Long Distance Scrambling
in Japanese and Dutch

MA Thesis

Linguistics

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1. Introduction

The aim of this paper is to explore the properties of Long Distance Scrambling (henceforth LDS) in Dutch and Japanese by comparing them with their long distance fronting operations, i.e. Long Distance Focal movement (henceforth LDF) in the Dutch language and Long Distance Topicalisation (henceforth LDT) in Japanese. 'Long Distance' in those operations indicates that displaced elements cross more than one clause. For this purpose, first we have to make clear what is 'scrambling' and what distinguishes it from fronting operations, including the focal or the topical movement in those languages.

1.1 Scrambling

As the term indicates, LDS (Long Distance Scrambling) is a type of 'scrambling[1]'. This term first appeared in Ross (1967) as an operation responsible for free word order phenomena, which are often observed in languages with SOV word order and/or with overt morphological Case markers. The following examples are an example of scrambling in the Japanese language.

(1) a. Taro-ga   Jiro-ni   hon-o   ageta (koto)[2].
         Taro-Nom Jiro-Dat book-Acc gave   fact
         'Taro gave Jiro a book / books.'
     b. Taro-ga   hon-o   Jiro-ni   ageta (koto).
         Taro-Nom book-Acc Jiro-Dat gave   fact
         'Taro gave Jiro a book / books[3]'
     c.   Hon-o$_i$ Hanako-ga [$_{CP}$ Taro-ga   Jiro-ni   t$_i$ ageta to]   omotteiru (koto)[4]
          book-Acc Hanako-Nom   Taro-Nom Jiro-Dat   t gave Comp   think   fact
          'Hanako thinks that Taro gave Jiro a book / books.'

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[1] Scrambling is often used as a cover term for any syntactic operations which are responsible for free word order and are different from other movement operations triggered by an overt morphological marker (Chocano 2007).

[2] Many researchers put 'koto (fact)' at the end of example sentences. With putting 'koto', sentences become a subordinate clause. This is due to the fact that a matrix clause without topics yields awkwardness and the results of the comparison can be affected by it. However it is not reflected in translation.

[3] Since several researchers insist scrambling is a semantically vacuous movement in Japanese (Saito Fukui and so on), effect of scrambling is not translated.

[4] As for the movement (Move) operation, I follow Copy Theory rather than Trace Theory, since within the Minimalist framework no extra items such as a trace are allowed to be added in the middle of derivation (Inclusiveness condition). However I used 't (trace)' for descriptive purposes.

In (1a), the word order is S(ubject) - D(irect)O(bject) - I(ndirect)O(bject) - V(erb), while the example in (1b) exhibits S - IO - DO - V. Besides the given two word orders, the other four word orders are also possible, i.e. DO - S - IO - V, DO - IO - S - V, IO - S - DO - V or IO - DO - S - V. The sentence in (1c) exhibits LDS where the scrambled element is extracted from the embedded clause to the structurally higher matrix clause.

Since Ross, this operation, i.e. scrambling draws wide attention of researchers and diverse approaches have been proposed[5]. The two main approaches in this field are the base generation approach and the movement approach. The former insists that the free word order is a result of base generation of constituents in arbitrary order (for recent literature on this approach; Neeleman 1994; Neeleman and Weer 1999; Bošković and Takahashi 1998 etc[6]). The latter insists that there is a basic word order, i.e. unscrambled word order and the scrambled word order is derived by movement.

As for the base generation approach, there are configurational and non-configurational views of languages (see also footnote 5). As for the movement approach, researchers concern whether scrambling is A-movement (e.g. Dprez 1994; Fanselow 1990; Santorini 1991 etc) or A'-movement (e.g. vanden Wyngaerd 1989; G.Müller and Sternfeld 1994 etc). A-movement is a movement operation to A(rgument) position where Case is assigned, while A'-movement is a movement to non-argument, A'-position. Typical examples of the former are found in passive and raising constructions. An example of the latter is wh-movement. These two movement operations have their own distinctive properties: In A'-movement for instance scrambled elements can be reconstructed at LF for binding relations. Moreover this movement is sensitive to Weak Cross Over (henceforth WCO) and scrambled elements can license parasitic gap. In contrast, A-movement allows scrambled elements to create new binding relation in its

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[5] Ross himself and later Chomsky and Lasnik (1977) insisted scrambling is stylistic reordering at PF and it is not syntactic. In contrast, Hale (1980, 1983) took it as a syntactic phenomenon. According to Hale, languages are divided into two groups due to parametric difference; configurational languages, which have hierarchical structure, and non-configurational languages, which have non-hierarchical flat structure. In this flat structure the subject, object and verb are all under the same node and these three can be base generated in arbitrary order. The advantage of this approach was that it could explain why some languages allow free word order, while some others do not. However while this approach fits with languages such as Warlpiri (Hale 1983) and Hungarian (É Kiss, 1994, 2003), it is not the case for Japanese. In the latter language WCO and Binding Principle C violation are observed, which exhibit an asymmetric relation between the subject and object such as configurational languages (Saito and Hoji 1983). Nevertheless Japanese allows fairly free word order (for the case in German: Haider 1988). Besides the issue around configurationality, the presence of the syntactic relations in scrambled sentences indicates that this is a syntactic rather than a stylistic phenomenon.

[6] Bošković and Takahashi (1998) proposes an analysis that the Japanese free word order is base-generated and then scrambled elements lower to its theta-marking position at LF. This lowering is motivated by the theta feature on arguments. According to Bošković and Takahashi, if the theta feature is weak, lowering is waited until LF, while if the theta feature is strong, the movement has to take place overtly. The former yields a scrambling language, while the latter yields a non-scrambling one.

surface position, but they cannot be reconstructed. In addition, this movement is not sensitive to WCO, and it is impossible to license parasitic gaps. See the following examples from Cover (1994).

(2) a. [Which book of himself$_i$]$_j$ do you think John$_i$ reads t$_j$? (A'-movement)
   b. They$_i$ seem to each other$_i$ [t$_i$ to be interigent]. (A-movement)

(3) a. *Who$_i$ does it seem to his$_i$ father [that Mary likes t$_i$]. (A'-movement)
   b. John$_i$ seems to his$_i$ father [t$_i$ to be interigent]. (A-movement)

(4) a. Which article$_i$ did you file t$_i$ [without reading e$_i$]? (A'-movement)
   b. *The article$_i$ was filed t$_i$ [without reading e$_i$]. (A-movement)

In (2a), the constituent containing the anaphor 'himself' is reconstructed in its in-situ position at LF to be bound by coindexed 'John', while in (2b) the displaced element binds the anaphor 'each other' on its surface position. (3) shows WCO effect, where displaced elements c-command its coindexed element and its trace (or lower copy) at the same time. The A'-movement in (3a) is sensitive to this effect, while the A-movement in (3b) is not. Finally (4) shows that the former can license the parasitic gap '*e*', while the latter cannot. These constructions are often used as diagnostic tests to identify A- or A'-movement. In chapter 3 I will also use these tests.

