*how very Adj*" can be used in what she calls "*how* pseudo-questions," which is illustrated below:

(iii) a. How very healthy am I! (Nye (2009: 3))
b. * What a good deal is that! (Nye (2009: 8))

The contrast in (iii) shows that the string *how+very+Adj*, unlike the other Excl-operator *what+a+NP*, can be followed by the inverted auxiliary. She treats *how* pseudo-questions as different from *wh*-exclamatives, though she argues that they potentially share similar semantic components: scalar implicature and presupposition. However, as she mentioned, a detailed study will be needed to characterize the syntax and semantics of *how* pseudo-questions. Interested readers are referred to Nye (2009).

[6] Concerning the interpolation of a lower (argument/adjunct) topic, different judgments are reported (cf. Zanuttini and Portner (2003), Inada (2007), Haegeman (2012)). Obviously, it would be important to clarify what factor is at the basis of the variation. Throughout this chapter, I will rely on the judgments in the literature confirmed by my own native speaker informants.

(8) a. * What a nice present, to your sister, they gave as a gift!

b. (?)To your sister, what a nice present they gave as a gift!

(Inada (2007: 73))

However, Excl-operators can be followed by adjunct lower topics.[7]

(9) a. When we were young, how (very much) we used to enjoy our trips to the seaside

b. How (very much), when we were young, we used to enjoy our trips to the seaside! (Haegeman (2012: 75), with modifications)

(10) a. When we were young, what a nice house we used to live in.

b. What a nice house, when we were young, we used to live in.

These facts suggest the correlation between the lack of SAI and the absence of the focus-verb adjacency.

From the perspective of Cruschina's (2011) two-layered focus hypothesis, the lack of SAI and the focus-verb adjacency excludes the possibility that *wh*-exclamatives are derived by fronting Excl-operators to [Spec, IFocP]; therefore, it will be concluded that *wh*-exclamatives are derived by CFoc fronting. The next section shows that the unification of *wh*-exclamatives into CFoc-fronting is desirable in terms of their semantics.

5. 2. 2. Semantic Properties

Having seen the syntactic properties of *wh*-exclamatives, this section considers the semantic properties of them, with particular reference to Zanuttini and Portner (2003).

[7] My informants reported that the sentences in (9a) and (10a, b) are all grammatical.

According to their study, the exclamative clause type is characterized by the following two semantic components: scalar implicature and presupposition. Roughly speaking, the former corresponds to (the speaker's surprise at) the extreme degree of some property, and the latter means that the propositional content of a *wh*-exclamative is presupposed, or considered to be true for the speaker and the interlocutor(s) (i.e., the propositional content has already been integrated as part of the shared knowledge or the common ground of the speaker and the interlocutor(s)).

The former property (i.e., scalar implicature) is indicated by the fact that Excl-operators can be modified by extreme-degree expressions (for convenience, examples (2) and (3) are reproduced below):

(11) a. How {very/unbelievably/extremely} long he can stay under water.

b. ?? How {very/unbelievably/extremely} long can he stay under water?

(12) What a(n) {very/unbelievably/extremely} good swimmer he is!

This fact suggests that the degree of the property denoted by an Excl-operator lies at the extreme end of some contextually given scale. Roughly speaking, a *wh*-exclamative sentence like *How very cute Mary is!* indicates that her degree of cuteness is greater than the alternatives under consideration. This scalar implicature meaning is seen as a conventional implicature which goes beyond the sentence's truth-conditional meaning (i.e., what the propositional content means) because it is not defeasible, as the following contrast shows:

(13) a. ?? How very cute John is! — though he's not extremely cute.

b. He's quite cute! — though not extremely cute.

(Zanuttini and Portner (2003: 47), with slight modifications)

The unacceptable mini-discourse in (13a) suggests that the scalar implicature component cannot be cancelled by the speaker/utterer of the *wh*-exclamative. It is quite strange for the (same) speaker to express her/his surprise at the extreme degree of John's cuteness and to deny that extreme degree at the same time. The scalar implicature meaning is tied to the syntax of *wh*-exclamatives, while the declarative sentence in (13b) does not carry the scalar implicature meaning as a conventional implicature. The following contrast also illustrates the same point:

(14) a. * It isn't amazing how very cute he is!.

b. It is amazing how very cute he is!

(Zanuttini and Portner (2003: 47))

The use of the embedding predicate with negation, *it isn't amazing*, denotes that the speaker is not surprised at the complement clause described in the embedded sentence. Hence, the *wh*-exclamative in (14a) is unacceptable because it denies the speaker's surprise at the extreme degree of his cuteness described in the embedded *wh*-exclamative: in other words, denying the amazingness of his cuteness amounts to contradicting the scalar implicature. To summarize, *wh*-exclamatives convey the scalar implicature meaning (i.e., the speaker's surprise at the extreme degree of some property). In certain pragmatic circumstances, the scalar implicature serves to provide new information (cf. Zanuttini and Portner (2003: 46, fn. 47). For example, Castroviejo-Miró (2008:50) presents the following example:

(15) A: Do you think I will get the job?

B: How naïve you are!