As a result of researches concerning whether scrambling is A- or A'-movement, researchers come to consider that scrambling is not a unitary operation, since scrambling exhibits both A- and A'-properties (Webelhuth 1989[7]). In his influential papers, Mahajan (1990, 1994) has successfully proved that clause initial-scrambling is either A- or A'-movement, while LDS is solely A'-movement, based on the data from Hindi. In the light of his analysis, most researchers agree with the point that LDS is solely A'-movement (Miyagawa 1997; É Kiss1998; S. Karimi 1999; Bailyn 2001 etc, also vanden Wyngaerd 1989; Saito 1985 for this position). Those approaches provided above are still valid in the field of scrambling. Moreover as a result of the non-unitary view of scrambling, mixtures of those approaches are also accepted. In the following paragraph, I will concentrate on LDS phenomenon in Dutch and Japanese.

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[7] Webelhuth (1989) observed that scrambling in German shows both A- and A'-properties. However he considers scrambling itself as a unitary operation which leads to the third position that exhibits both A- and A'-properties.

1.2 Japanese and its Long Distance Scrambling

First of all, before I describe Japanese LDS, I want to describe some relevant properties of the Japanese language. Japanese is a language with relatively free word order as we have seen in the example (1) of the previous paragraph. Its basic (unscrambled) word order is claimed to be SOV[8], which is a typical word order for head-final languages, in which a head of a syntactic phrase follows its complement. Often is claimed that scrambling languages are head-final languages in many cases[9]. Another property relevant to scrambling is that Japanese has overt morphological Case markers. Thus syntactic relations of constituents are clear even in scrambled word orders. Japanese exhibits clause internal local scrambling as well as LDS.

As for fronting operation, Japanese has no structural wh-movement. Thus, typical A'-movement in Japanese is topicalisation. This operation is clearly distinguished from scrambling, since the topicalised element is marked by the topic marker 'wa'.

In contrast, focal movement is hard to distinguish from scrambling. According to the researchers who claim that scrambling is a semantically vacuous movement (Saito 1985; Kuroda 1988; Fukui 1993 etc.), focal movement in this language can be distinguished from scrambling in terms of semantic contributions. There is no focal movement that does not affect semantic content of a sentence. On the other hand, the researchers who consider scrambling as an obligatory movement (Miyagawa 1997, 2001, 2003 for Japanese, also É Kiss1998; S. Karimi 1999; Bailyn 2001 etc. for other languages) often claim LDS to be a focal movement driven by a feature such as 'focus' (see paragraph 2.2).

Since topicalisation is easy to distinguish from scrambling, I will use LDT (or Long Distance Topicalisation) for the comparison with LDS in chapter 3.

The distincitve property of Japanese LDS claimed by the semantic vacuous view is so called radical reconstruction, which is first observed in Saito (1989). The following example is examples of radical reconstruction given in Miyagawa (2006).

(5) a. John-ga [WH-ISL Taroo-ga nani-o katta ka] siritagatteiru.
        John-NOM [WH-ISL Taro-NOM what-ACC bought Q] want.to.know
        'John wants to know what Taro bought.'
    b. ?Nani-o$_i$ John-ga [WH-ISL Taroo-ga t$_i$ katta ka] siritagatteiru.
        what-ACC$_i$ John-NOM [WH-ISL Taro-NOM t$_i$ bought Q] want.to.know

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[8] The basic word order is not SOV or there is no such a thing as the basic word order for the base generation approach of scrambling. Besides that approach, Universal Base Hypothesis (Cinque 1999) claims that SVO order is the basic word order for every language and the other word orders are derived by movement.

[9] However, for example Slavic languages such as Polish or Russian exhibit free word order, while they have SVO word order.

The example in (5b) is slightly marginal, but not ill-formed. This is also remarkable since the scrambled wh-phrase is extracted out of the interrogative embedded clause and the sentence is still affirmative. To allow this phenomenon, Saito argues that the scrambled wh-phrase undergoes 'radical reconstruction' to return to the embedded clause at LF. Crucial claim is that the radically reconstructed phrase leaves no trace in the matrix clause on the basis of the Proper Binding Condition (Fiengo 1977; May 1977), since it does not allow unbounded traces. So, there is no trace at LF, which suggests the scrambling is cancelled and not visible at LF. In contrast, researchers insist scrambling is an obligatory movement which tends to categorise LDS as a sort of focal movement (e.g. Miyagawa 1997, 2001, 2003). The following argument is given by Nishiguchi (2002) against the radical reconstruction view. The crucial example provided in Nishiguchi is as follows (from Lasnik and Saito 1999).

(6)   [DP John$_i$-ni-tuite-no   dono hon]-o$_j$ kare$_i$-ga   [CP Hanako-ga   t$_j$ ki-ni-itteiru
        [DP John$_i$-about-GEN which article]-ACCj he$_i$-NOM [CP Hanako-NOM t$_j$ like
        ka] sitte-iru.
        Q]   knows
        'He knows which article about John, Hanako likes.'

In this example (6), as well as in Miyagawa's examples in (5), the complex wh-DP is extracted out of the embedded indirect question. This should lead to radical reconstruction which lowers the wh-phrase to the embedded clause at LF in order to license it. However if this sort of obligatory reconstruction takes place, it violates Binding Condition C, which requires R-expressions (e.g. proper names) are not to be bound in a sentence, since the lowered DP contains the proper name 'John', which is c-commanded by the coindexed pronoun 'kare (=he)'[10]. I do not go further into this issue since this is beyond the scope of this paper[11].

As for A- and A'-distinction, LDS at least in Japanese is considered to be an A'-movement. Saito (1992) for example observes that LDS is A'-movement in terms of reconstruction property, WCO sensitivity and parasitic gap licensing. However given the above-mentioned discussion, it is not clear whether those examples examined in Saito (1992) are examples of

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[10] Some researchers standing in Copy Theory suggests adjuncts 'about John' are constructed later in the matrix position and the copy of the core wh-phrase leaves it copy. From this point of view, it is also possible only the core wh-phrase is visible in its in-situ position and the adjunct positions in the higher clause at LF.

[11] Other arguments against the radical reconstruction is provided in Miyagawa (2006); Tsai (1994) insists that the wh-feature on the wh-phrase is checked by Q-morpheme before scrambling takes place. Another approach is Watanabe (1992), which suggests an empty wh-operator to check wh-feature on C, while wh-phrase itself moves to the higher clause. Again another approach is proposed by Takahashi (1993). This approach assumes cyclic movement to the higher clause via Spec, CP to check wh-feature.

LDS and not of LDF (or long distance focal movement), except for the example such as in (5b), which is at least claimed to undergo radical reconstruction.

Moreover A'-movement is well known to be sensitive to so-called Island Constraints, which form a sort of barrier to long distance movement. The following examples in (7) show those Island Constraints.

(7)   a.   *What$_i$ do you think [WH-ISL where John will read t$_i$]?

        b.   *What$_i$ do you make [DP a report [CP that John will read t$_i$]]

(7a) exhibits Wh-Island Constraint violation. In order to cross the embedded CP the wh-phrase 'what' has to move via Spec, CP to the initial position of the sentence due to Subjacency Condition. However here such Spec, CP is occupied by another wh-phrase, which intervenes the wh-movement (A'-movement) and thus forms a barrier to the long distance movement. This is Wh-Island Constraint. The A'-movement in (7b) violates the complex DP constraints, where the wh-movement crosses DP and CP at the same time, since there is no intermediate position between them. This is again a violation of the Subjacency Condition, which states movement operations cannot cross more than one binding node, i.e. CP and DP in English, at once.

In contrast with most languages, Japanese wh-movement exhibits no sensitivity to these Constraints (Watanabe 1992). Given this property, I expect that other A'-movements such as topicalisation also are not sensitive to Island Constraints. Further it is also interesting to examine whether 'Islandlessness' also is a property of LDS or not.

In chapter 3 where I start the comparison, I basically use LDS examples with reconstruction property, i.e. construction as given in (5b) and if this construction is not available, then I put LDS sentences in the context where there is no semantic contribution to make sure the compared operation is LDS[12]. Detailed descriptions of such cases are given in chapter 3.

1.3 Dutch Language and its Long Distance Scrambling

In this paragraph, I describe relevant properties of the Dutch language in terms of scrambling. Dutch is a head-final language in terms of VPs, whose basic word order is considered to be SOV. This word order is common in a subordinate clause, while SVO word order is produced in the matrix definite clause by virtue of the so-called V2 property. Due to this property the

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[12] Strictly speaking, LDS as well as other scrambling operations yields semantic contribution in terms of Information Structure, which is explained in the following chapter. So, strictly speaking, the LDS examples in this paper is semantically vacuous except for semantic/pragmatic import in terms of positions they occupy in a sentence.

finite verb of the main clause in Dutch is attracted to the head of a Functional Phrase (henceforth FP) in the left periphery and then diverse elements such as topicalised, focalised elements, time adverbs, wh-phrase etc. are hosted in the specifier position of the FP[13]. As a result of this process, the finite verb is placed in the second position in the surface order, thus V2 in the matrix clause. In addition, Dutch has a mixed nature of head finality, for instance, DPs and PPs have the order where a head precedes its complement. Furthermore, in contrast with Japanese, Case in Dutch is not indicated by overt morphology, except for pronouns, which have specific forms according to its Case.

The word order of Dutch is relatively restricted. Besides LDS explained below, the clause-internal scrambling occurs in Dutch as in (8). The definite DP is boldfaced and the sentential adverb is given in Italics.

(8) a.   Maar we moeten *eerst* **de vogels** waarschuwen.
          but   we must   first   the birds   warn
          'But first we have to warn the birds'.
     b.   Maar we moeten **de vogels** *eerst* waarschuwen.
          but   we must   the birds   first   warn   De Hoop (2003)

As we can see, the definite DP appear to the right of the sentential adverb '*eerst*' in (8a), while the alternative word order in (8b) exhibits that the definite DP precedes the sentential adverb. In literature, this alternation of the two elements is considered to be the only scrambling case in Dutch[14]. Furthermore it is important to point out that the target of this claus-internal scrambling is restricted to definite DPs.

The Dutch language has fronting operations such as structural wh-movement, topicalisaton, focal movement etc as demonstrated in (9).

(9) a.   Wie_i denk   je [CP dat Jan t_i zal ontmoeten]?
          Who think you   that Jan t will   meet
          'Who do you think Jan meet?'
     b.   A: Weet je wat er aan de hand was?

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[13] As I will mention in 2.3.1, the higher area than the IP/TP was assumed to be represented by CP alone before Rizzi (1997). Given this assumption the traditional analysis (e.g. den Besten 1983) claims the finite verb in a matrix clause moves to the head of CP and one more element fills the Spec of CP, the highest position in this framework. The verb final word order occurs in the subordinate clause since the C0 position is occupied by the complementizer.

[14] Note that the scrambling of Dutch is different from Object Shift observed in North Germanic languages in terms of Holmberg's Generalisation (Holmberg 1986), which states Object Shift is correlate with verb movement. This is not the case of Dutch scrambling.

'Do you know what was going on?'

B: Die_i weet_j ik t_i niet t_j.
   that know I t   not
'I don't know that.'

c.   DIE TWEE BOEKEN_i leest_j Jan t_i t_j.
   these two   books   think I   that Jan t will read
'THESE TWO BOOKS.'

(9a) is an instance of structural wh-movement to the pre-finite-verb position, which is called 'voorveld' in traditional Dutch grammar. I use henceforth a coined term 'fore-field' for descriptive purposes. In the B's answer to A's question in (9b) is the case of topicalisation, where the topic 'die (that)' occupies the fore-field and (9c) exhibits focal movement to the fore-field. Long distance fronting is possible for wh-movement. Moreover LDF (or long distance focal movement) is observed in Barbiers (2002), which is called 'long distance stranding' in the literature.