The *wh*-exclamative uttered by B carries the scalar implicature that the naïveness of the person in question is greater than the alternatives under consideration (i.e., the speaker's expectations). It is obvious here that the *wh*-exclamative uttered by B does not qualify as a direct yes-no answer, but it serves as an indirect answer corresponding to *no*. In this context, A's utterance implies her or his underlying presupposition that A is so naïve to even think she or he will get the job. The *wh*-exclamative uttered by B is used as an emotional response to the underlying presupposition; by conveying that A is so naïve to even think she or he will get the job, B indirectly provides a negative answer to the yes-no question. In a nutshell, *wh*-exclamatives are degree-oriented in the sense that they express the speaker's surprise at the extreme degree of some property; this scalar implicature meaning is syntactically ensured by Excl-operators.

The latter property (i.e., presupposition) has been discussed by many scholars (Grimshaw (1979), Zanuttini and Portner (2003), Abels (2010)).[8] One of the traditional observations is concerned with complementation: *wh*-exclamatives can be embedded under factive predicates, but not under predicates which can introduce indirect *wh*-questions:

[8] In conjunction with the presuppositional nature of *wh*-exclamatives, it is worthwhile mentioning that they do not co-occur with tag-questions. Huddleston and Pullum (2002) point out that *wh*-exclamatives do not occur with interrogative tag questions with rising intonation (e.g. * *What a disaster it was, wasn't it?*). They argue that this fact is accounted for by assuming that the propositional content is presupposed.

In contrast, example (ia) with falling intonation on the tag is possible because such a tag can be used to seek agreement; in this case, it is agreement with the subjective attitude toward the scalar implicature (that the situation is remarkable), not the propositional content. However, example (ib) would not normally be used because the constant polarity tag in this case would be acknowledgement of the statement component, which is inconsistent with the presupposed status of the propositional content.

(i) a. What a disaster it was, wasn't it! [Reversed polarity tag]
b. ? What a disaster it was, was it! [Constant polarity tag]
(Huddleston and Pullum (2002: 922))

(16) a. Mary {knows/*thinks/*wonders} how very cute he is.

b. * I don't know/realize how very cute he is.

(Zanuttini and Portner (2003: 46-47))

This fact has motivated the idea that *wh*-exclamatives are associated with presupposition, or factivity. Zanuttini and Porter (2003) provide another evidence for factivity: that is, *wh*-exclamatives cannot be used as answers because they are factive. In general, a sentence being used as an answer may not presuppose the information that provides the answer (Grimshaw (1979)). Thus, the following mini-discourse is unacceptable because the complement clause of the matrix predicate *it's odd* is factive.

(17) A: Did Bill leave?

B: * It's odd that he did.

(Grimshaw (1979: 321))

If *wh*-exclamatives are factive, then the following unacceptable mini-discourse will be explained in a similar fashion.[9]

(18) A: How tall is he?

B: * How very tall he is!

(Zanuttini and Portner (2003: 48))

[9] One may wonder whether the unacceptable mini-discourse here is excluded without recourse to factivity. For example, it will be possible to argue that the primary pragmatic function of exclamatives is to express the speaker's surprise, and therefore they cannot be used as answers to *wh*-questions. This idea can be implemented in a formal way in order to explain why the exclamative illocutionary force is incompatible with providing the exact value of the degree *wh*-phrase. However, as we will see later, this approach will be also required to assume that the propositional content of *wh*-exclamatives is not assertive.

Since *wh*-exclamatives are factive, it is expected that they cannot be used as answers. These observations are interpreted as pointing to the following claim (see Abels (2010) for additional arguments for factivity in *wh*-exclamatives):

(19) "The claim that I want to make here is that in exclamations, what can be termed the 'propositional content' is *inherently presupposed*. For an exclamation to be used appropriately, it must always be true that the corresponding proposition is presupposed to be true. The exclamation *How tall John is!* presupposes that John is tall, and an exclamation like *What big ears John has!* presupposes that John has big ears." (Grimshaw (1979: 144))

If the propositional content of *wh*-exclamatives is presupposed, it will be predicted that they, unlike emphatic IFoc fronting, are incompatible with sentence focus in the narrative context. This prediction is confirmed by the following facts observed by Castroviejo-Miró (2008):

(20) a. I've got some news / you're going to love this / check this out: Pau is very tall.

b. I've got some news / you're going to love this / check this out: # How tall Pau is!

(Castroviejo-Miró (2008: 51))

The contrast above suggests that when the speaker utters a *wh*-exclamative, she or he does not intend to introduce its descriptive content and the scalar implicature (i.e., the speaker's surprise at the extreme tallness of Pau's height) as new information to the interlocutor(s).

This point is also confirmed with the following example:[10]

(21) [Context] The speaker A visited a very famous aquarium, and she or he is talking with her/his friend about it,

A: For the first time, I visited Sumida aquarium, and guess what?

a. # What an amazing octopus they have!

b. They have so amazing an octopus!

In this context, the speaker is using the sentence-focus *wh*-question in order to introduce sentence-focus new information with a concomitant of the speaker's surprise. The sentence-focus *wh*-question can be followed by the declarative sentence "They have kept so amazing an octopus," not by the *wh*-exclamative sentence "What an amazing octopus they have kept!." It should be noted here that these properties are different from those of emphatic IFoc fronting in Italian.

(22) A. Chi scrivisti? [Sicilian]

what write.PAST.2SG

'What did you write?'

B. a. Scrissi **n'articulu**.

write.PAST.1SG an article

'I wrote an article.'

b. **N'articulu** scrissi!

an article write.PAST.1SG

'I wrote an article.'

(Cruschina (2011: 58), with slight modifications)

[10] My informants reported that it is impossible to use a *wh*-exclamative as a self-answer to a sentence-focus question.

(23) [Context: Lucy is telling news about her friend's new boyfriend]

A: Pensa unpo': **un anello di diamanti** le ha regalato!
think a little: a ring of diamonds to-her.CL has given

B: Niente affatto! (Chi ti ha detto questa assurdità)
nothing at-all! who you.CL has told this absurdity

'A: Guess what! He gave her *a diamond ring*!'

'B: You're wrong! (Who told you this absurd thing?)'

(Bianchi, Bocci and Cruschina (2016: 18))

As we have already seen in Chapter 2, the preposed IFoc element and the rest of the sentence may carry new information as a whole. These empirical differences suggest that *wh*-exclamatives must be treated differently from emphatic IFoc fronting on the conceptual side, more specifically, from the perspective of Cruschina's (2011) two-layered focus hypothesis.[11]

This section has shown that *wh*-exclamatives are semantically characterized by scalar implicature and presupposition. Among these two semantic properties, the latter semantic component (i.e., presupposition) will exclude the possibility that *wh*-exclamatives are reduced to emphatic IFoc fronting; instead, the alternative possibility that *wh*-exclamatives are derived by CFoc fronting seems to be right under Cruschina's (2011) two-layered focus hypothesis. The next section proposes an analysis of *wh*-exclamatives on the basis of the two-layered focus hypothesis.

[11] The so-called optative construction (e.g. *To think that you tried your best to pass the examination*.) is also incompatible with the sentence-focus context (see Honda and Ikarashi (2015)).

5. 3. Proposal

5. 3. 1. The Syntactic Structure of Wh-Exclamatives

On the basis of Cruschina's (2011) two-layered focus hypothesis in (24), the present study proposes the syntactic structure of *wh*-exclamatives illustrated in (25b):

(24) The Two-Layered Focus Hypothesis (Cruschina (2011))

Force ... Topic ... Contrastive Focus [CFoc] ... Topic ... Information Focus [IFoc] ... Finite IP ...

(25) a. What a beautiful flower John found!

b. ... [$_{\text{CFocP}}$ what a beautiful flower$_{[+\text{deg}]i}$ [$_{\text{CFoc}}$, Ø$_{[+\text{deg}]}$ ... [$_{\text{FinP}}$ [$_{\text{IP}}$ John found t$_i$]]]]

First, I assume that the extreme degree feature (represented as [+deg]) is endowed with the empty CFoc head; Excl-operators also bear the [+deg] feature. The [+deg] feature on the CFoc head triggers fronting of the Excl-operator with the [+deg] feature to [Spec, CFocP]. The Excl-operator at [Spec, CFocP] and the CFoc head satisfy the CFoc criterion. Thus, the Spec-Head agreement relationship syntactically realizes the scalar implicature meaning of *wh*-exclamatives. As a result, the informative part (the new information) corresponds to the scalar implicature meaning that the degree of some property denoted by the Excl-operator is greater than the alternatives (i.e. the speaker's expectations).

The clause type of *wh*-exclamatives is syntactically encoded by the following searching operation.[12] First, I assume that Excl-operators have the clause typing feature [+excl]. Then, the Force head with the [+excl] feature searches (agrees with) the Excl-

[12] The searching operation assumed here needs to be developed in a more formal way (see Section 2.3). One possibility is to assume that the operation in question is a type of AGREE: Excl-operators are assumed to bear the clause typing feature [+excl], and the Force head is assumed to bear the unvalued force feature. Then, the unvalued force feature on the Force head will be valued by the [+excl] feature of Excl-operators by means of AGREE.

operator with the [+excl] feature in [Spec, CFocP]. As a result of this searching operation, the clause type is determined as 'exclamative.'

The present analysis treats *wh*-exclamatives as a clause type independent of the declarative clause type whose (typical) speech act is assertion; hence, they perform different speech acts. Therefore, it is expected that we cannot coordinate declarative sentences and *wh*-exclamatives because they belong to different clause types. This is confirmed with Castroviejo-Miró's (2018: 52) observation that exclamatives, unlike declaratives, cannot be naturally inserted in a narration:

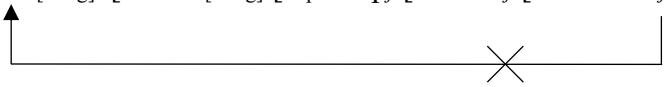
(26) a. I looked at the ceiling and I say an extremely tall boy.

b. # I looked at the ceiling and what an extremely tall boy I saw!