Now I look at LDS in Dutch, which is also observed in Barbiers (2002). The LDS is distinguishable from wh-movement, topicalisation or focal movement in terms of its landing site, which is not the fore-field. The apparent landing site of the LDS is the area between the V2 finite verb position and the in-situ position of the verb in the matrix position, which is called 'middelveld', again I coin a term 'middle field' for this. So, the long distance movement to the higher middle field is called LDS in Dutch. Of course it does not necessarily mean the Dutch LDS and its VP internal scrambling are a unitary phenomenon. Examples of Dutch LDS are:

(10) a.   ? Ik had [DP een BOEK]_i gedacht [CP dat Jan t_i   zou kopen].
          I had   a book   thought   that Jan t would buy
       'I had thought that Jan would buy a BOOK.'
   b.   * Ik had [DP een BOEK]_i betreurd [CP dat Jan t_i   zou kopen].
          I had   a book   regreted   that Jan t   would buy
       'I had regretted that Jan would buy a BOOK.'

In (10a), the scrambled element 'a book' is extracted out of the embedded clause to the matrix middle field. This is an example of Dutch LDS. The example in (10b) indicates this construction is sensitive to a type of clauses; compositional and factive clause[15] and

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[15] The truth value of compositional clauses changes when the verb dominating them is negated, while the truth value of factive clauses is presupposed and thus does not change. The former is dominated by verbs such as 'think' or 'believe', while the latter is dominated by verbs such as 'regret' or 'know'.

extraction out of factive clauses is excluded. Although many speakers have difficulties with the sentence (10a), they claim this sentence is better than the ill-formed counterpart in (10b). Several properties of this LDS are described and examined in Barbiers. First of all, scrambled elements have to carry focal stress, at least on part of the constituent. Moreover this LDS shows properties that resemble A'-movement, such as reconstruction for binding an anaphor or a pronoun, WCO effect and sensitivity to Island Constraints (definitions of those diagnostic tests are given in the following chapter). Finally as indicated above, LDS is sensitive to the type of clause. Those properties indicate the LDS in Dutch is a sort of LDF. However again its landing site is different from typical focal movement[16]. I expect here that the comparison in Chapter 3 between LDS and LDF in Dutch would lead to the conclusion that LDS is a focal movement with different landing site. Note that Dutch LDS is distinguished from LDF in terms of their landing site, whereas Japanese LDS is distinguished from LDT in terms of semantic contributions.

1.4 Summary and Construction of this paper

To summarise, the aim of this paper is to explore the properties of LDS in Dutch and in Japanese by comparing them with fronting operation[17]. As for the Japanese case, I compare Japanese LDS with LDT (or Long Distance Topicalisation), since the latter operation is clearly distinguishable from the former by virtue of the topic marker of this language. As for the Dutch case, LDS is compared with LDF (or long distance focal movement), since the properties of LDS observed in Barbiers (2002) indicates the similarity of this operation to LDF, which is different from typical Dutch clause internal scrambling.

Furthermore as recent literature suggests, many researchers insist that 'scrambling' is NOT a unitary operation, but a cover term for diverse phenomena both crosslinguistically and within a language. If this approach is on the right track, it is meaningful to compare LDS in different languages or to compare it with other operations in order to reveal properties of specific 'scrambling' cases. This paper further follows the course as is indicated below.

In Chapter 2, I will provide some relevant theoretical background around the issue of LDS.

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[16] Barbiers (2002) indicates the landing site is within the matrix vP, which according to him is a phase as well as CP, which can trigger leftward movement. Detailed discussion where exactly the landing site of LDS is situated is beyond the aim of this paper.

[17] I have chosen these two languages as subject of my research since on one hand comparison between closely related languages, e.g. comparison within the same language family or its subgroups allows us to understand what small differences in grammar is responsible for a certain phenomenon. However such comparison is mostly that does not lead to explanatory adequacy, but rather stays at the descriptional adequacy level for the language family or its subgroup in question.

First of all, a serious problem to the movement approach of scrambling, which is 'last resort' property of movement within the Minimalist Program (Chomsky 1993, 1995, 2000, 2001), which only allows movement when it's necessary. Then I will provide basic notions of Information Structure, especially foci and topics. This semantic and pragmatic study of sentence structure makes a significant contribution to the field of scrambling. Finally I provide a description of the left periphery proposed by Rizzi (1977) and the clause-internal periphery proposed by Belletti (2001, 2004, 2005), which is the meaningful for considering the landing position of LDS and LDF/LDT.

In Chapter 3, I begin with actual comparison of LDS and LDF/LDT. First of all, I examine what sort of a role focal stress plays in both operations in the two languages. Then I look at the properties of displaced elements in terms of Information Structure, whether semantic/pragmatic content of a sentence affect these operations. In the following subchapter, I want to confirm the major claim that LDS is A'-movement, by examining its properties such as reconstruction and WCO. Moreover I will check whether LDS is sensitive to Island Constraints, especially in Japanese where insensitivity of Island Constraints for wh-movement is confirmed. Further I will examine whether LDS and LDF/LDT can cross more than one clause. In the last subchapter, I examine DPs with different degrees of definiteness, R-expression, anaphora and pronouns, definite DPs, indefinite DPs and quantified DPs. In the last chapter, it will be concluded whether those operations are similar to each other or not and what sort of properties are observed in the comparison. The literatures I used in this paper are provided at the end of this paper.

2. Theoretical Framework

Before I turn to the actual comparison of LDS and LDF/LDT, I want to clarify the theoretic background of this paper.

2.1 Last Resort property and LDS

As for LDS, most researchers insist that LDS is an A'-movement operation (Saito 1985; vanden Wyngaerd 1989; Miyagawa 1997; É Kiss1998; S. Karimi 1999; Bailyn 2001 etc). In the case of newly observed Dutch LDS it is proved that this is an example of A'-movement by several diagnostic tests in Barbiers (2002). However the movement approach faces difficulty ever since the emergence of the Minimalist Program (Chomsky 1993, 1995, 2000, 2001). This theory tries to explain syntactic phenomena in terms of economy of derivation, which requires every step in derivation has its own motivation and effect on the result. As for movement operations, its motivation is supposed to be checking features such as Case feature (passive and raising structure) or wh-feature (wh-movement). This 'Last Resort' nature of movement excludes optional movement, which has no particular motivation and effect on the semantic/pragmatic outcome i.e. movement takes place only when it is necessary. Diverse suggestions are made to reconcile scrambling to the Last Resort provided by the Minimalist Programme[18]. I do not further go into the discussions. However it makes the direction of this paper clear. The position that insists LDS is a sort of long distance fronting such as topicalisation or focalisation is economical since I do not have to find extra motivation and semantic/pragmatic effect for LDS or to create an extra principle that allows LDS to undergo optional movement within the Minimalist programme.