The analysis proposed above has a direct consequence for the lack of SAI in *wh*-exclamatives. CFoc fronting does not require the Spec-Head agreement relationship between the CFoc element and the inverted auxiliary. Thus, the unification of *wh*-exclamatives into CFoc fronting naturally explains the lack of SAI (cf. (2), (3)). Taken together with the assumption that argument lower Topic is licensed by fronting an anaphoric operator to [Spec, FinP] and that the anaphoric operator at [Spec, FinP] blocks the subsequent focus fronting (i.e., the CFoc fronting operation applied to an Excl-operator), the present approach correctly predict that the Excl-operator cannot be followed by argument lower Topic, as schematized below (cf. (8)):

(27) a. ... [$_{\text{CFocP}}$ Excl-OP$_{[+\text{deg}]i}$ [$_{\text{CFoc}}$, Ø$_{[+\text{deg}]}$ ... [$_{\text{FinP}}$ [$_{\text{IP}}$ ... t_i ...]]]]

b. * ... [$_{\text{CFocP}}$ Excl-OP$_{[+\text{deg}]i}$ [$_{\text{CFoc}}$, Ø$_{[+\text{deg}]}$ [$_{\text{TopP}}$ Top$_j$ [$_{\text{FinP}}$ OP$_j$ [$_{\text{IP}}$ ... t_i ... t_j...]]]]]



In contrast, when the lower Topic position is occupied by an adjunct element, there is no anaphoric operator at [Spec, FinP]; hence, it is correctly predicted that the Excl-operator at [Spec, CFocP] can be followed by an adjunct lower topic, as illustrated below (cf. (9), (10)):

(28) a. ... [$_{\text{CFocP}}$ Excl-OP$_{[+\text{Deg}]i}$ [$_{\text{CFoc'}}$ Ø$_{[+\text{Deg}]}$ ... [$_{\text{FinP}}$ [$_{\text{IP}}$ ... t_i ...]]]]

b. ... [$_{\text{CFocP}}$ Excl-OP$_{[+\text{Deg}]i}$ [$_{\text{CFoc'}}$ Ø$_{[+\text{Deg}]}$ [$_{\text{TopP}}$ Top [$_{\text{FinP}}$ [$_{\text{IP}}$ ... t_i ...]]]]]

To sum up, the reduction of *wh*-exclamatives to CFoc fronting naturally accounts for the lack of SAI and the absence of the focus-verb adjacency.

5. 3. 2. The Semantics of Wh-Exclamatives

Having proposed the syntactic structure of *wh*-exclamatives, let us turn to how it accounts for the semantics of *wh*-exclamatives, namely, scalar implicature and presupposition. As for the former property (i.e., scalar implicature), the Spec-Head agreement relationship between the Excl-operator and the CFoc head syntactically encodes it. Another important assumption concerning CFoc fronting is that the complement of the CFoc head is interpreted only as presupposition: CFoc fronting contributes to the bipartite information structure in which the fronted element marks CFoc and the rest of the sentence is presupposed. This explains the presupposition meaning component of *wh*-exclamatives.

(29) ... [$_{\text{CFocP}}$ **Excl-OP**$_{[+\text{deg}]i}$ [$_{\text{CFoc'}}$ Ø$_{[+\text{deg}]}$ ... [$_{\text{FinP}}$ [$_{\text{IP}}$ ... t_i ...]]]]

CFoc *Presupposition*

Under the present proposal, the informative part (the new information) corresponds to the scalar implicature meaning that the degree of some property denoted by the Excl-operator is

greater than the alternatives (i.e., the speaker's expectations). In other words, reducing *wh*-exclamatives to CFoc fronting amounts to creating a contrast between the extreme degree denoted by the Excl-operator and the other degree alternatives (i.e., the speaker's expectations). This analysis naturally captures the use of a *wh*-exclamative as an indirect answer to the yes-no question (cf. (15)).

Furthermore, the present approach assumes that the propositional content (i.e. the complement of the CFoc head) of *wh*-exclamatives must be presupposed; hence, it is correctly predicted that *wh*-exclamatives cannot be used to introduce a sentence-focus statement (cf. (20), (21)).

To summarize, the unification of *wh*-exclamatives into CFoc fronting naturally explains the presupposition component, which is irrelevant to emphatic IFoc fronting.

5. 4. Alternatives

Comparing the present proposal with other possible alternatives in the cartographic approach, this section argues that the proposed analysis based on CFoc fronting is compelling. In the present approach, *wh*-exclamatives are derived by CFoc fronting, as illustrated below:

(30) $[_{\text{ForceP}} \ldots [_{\text{CFocP}}$ **What a book**$_i$ $[_{\text{TopP}} \ldots. [_{\text{FinP}} [_{\text{IP}}$ John read $\mathbf{t}_i$]]]]]

In this syntactic structure, the clause type is determined by the searching operation in which the Force head agrees with the [+excl] feature of the Excl-operator in [Spec, CFocP]. This analysis implies that the clause type of a sentence can be syntactically encoded without directly fronting an operator to [Spec, ForceP]. By excluding other possible analyses of *wh*-exclamatives, this section shows that the unification of *wh*-exclamatives into CFoc fronting is maintained.

First, the present analysis has an advantage over the possible analysis that the Excl-operator directly moves into [Spec, ForceP]. As we have already seen, the Excl-operator can be preceded by a higher topic element.

(31) a. * What a nice present, to your sister, they gave as a gift! (= (8))

b. (?)To your sister, what a nice present they gave as a gift!

Under the assumption that ForceP is the highest projection in the CP domain, the Excl-operator may occupy some syntactic position lower than ForceP and higher Topic. Hence, the possibility that Excl-operator fronts to [Spec, ForceP] is excluded under Cruschina's two-layered focus hypothesis.

Another possibility is to unify *wh*-exclamatives into *how come* questions (cf. Radford (2018)). Following Rizzi's (2001, 2015) revised version of the split CP hypothesis, Radford (2018) argues that *how come* questions are derived by generating the *wh*-phrase *how come* at [Spec, Int(errogative)P] (cf. Shlonsky and Soare (2011)).

(32) a. Force ... Topic* ... Interrogative ... Topic* ... Focus ... Fin (IP ...)

b. [$_{\text{ForceP}}$ ... [$_{\text{IntP}}$ How come ... [$_{\text{FinP}}$ [$_{\text{IP}}$ he lied]]]]

How come questions have the following characteristics which *wh*-interrogatives do not share. First, they lack SAI (Ochi (2004)):

(33) a. How come you were arrested? (Radford (2018: 236))

b. * How come were you arrested? (Radford (2018: 236))

cf. * What lovely teeth do you have, my dear! (Elliott (1974: 233))

Second, they allow the optional occurrence of the complementizer-like *that* in colloquial English (e.g., national newspapers, news bulletins on radio and TV):[13]

(34) a. How come that you were arrested? (Radford (2018: 237))

b. How pretty that she looks in this photo! (web)
(Radford (2018: 272))

By reducing the complementizer *that* to the syntactic marker of factivity, Radford implies the possibility that both *how come* questions and *wh*-exclamatives are derived by generating the complementizer-like *that* at the Fact head (located above the Fin head).[14]

(35) a. [$_{\text{ForceP}}$ ... [$_{\text{IntP}}$ how come ... [$_{\text{FactP}}$ that [$_{\text{FinP}}$ [$_{\text{IP}}$ he lied]]]]]

b. [$_{\text{ForceP}}$ ... [$_{\text{ExclP}}$ how pretty ... [$_{\text{FactP}}$ that [$_{\text{FinP}}$ [$_{\text{IP}}$ she looks in this photo]]]]]

Radford assumes that there is a functional projection dedicated to the Excl-operator below the Force layer. Although Radford does not argue about whether IntP and ExclP share the

[13] In the typical case of *wh*-exclamatives in English, the Excl-operator does not co-occur with the complementizer *that*, but Radford (1988, 2018) observes that the complementizer-like *that* may follow the Excl-operator in colloquial English (e.g., national newspapers, news bulletins on radio and TV).

(i) a. You will be amazed [*how quickly* **that** people you care about come round to the idea ...] (community.babycentre.co.uk)

b. *How pretty* **that** she looks in this photo! (web)
(Radford (2018: 272))

It should be noted that the complementizer *that* in these examples is not an instance of *that* used to introduce a relative clause because it occurs with the adverbial *wh*-phrase (ib). Radford interprets the relevant fact as suggesting that *that* syntactically marks factivity. It is worthwhile exploring the nature of the complementizer *that* in *wh*-exclamatives, but I would like to leave this issue open for future research. As we will see later in Section 5.5.1, the complementizer-like *that* also occurs in Italian *wh*-exclamatives.

[14] This assumption will need independent motivations and arguments,

same syntactic position or not, one may wonder whether it is possible to unify *wh*-exclamatives into *how come* questions. However, the following data will exclude such a possibility. First, *how come* questions allow argument lower Topic, while *wh*-exclamatives do not:

(36) a. How come, the things you did last night, you can't remember (them).

(Radford (2018: 247))

b. * What a nice present, to your sister, they gave as a gift! (= (31a))

Second, *how come* questions allow CFoc fronting, while *wh*-exclamatives do not.[15]

(37) a. How come SYNTAX you don't like, but PHONOLOGY you do?

(Radford (2018: 249))

b. * What a nice present, TO YOUR SISTER, they gave as a gift!

These facts suggest that *how come* questions and *wh*-exclamatives behave differently as to whether they allow argument lower Topic and CFoc fronting. The syntactic differences will be naturally captured by assuming that they are derived differently.

What I would like to preserve from Radford's analysis (2018) is that the occurrence of the complementizer-like *that* syntactically marks factivity in *wh*-exclamatives in colloquial English. Under the present approach, the factive marker *that* occurs in the following two syntactic configurations; one with the reason *wh*-operator *how come* at [Spec, IntP] and the other with the Excl-operator at [Spec, CFocP]. One remaining issue is whether it is

[15] My informants reported that the *wh*-exclamative in (36b) is unacceptable.

necessary to assume an independent CP projection for factivity (as assumed by Radford (cf. (35)). I would like to leave this issue open for future research.