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[18] In the light of Mahajan (1990, 1994), several researchers consider both A- and A'-scrambling have their own motivations and results. As for A-movement, recent literature (Lavine 1998; Miyagawa 2001, 2003; Bailyn 2002, 2003 etc.) propose this is motivated by checking EPP feature on T, which triggers movement to its specifier position. As for A'-movement such as LDS, its motivation is claimed to be semantic / pragmatic factors such as focus feature on a FP (or Functional Phrase) in the left periphery (Miyagawa 1997; É Kiss 1998, Karimi 1999, Bailyn 2001 etc). To summarise, they assume scrambling is an obligatory movement, which reconciles with the Last Resort nature of movement. In contrast, semantic vacuous optional view of scrambling (Saito 1985; Kuroda 1988; Fukui 1993 etc.) has to have special explanation for the optionality. Fukui (1993) for example suggests optional movement takes place according to Head Parameter and predicts movement operation is free in the preverbal domain of SOV language and in the postverbal domain of SVO language in terms of 'Cost' presented in Chomsky (1991).

2.2 Information Structure and stress

2.2.1 topics and foci

In this chapter, I want to turn to the semantic/pragmatic approaches in order to explore further the properties of LDS. It is well known and became a consensus that word order is determined crosslinguistically by Information Structure of sentences, where contextually known elements precede contextually unknown elements. The former is called a 'topic', which represents contextually known old information and the latter is a 'focus', which represents newly introduced information in the context. The examples of topics and foci are provided in (11) and (12) below. Topics are written in italics and foci are in capital letters.

(11)   A: Tell me something about Jan[19].
        B: *Jan* / *He* is a good guy.

(12)   A: What did Jan read?
        B: *Jan* read A BOOK.

In the question-answer pair in (11), 'Jan / He' in B's answer is a topic, since this has already introduced in the preceding question. In contrast, 'A BOOK' in B's answer in (12) is foci, which is first introduced in the sentence as an answer to the wh-phrase. The italic 'Jan' in (12) is also a topic as old information. This sentence shows the universal tendency that topics precede foci. These two information statuses are the primitives of Information Structure.

Furthermore both topics and foci have several variants. What is relevant for our purpose is the contrastive topic and foci, which emerge when a 'contrastive set' is provided in context. See the following examples in (13) and (14).

(13)   A: Tell me something about Jan and Wim.
        B: *Jan* is a tailor. *Wim* is a sailor.

(14)   A: What did Jan read, a book or an article.
        B: *Jan* reads A BOOK.

(13) exhibits the case of the contrastive topic, where 'Jan' and 'Wim' are given as a set of

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[19] This 'tell me something about X' sentence is used to make sure that X will be a topic of the following utterance in the light of the definition by Strawson (1964) and Reinhard (1981), who define topics as an item used for assessment of truth value, besides the definition given above, i.e. topics as contextually known old information.

contrasted elements in A's question. At the same time, since the question asks the description of 'Jan' and 'Wim', those elements become the topic of the two responses. In contrast, (14) is the case of contrastive focus, where the focus 'A BOOK' in B's response is already given in the A's question as a member of the contrastive set. In contrast with the contrastive topic, only one member is chosen from a contrastive set and other members are eliminated. All four cases are examined below for LDS and LDF/LDT in both Dutch and Japanese.

2.2.2 n-stress and a-stress

Stress plays an important role to mark the focus of a sentence in many languages. This is also the case for Dutch and Japanese. According to Ishihara (2001), there are two sorts of stress: n(uclear)-stress (Chomsky and Halle 1968, Halle and Vergnaud 1987, Cinque 1993, Selkirk 1995), which is observed in a sentence uttered in a natural falling intonation pattern, and a(dditional)-stress, which is assigned on an arbitrary element in a sentence. As for the n-stress, its position is predictable by Null Theory (Cinque 1993), which predicts n-stress to fall on the most deeply embedded phrase of a sentence, i.e. the preverbal position in both Dutch (Reinhart 1995, Neeleman and Reinhart 1998) and Japanese (Kim 1988, Ishii 2001, Ishihara 2001)[20]. This n-stress position is a new information focus position in both Dutch and Japanese. See the following Japanese examples.

(15)   A: Taro-ga   nani-o   yonda no?
            Taro-Nom what-Acc read   Q
         'What did Taro read?'
   a.   B: Taro-ga   **hon-o**   yonda.
            Taro-Nom book-Acc read.
   b.   B: **?**Hon-o   **Taro-ga**   yonda.
            book-Acc Taro-Nom   read.
         'Taro read a book.'

The preverbal position in the sentences of (15) are in boldface. In (15a), the new information focus 'a book' is compatible with the preverbal focus position, while the sentence in (15b) is not natural as an answer of the question, since the topic of the sentence is in the new information focus position.

In turn, a-stress is freely assigned on other positions than the preverbal position. See the following examples, where a-stressed phrases are in capital letters.

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[20] A head intial language as English assigns its n-stress on postverbal position.

(16)   A: Taro-ga   nani-o   yonda no?
        Taro-Nom what-Acc read   Q

    'What did Taro read?'

a. B: ?TARO-GA   hon-o   yonda.
        Taro-Nom book-Acc   read.

b. B: HON-O   Taro-ga   yonda.
        book-Acc Taro-Nom read.

    'Taro read a book.'

In (16a), a-stress is assigned on the topic 'Taro', which yields awkwardness as an answer to A's question. In contrast, (15b) is a natural answer to the question, since the focus 'a book' is marked by the a-stress. In addition, a-stress is a more prominent stress than n-stress.

Moreover an important difference between the two stresses is that n-stress forms a 'focus set' while a-stress does not. See the following example.

(17)   [TP Jan [VP read [DP **a book**.]]]

The n-stress position in English is the postverbal position. According to Focus Rule (Reinhart 1995), which states 'the focus of IP is any constituent containing the main stress of IP', the focus of the sentence in (17) is the DP, the VP and the whole TP (or IP), which are called a focus set. In contrast, a-stress assigns 'narrow focus' on the stressed phrase and does not form such a set[21]. That knowledge on stress becomes important when I actually begin with the comparison between LDS and LDF/LDT. Note that if I use 'stress' without indicating n- or a-stress, it refers to a-stress.

2.3 Left Periphery and Clause-internal Periphery

2.3.1 Left Periphery

Long distance fronting of both languages and Japanese LDS are the cases where elements are displaced to the left edge of a sentence. This area, higher than IP (TP) is called the left periphery in the literature. For a long time, it has been assumed that the left periphery would be represented by a CP alone and the landing site of movement into this area was assumed to

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[21] Given this discussion, Ishii (2001) assumes scrambling in Japanese is motivated in order for elements such as topics to avoid the preverbal focus position. Ishihara (2001) suggests scrambling in Japanese is not semantically vacuous, since it affects the possible focus set created by n-stress.

be Spec, CP or adjunction to the CP. However resent researchers suggest this is too simple and there is more complicated structure in the left periphery. I prefer to take the left periphery structure presented by Rizzi (1997). Rizzi presented this structure as follows:

(18)   ForceP - TopP* - FocP - TopP* - FinP (- IP)

The ForceP is a projection which determines the specification of Force (Chomsky 1995), i.e. the specification whether a sentence is a declarative, a question, an exclamative, a relative, a comparative etc. The TopP(s) and FocP are a host for topicalised and focalised elements respectively[22]. The asterisk on the TopP indicates that this item can be recursive[23]. Thus, he assumes while the TopP can occur more than once in both left and right side of the FocP, only one focalized element can occur in the pre-IP field. FinP is responsible for determining

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[22] Gill and Tsoulas (2004) casts doubt on this view of Rizzi (1997) that TopPs and FocP are an independent FP or functional projection. See the following example from Korean:

(i) a. Chelswu-nun   i chayk-ul   sassta.
         Chelswu-Top   this book-Acc bought
         'Chelswu bought this book.'
     b.   I chayk-ul$_i$ Chelswu-nun t$_i$ sassta.
         This book-Acc Chelswu-Top   t bought
         'It is Chelswu that bought this book.'

In (a) DP with the topic marker 'Chelswu-Top' is interpreted as both a normal or contrastive Topic, while the corresponding DP in (b) is interpreted as a contrastive focus. They claim that scrambling of the object 'this book' in (b) alters the interpretation of the topic DP. Given this assumption, the landing site of the object in (b) is a host of this item and at the same time its functional head affects the interpretation of the topic DP, which is impossible for one functional head.

[23] Rizzi(1997) assumes recursivity of TopPs and uniqueness of FocP based on (i) the structures provided in (19) and (ii) distribution of Italian topics and foci. As for (i), Rizzi explains that given this structures of the TopP and the FocP, TopPs can occur more than once. This is due to the fact that topics can be incorporated in the complement position of the TopP, since topics can be a comment for other TopPs. In contrast, FocP cannot be incorporated in the complement position of the FocP since foci as new information cannot be a presupposition. In the latter case, interpretational crash raises.
As for (ii), he presented Italian examples where topics can appear in preceding and in following position to foci and foci cannot appear more than once.
However especially the latter pattern is not observed cross-linguistically. So, it cannot explain the languages which allow multiple foci in the left periphery. See the following examples.
(ii)   Q: Saburo-ga [CP Taro-ga   dare-ni   nani-o   yorokonde ageta to] omotteiru no?
             Saburo-Nom   Taro-Nom who-Dat what-Acc   happily   gave Comp think   Q
          'Who does Saburo thinks that Taro happily gave this book to whom?'
          A: Jiro-ni$_i$ kono hon-o$_j$ Saburo-ga [CP Taro-ga t$_i$ t$_j$ yorokonde ageta to] omotteiru.
             Jiro-Dat this book-Acc Saburo-Nom Taro-Nom t t   happily   gave Comp think
          'Saburo thinks that Taro happily gave this book to Jiro.'

In this example, there are two new information foci in the left periphery. Benincà and Poletto (2004) also argue Rizzi's structure by having a close look at the distribution of topics and foci in Italian.

finiteness of sentences[24]. What important for our discussion is the TopP and the FocP, which host the target elements of LDF and LDT. The structure of the TopP and the FocP are given below in (19).

(19)   a. TopP: [TopP XP [Top' Top0 YP]]
         XP = topic, YP = comment, Top0 = a head of TopP
         b. FocP: [FocP ZP [Foc' Foc0 WP]]
         ZP = focus, WP = presupposition, Foc0 = a head of FocP

As in (19a), TopPs host topical element in its specifier position and non-topical comment as its complement, while in (19b), the FocP hosts a focal element in its specifier and non-focal old information, i.e. presupposition as its complement[25]. While topics can become a comment of another topic, foci as new information cannot be presupposed. This is the reason assumed for the non-recursive nature of the FocP. Given this structure of the left periphery, topicalisation and focal movement, as well as LDT and LDF are assumed to be motivated respectively by Top(ic)-feature and Foc(us)-feature in a head of corresponding FPs (or functional phrases) to check them. This fits well into the view that considers movement as a feature checking process[26]. I expect that as a result of the comparison in chapter 3, LDS would be incorporated into this movement motivated by semantic features in the left periphery, as assumed by researchers such as Miyagawa (1997, 2001). Then LDS at least in Dutch and Japanese are reconciled with Last Resort view of movement in the Minimalist Program. In the next chapter, I draw a comparison between LDS and LDF/LDT.

Finally in this paragraph I briefly mention the V2 phenomenon within this left peripheral structure. As I have mentioned in footnote 13, it is traditionally assumed that a finite verb in the matrix clause obligatorily moves to the head of CP and its specifier position is filled by a constituent or an adjunct. However given the fine structure provided by Rizzi, one question comes to mind: Where is the landing site of the finite verb?
First of all, it is important to point out the fact that the pre-finite-vert position, traditionally assumed as the Spec, CP, allows both topics and foci. Consequently I assume that the position occupied by the root finite verb is not associated with particular interpretations and that

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[24] For instance, the English complimentizer 'that' in FinP chooses a finite clause as its complement, while 'for' in FinP chooses an infinite clause.
[25] Given that topics are a statement what the sentence is about, other elements than topics are a comment on the topics (also refered to as theme and rheme). In contrast, given that foci are newly introduced information into the context, other elements are all presupposed, thus presupposition. These relations are reflected in the structure in (19).
[26] Rizzi (1997) prefers the term Criteria (Rizzi 1991, Haegeman 1995) to the feature checking process in the Minimalist Program, since those features in A'-system, i.e. the left periphery have semantic import and thus not deleted even when they are checked.

position is thus not the head of TopP or FocP.