5. 5. Consequences

5. 5. 1. Wh-Exclamatives in Italian and Lower Topic

In the present proposal, *wh*-exclamatives in English are derived by fronting an Excl-operator to [Spec, CFocP]. In this language, topicalization is derived by fronting an anaphoric operator to the escape hatch, [Spec, FinP], which blocks the subsequent focus fronting; hence, the unacceptability of the co-occurrence of the Excl-operator and argument lower topic. In contrast with English, Italian allows CLLD, wherein the anaphoric relationship between the topicalized element and its trace is established by cliticization (i.e., the presence of the clitic attached to the verbal element). If the present approach is extended to the co-occurrence of the Excl-operator and a lower topic in Italian, then it will be predicted that the Excl-operator can be followed by the topic element in Italian. This subsection shows that this predication is borne out.

Let us first look at the basic properties of *wh*-exclamatives in Italian. In this language, Excl-operators take the following form:[16]

(38) a. how very many books
WH E-ONLY MEASUER SORTAL
b. chi t-anti libri
WH E-ONLY + MEASURE SORTAL

(Zanuttini and Portner (2003: 69))

[16] In Italian, interrogative *wh*-phrases are also used as Excl-operators, but for the sake of discussion, I will focus on the *wh*-exclamatives that involve operators exclusively used as Excl-operators.

In English, the Excl-operator is characterized by the following four subcomponents. *How* indicates that we have WH quantification. *Very* indicates that the *wh*-phrase carries the exclamative illocutionally force. *Many* provides a specification of the "measure" by which the WH element quantifies, indicating that we are counting numbers of individuals. *Books* provides the sortal, indicating that these individuals are books. In Italian, the same four components are expressed by the three elements. *Che* corresponds to the *wh*-word *how*, marking WH quantification. *T-anti* is a combination of the Excl-only part (very) and the measure (many). *Libri* indicates the sortal (books). The Excl-operator in (38b) is solely used as an Excl-operator, and therefore does not work as a *wh*-operator, as shown below:

(39) a. Chi tanti libri che ha comprato! [Italian]
which many books that has bought
'How very many books s/he bought!'

b. * Chi tanti libri ha comprato?
which many books has bought

(Zanuttini and Portner (2003: 66))

Another important property is that Excl-operators require the obligatory occurrence of the complementizer *che* in *wh*-exclamatives in Italian.

(40) Chi tanti libri *(che) ha comprato! [Italian]
which many books that has bought
'How very many books s/he bought!' (Zanuttini and Portner (2003: 66))

Thus, *wh*-exclamatives in Italian are characterized by the following two properties: the Excl-

operator *chi tanti* 'how very many books' and the obligatory occurrence of the complementizer-like *che* 'that.' Zanuttini and Portner (2003) interprets the latter as a syntactic realization of factivity

Under the present approach, Italian *wh*-exclamatives are expected to have the following syntactic structure:

(41) $[_{ForceP}$ ... $[_{CFocP}$ Chi tanti libri $[_{TopP}$ .... $[_{FinP}$ che $[_{IP}$ ha comprato]]]]]

In this structure, the Excl-operator occupies [Spec, CFocP], and the complementizer *che* is generated at the Fin head, signaling factivity. If this syntactic structure is correct, then it will be predicted that argument lower Topic is allowed in Italian *wh*-exclamatives because the anaphoric relationship between the lower topic and its trace is established by means of cliticization (without fronting an anaphoric operator to [Spec, FinP]). This prediction is borne out by the following examples:

(42) a. Chi tanti libri, a tua sorella, che le hanno regalato! [Italian]
which many books to your sister that her have given
'How very many books they gave to your sister!'

b. Che bel posto, a Giorgio, che (gli) hanno assegnato!
which nice place to Giorgio that him have assigned
'What a good place they assigned to Giorgio!'

(Zanuttini and Portner (2003: 66))

The examples above suggest that the Excl-operator can be followed by argument Lower topic. Hence, the reduction of *wh*-exclamatives to CFoc fronting is also supported from the fact

that argument Lower topic is possible in Italian *wh*-exclamatives.

A further exploration will be necessary to confirm our prediction from a cross-linguistic perspective. [17]

5. 5. 2. The Differences between Emphatic IFoc Fronting and Wh-Exclamatives

Finally, the present study discusses another consequence for the treatment of *wh*-exclamatives in relation to emphatic IFoc fronting. On the empirical side, emphatic IFoc fronting is differentiated from *wh*-exclamatives in the following viewpoints. First, emphatic IFoc fronting is compatible with sentence-focus questions in the narrative context, while *wh*-exclamatives are not. Second, emphatic IFoc fronting is not necessarily degree-oriented, but *wh*-exclamatives must express the speaker's evaluative attitude toward the degree of some property indicated by Excl-operator. On the conceptual side, emphatic IFoc fronting is reduced to fronting to [Spec, IFocP], while *wh*-exclamatives are assimilated to CFoc fronting. These empirical and conceptual considerations clearly suggest that emphatic IFoc fronting and *wh*-exclamatives should be treated differently on both the empirical and conceptual sides. Although Cruschina (2011) does not provide a formal and empirical analysis of *wh*-exclamatives, the present study has shown that emphatic IFoc fronting must be differentiated from *wh*-exclamatives under his two-layered focus hypothesis.

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[17] The same is true of *wh*-exclamatives in Paduan, an Italian dialect, as shown below:

(i) [Paduan]

Che bel libro, a to sorela, che i ghe ga regala!
what nice book to your sister that S.CL her have given
'What a nice book, to your sister they gave her as a gift!'

(Zanuttini and Portner (2003: 60))

5. 6. Conclusion

Adopting Cruschina's (2011) two-layered focus hypothesis, this chapter has shown that *wh*-exclamatives are reduced to CFoc fronting. After showing that *wh*-exclamaties are semantically characterized by scalar implicature and factivity, I have proposed that the fronting operation of an Excl-operator contributes to the bipartite information structure, namely, the CFoc-Presupposition articulation. The scalar implicature meaning is attributed to the CFoc part which indicates that the degree of some property is contrasted with the other alternatives under consideration (or the speaker's expectations). The presupposition meaning is directly reflected as the complement of the CFoc head. As a consequence, emphatic IFoc fronting and *wh*-exclamatives are treated as independent focus-related phenomena under the two-layered focus hypothesis.

Chapter 6

Concluding Remarks

Since Chomsky (1970b), the research on focus has been developed by addressing the following main issue: how grammar specifies focus. Within the P-and-P approach (i.e., the inverted-Y model), a number of studies have been conducted to identify the types of focus and how they are specified in syntax. The two major insights gained from such studies are (i) focus effects should be studied at the interface between syntax, semantics, and phonology, and (ii) focus behaves similarly to quantification (e.g., quantifier raising and *wh*-movement).

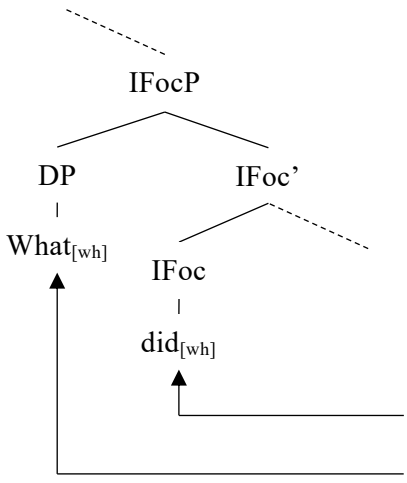
Another theoretical contribution is made by Lambrecht (1994) concerning the relationship between the projection of focus and thetic/categorical judgment distinction (see also Breul (2004)). Lambrecht classifies focus projection into the following three types: argument focus, predicate focus, and sentence focus. Among these three focus projections, predicate focus corresponds to categorical judgments, and sentence focus is identical to thetic judgments. These rough corresponding relations imply that since (contrastive) focus fronting contributes to the bipartite Focus-Presupposition articulation, focus fronting is incompatible with thetic judgments.

The cartographic approach adopted as the theoretical background of this thesis follows the traditional generative guideline in exploring the nature of focus from the perspective of the interface between syntax, semantics, and phonology. Within the cartographic approach, it is assumed that discourse-related features/morphemes exist in the lexicon and that they motivate constituents to front to dedicated discourse-related functional projections such as Topic and Focus. According to Rizzi's (1997) split CP hypothesis, there is only one functional projection dedicated to focus. Therefore, focus-related linguistic phenomena are assumed to target the unique specifier of the Focus head, satisfying the Focus criterion. In

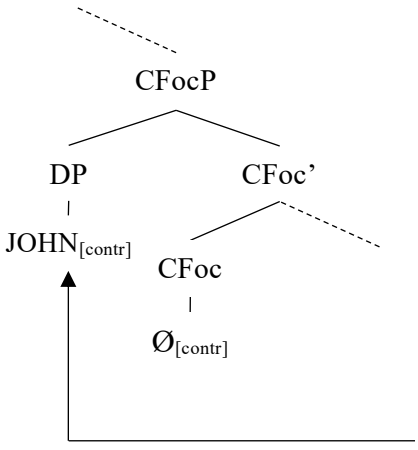
Rizzi's approach, the Focus criterion is satisfied either by establishing (i) a Spec-Head agreement relationship between the fronted focus element and the fronted verbal element or (ii) a Spec-Head agreement relationship between the fronted focus element and the null element in the Focus head. Thus, the Focus criterion can be satisfied by the two Spec-Head agreement patterns.

Cruschina's (2011) two-layered focus hypothesis differs from Rizzi's (1997) original one in that the former posits two functional projections for focus in the CP domain: CFoc and IFoc. CFoc is dedicated to contrastive focus fronting, and IFoc involves non-contrastive focus fronting. This dichotomy can be differently viewed from the perspective of Rizzi's Focus criterion. According to Rizzi's original proposal, the Focus criterion can be satisfied in the two ways mentioned above. Cruschina's two-layered focus hypothesis seems to suggest that the two grammatical patterns of satisfying the Focus criterion also affects the locality between the focus element and the rest of the sentence. IFoc fronting results in the focus-verb adjacency pattern, while CFoc fronting allows no adjacency relationship between the focus element and the rest of the sentence.