Secondary it is traditionally explained that the verb final word order in Dutch occurs in the subordinate clause, since the head of CP is occupied by the complementizer and it blocks the V-C movement of the verb in this case. In the light of this explanation, it is natural to assume that the position filled by the complementizer is the position to which the root finite verb moves. This is the head of FinP.

From these aspects, I assume that the root finite verb moves to the head of FinP to check a feature on it. Then one constituent or adjunct is attracted to the Spec, FinP. Furthermore this constituent or adjunct moves to the specifier position of TopP or FocP according to their particular interpretation. This issue will be concerned in chapter 4 to specify the landing site of the elements displaced in LDS or LDF/LDT.

2.3.2 Clause-internal Periphery

In the light of the structure given in (18), Belletti (2001, 2004, 2005) claims that there is an area immediately above VP, which has a similar structure to the structure in the left periphery by exploring clitic-related phenomena in Romance languages and the position of the postverbal subject[27]. The fine structure of the clause-internal periphery is assumed as follows.

(20) ...[$_{TopP}$ Top [$_{Foc}$ Foc [$_{Top}$ Top...VP]]]   Belletti (2005)

Furthermore she assumes there are simple relations between syntactic, semantic/pragmatic and prosodic configurations, e.g. elements interpreted as 'focus' should occupy the focus

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[27] Belletti (2005) provides the following examples, where the topic and focus positions are occupied.

(iii) a.   Maria manderà suo fratello, invece **Gianni**   verrà   **lui**.
         Maria will-send her brother,   but   Gianni will-com he.
         'Maria will send her brother, but Gianni will personally come.'
     b.   **Gianni**   verrà, **lui**; lo conosco, so   che è affidabile (Maria   invece
         Gianni will-come he him I-know I-know he   is trustable   Maria on the contrary
         non   so   cosa farà).
         not I-know what will-do
         'Gianni will come, as far as he is concerned; I know him, I know he is trustable
         (Maria on the contrary, I don't know what she will do).'

Both examples contain the sentence 'Gianni verrà lui', where the postverbal strong pronoun 'lui' is coindexed with 'Gianni'. This phenomenon is called 'doubling', since the subject is realised twice. In this construction, she proved the postverbal strong pronoun (and clitics or quantifiers) occupies a position in the clause-internal periphery. According to her, in the former example, the strong pronoun occupies Spec, FocP and in the latter example, the strong pronoun occupies Spec, TopP of the clause-internal periphery. From this respect, she claims there are at least topical and focal functional phrases in the lower periphery.

position and draw a focal stress and 'topic' elements should occupy the topic position and obtain special down grading intonation. In addition to this, she insists the left peripheral focus position is solely associated with 'contrastive focus', while the clause-internal focus position is solely associated with 'new information focus' (Belletti 2004). Given this assumption, the landing site of Dutch LDS has to be in the left periphery due to its contrastive nature. However I question this view. First of all, there is no such a simple relation between prosodic and semantic/pragmatic outcomes in Japanese as in (21).

(21) a.　TARO-GA　hon-o　　katta.
　　　　Taro-Nom book-Acc bought
　　　　'Taro bought a book.'
　　b.　TARO-WA　hon-o　　katta.
　　　　　Taro-Top book-Acc bought
　　　　'Taro bought a book (but not Jiro).'

In both examples, a-stress is indicated in capital letters. As I mentioned in 2.2.2, a-stress typically marks 'focal element' as in (21a). In contrast, (21b) indicates the topicalized element marked by the topic marker 'wa' can also draw a-stress, which yields contrastive topic interpretation. According to Belletti, the same type of stress indicates that the stressed elements are hosted by the same position and interpreted as the same. However this clearly is not the case, since the former is a focus and the latter is a topic.

The second argument is as follows: The non-contrastive, new information focus can appear in a higher position than the sentence-modifying adverb as in (22).

(22)　　A:　Nani-o　　saiwai　　Taro-wa　katta-no?
　　　　　　what-Acc fortunately Taro-Top　　bought Q
　　　　　　'What did Taro buy fortunately?'
　　　　B:　Hon-o　　saiwai　　Taro-wa katta.
　　　　　　book-Acc fortunately Taro-Top bought
　　　　　　'Taro bought a book fortunately.'

(22) shows the question of A and the corresponding answer of B. Due to the sentence-modifying nature of the adverb 'saiwai', it is natural to assume this element occupies a position in the IP level, which is higher than the clause-internal periphery. Nonetheless the new information focus can appear in a position higher than that adverb in B's answer in (22). From these points, I assume both focus positions in the left periphery and in the clause-internal periphery can host new information as well as contrastive foci. Thus the possibility that the lower periphery attracts the contrastively focalized elements as I observed in Dutch LDS, is not excluded. The further discussion on the landing site of the elements in

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LDS and LDF/LDT in Japanese and in Dutch will take place in Chapter 4.

3. Comparing the two LDS

In this chapter I start to compare LDS in both Dutch and Japanese with those of fronting operation, i.e. LDF (or Long Distance Focal movement) and LDT (Long Distance Topicalisation). As for the Dutch LDS and LDF comparison[28], five Dutch native speakers helped to provide their intuition whether particular sentences are well-formed or ill-formed. As for Japanese I create examples and I judge them whether grammatical or not. As I mentioned above in Chapter 1.2, the definitive characteristic of LDS is thought to be 'radical reconstruction' (Saito 1989). Thus, here I use examples which are claimed to yield such obligatory reconstruction, i.e. those where a wh-phrase is extracted out of interrogative embedded clauses for LDS as long as this construction is available. As for fronting operation, I will use LDT, since this operation is easily distinguished from LDS in terms of existence of the topic marker 'wa'.

First of all in 3.1, I will examine whether or not focal stress (a-stress) plays a role for LDS and LDF/LDT, 3.2 explains how the four statuses of Information Structure given in 2.2.1, i.e. the normal topic, new information focus, contrastive topic and focus, interact with those movement operations. Further in 3.3, I will clarify whether those movement operations are A- or A'-movement. Moreover I predict this is the case of an A'-movement according to the arguments given in the chapter 1.2 and 1.3. In 3.4, I will examine whether those movement operations can cross more than one clause. Finally in the last paragraph 3.5, I will look into DPs with diverse degrees of the definiteness, whether some of them are excluded from those movement operations, as the Dutch VP internal scrambling does. The examined DPs are as follows: In 3.5.1 R-expressions, in 3.5.2 anaphora and pronouns, in 3.5.3 definite DPs and in 3.5.4 indefinite DPs and quantified DPs are examined respectively.