(1) a. IFoc Fronting



b. CFoc Fronting



This syntactic difference contributes to the semantic one between IFoc fronting and CFoc fronting. In the case of IFoc fronting, the IFoc element is connected to the rest of the sentence by the fronted verbal element. As a result, the fronted IFoc element and the rest of the sentence may form a unified assertive unit. In the case of CFoc fronting, there is no connector between the fronted CFoc element and the rest of the sentence; this syntactic configuration directly affects its information structure, yielding the bipartite Focus-Presupposition articulation. Hence, Cruschina's two-layered focus hypothesis opens a new possibility concerning the corresponding relationship between focus types and thetic/categorical judgments; since IFoc fronting leads to a unified assertive unit, the resulting structure can be compatible with the sentence-focus (thetic) context. Cruschina's comparative study on the focus-related phenomena in Romance languages speaks for the two-layered focus hypothesis. Therefore, the exploration of his two-layered focus hypothesis in other languages such as English has the great potential to make independent contributions, theoretical and empirical, to a better understanding of how grammar specifies focus, the fundamental question that was raised by Chomsky (1970b).

In support of the two-layered focus hypothesis, Chapter 3 has examined two focus-related linguistic phenomena: namely, particle fronting and negative inversion. The first part of the chapter has argued that particle fronting in German and English is derived by satisfying the IFoc criterion. As a consequence, the preposed verb particle and the verbal element must satisfy the focus-verb adjacency requirement, and the preposed verb particle serves to intensify the degree of an expressive (extreme-degree) particle verb. The proposed analysis of particle fronting has been further applied to comparative substitution, an instance of preposing around BE. The second part of the chapter has examined negative inversion in English in terms of IFoc fronting. The idea that negative inversion involves focus is not brand-new in the cartographic approach (e.g., Haegeman (2000); cf. Rizzi

(1997)), but the two-layered focus hypothesis presents a new possibility in understanding the focus property involved in negative inversion: that is, negative inversion is derived by satisfying the IFoc criterion. Therefore, the fronted negative element and the fronted verb must keep to the focus-verb adjacency, and they form a unified assertive unit with the negative polarity (non-contrastively) emphasized. These arguments present independent evidence for the existence of the IFoc layer in the CP domain.

Chapter 4 has attempted to present independent evidence for the two-layered focus hypothesis (in particular, the presence of the IFoc projection) by extending it to the information structure of the nominal domain (cf. Shimada and Nagano (2016)). Following the recent development of the research on the parallelism between the clausal domain and the nominal domain, Chapter 4 has argued that IFoc fronting is substantiated from comparative binominal NPs, demonstrative double genitives, and negative inversion in the DP. The former two phenomena have been studied in terms of predicate inversion (i.e., A-movement) (Den Dikken (1998, 2006)). One of the important insights gained from the previous studies is that the fronted predicate is connected to the rest of the nominal element by the presence of the preposition-like *of* (i.e., "linker" in Den Dikken's (2006) term). This amounts to saying that the fronted predicate and the preposition-like *of* results in a structurally-adjacent configuration. From the perspective of the two-layered focus hypothesis, the relevant adjacent configuration is interpreted as corresponding to the IFoc criterion. Following this line of reasoning, Chapter 4 has argued that binominal NPs and demonstrative double genitives are derived by IFoc fronting; therefore, they serve as emotional vocatives which function as an on-the-spot emotional reaction to a given situation. A similar analysis is also applied to negative inversion in the DP. By extending IFoc fronting to the focus-related phenomena in the nominal domain, Chapter 4 has provided independent evidence for assuming the IFoc projection.

Having focused on the IFoc fronting patterns which are compatible with the sentence-focus (thetic) context, Chapter 5 has examined *wh*-exclamatives, which typically function to express the speaker's surprise. Cruschina (2011) does not consider the derivation of *wh*-exclamatives in terms of the two-layered focus hypothesis, but he mentions the possibility that *wh*-exclamatives are not derived by IFoc fronting because their propositional content is presupposed (Grimshaw (1979), Zanuttini and Portner (2003)). Following his remarks, Chapter 5 has argued that *wh*-exclamatives are derived by satisfying the CFoc criterion. Therefore, *wh*-exclamatives do not allow SAI, and fronting of the Excl-operator to [Spec, CFocP] contributes to the bipartite Focus-Presupposition articulation (i.e., the incompatibility with the sentence-focus context.). To conclude, *wh*-exclamatives are syntactically differentiated from IFoc fronting phenomena under the two-layered focus hypothesis.

Before concluding, some remaining issues are mentioned below. First, this thesis has attempted to support the two-layered focus hypothesis, but it is necessary to develop more robust syntactic, semantic, and phonological diagnostics for identifying the difference between CFoc fronting and IFoc fronting. Second, this thesis assumes that IFoc fronting, like (neutral) declarative sentences (i.e., IP), is still compatible with thetic judgments because it does not constitute bipartite information structures. Since thetic judgments, unlike categorical judgments, do not present a situation as something dissected into different information units, the unification of IFoc fronting into thetic judgments seems to be possible in a broad sense. However, such a unification will need more independent evidence and arguments. Third, if the whole picture of this thesis is correct, the IFoc projection exists in the clausal domain (CP) and the nominal domain (DP). The next issue is whether and how the IFoc projection in the CP domain interact with the one in the DP domain. An independent study will be needed to address this issue.

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