3.1 Stress

First of all, I will examine what sort of a role (a-)stress plays in LDS and LDF/LFT in Dutch and Japanese. As we have already seen in 1.3, Dutch LDS (and focal movement) requires focal stress[29] on displaced elements (Barbiers 2002). The crucial examples are as follows.

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[28] The examples of LDS and LDF in Dutch are created based on those in Barbiers (2002). As for LDF, he provides examples of so called 'focal particle stranding', a long distance focal movement.
[29] As we have already seen in Chapter 3, the stress described in this chapter indicates exclusively A(dditional) stress.

(23) a. *[DP Twee boeken]i denk ik [CP dat Jan ti zal lezen.][30]

   two   books   think I   that Jan t will read.

   'I think that Jan will read only two books.'

  b. [DP TWEE boeken]i   denk ik [CP dat Jan ti zal lezen.]

   two   books   think I   that Jan t will read.

   'I think that Jan will read only TWO books (but not three or four).'

  c. *Ik had [DP twee boeken]i gedacht [CP dat Jan ti zou lezen.]

   I had   two books thought   that Jan t would read.

   'I had thought that Jan would read only two books.'

  d. ?Ik had [DP TWEE boeken]i gedacht [CP dat Jan ti zou lezen.]

   I had   two books thought   that Jan t would read.

   'I had thought that Jan would read only TWO books (but not three or four).'

  e ?Ik had [DP twee BOEKEN]i gedacht [CP dat Jan ti zou lezen.]

   I had   two   books   thought   that Jan t would read.

   'I had thought that Jan would read only two books (but not articles or newspapers).'

As you can see in (23a) and (23c), in both LDS and LDF examples, DPs cannot undergo a movement across clauses when they do not draw the stress. In contrast, (23b), (23d) and (23e) indicate that DPs with focal stress can undergo both LDS and LDF. The question mark in front of (23d) and (23e) indicates that the LDS examples are slightly marginal than the LDF examples [31]. Moreover the informants claim the focal stress in those examples yields contrastive interpretation for the stress element as indicated in (23d) and (23e), where contrastive interpretation exactly arises for stressed element, i.e. 'two' for (23d) and 'book' for (23e). I cannot tell whether the contrastive interpretation is merely a result of necessary focal stress, or if it motivates the movement. However one thing is clear; both operations yield semantic contribution.

As for Japanese LDS, it is difficult to examine whether focal stress is required for a radical reconstruction structure, since wh-phrases have focal stress regardless of whether the wh-phrase is displaced or not (Nagahara 1994). Thus, I use examples of Japanese LDS without a radical reconstruction property and compare such LDS with LDT. See the following

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[30] Since LDS is not allowed in English, I will provide English translations without fronting scrambled elements. However when the element is stressed I indicate that by writing it in capital letters.

[31] Some of my informants had difficulties to judge LDS sentences and the judgement is sometimes not consistent. One of the reasons would be due to the fact that both LDS and LDF are colloquial expressions and they are not allowed in the prescriptive grammar. However, if they compare them with LDF examples and some clearly ungrammatical sentences such as those violate Island Constraints, they mainly claim LDS examples are worse than LDF and better than ungrammatical sentences.

examples.

(24)   A: Sono hon-o Taro-ga dare-ga yomu to omotteiru no?
       'Who does Taro think reads that book.'

   a.   B: ?Taro-ga [CP Jiro-ga [DP sono hon-o]   yomu to] omotteiru (koto)[32].
          Taro-Nom   Jiro-Nom   that book-Acc read Comp   think   fact
        'Taro thinks that Jiro reads that book.'
   b.   B: [DP Sono   hon-o]i   Taro-ga [CP   Jiro-ga ti yomu to] omotteiru (koto).
              that book-Acc Taro-Nom   Jiro-Nom t read Comp   think   fact
        'Taro thinks that Jiro reads that book.'
   c.   [DP Sono   hon-wa]i   Taro-ga [CP Jiro-ga   ti yomu to] omotteiru (koto).
           that   book-Top Taro-Nom   Jiro-Nom t read Comp   think   fact
        'Taro thinks that Jiro reads that book.'

Both examples in (24a) and (24b) are an answer to the question of A. (24a) is an example of an unscrambled sentence where the given information, or the topic 'that book' is in preverbal focus position, which yields awkwardness as an answer to A. The example in (24b) indicates movement, where old information 'that book', which has to be a topic of this sentence, does not carry the topic marker and so it is not topicalisation. Moreover n-stress falls on 'Jiro', which is new information or the focus of the sentence. So, Topic and Focus features are not a motivation for this movement and its only semantic contribution is due to the position they hold, which indicates this is LDS. This example shows that LDS can take place without focal stress in Japanese[33]. Although (24c) is awkward as an answer to the question, the LDT construction itself is possible without focal stress.

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[32] The subject of the matrix clauses is generally expressed by a DP with the Topic marker 'wa'. However even if I use the nominative marker 'ga' here, LDS is still accepted, though sounds slightly awkward since then two DPs marked as the nominative come one after another. This is solved if you put a sentential adverb such as 'yesterday' in between. The information status of the matrix simple nominative is generally contrastive Focus, though it is also possible to be interpreted as the new information Focus when you put the sentence in right context.

[33] The following examples show contrastive interpretations arise for the element with focal stress in the Dutch language.

(iv) a.   [DP SONO hon-o]i   Taro-ga [CP   Jiro-ga ti yomu to]   omotteiru (koto).
              that book-Acc   Taro-Nom   Jiro-Nom t read Comp   think   fact
        'Taro thinks that Jiro reads THAT book (and not this book).'
   b.   [DP sono HON-O]i   Taro-ga [CP   Jiro-ga ti yomu to]   omotteiru (koto).
              that book-Acc Taro-Nom   Jiro-Nom t read Comp   think   fact
        'Taro thinks that Jiro reads that BOOK (and not that article).'

To summarize, Dutch LDS resembles (contrastive) LDF in terms of semantic contribution, whereas this is not the case for Japanese LDS.

3.2 Information Status

As we have already seen in 2.2.1, the following four notions of Information Structure, i.e. the new information focus, normal topic, contrastive focus and topic play an important role for word ordering. Thus, here I examine LDS and LDF in Dutch and LDS and LDT in Japanese. First I examine Dutch examples. See the following examples.

(25)   A: Hoeveel boeken zal Jan lezen? (Hoeveel boeken denk je dat Jan zal lezen?)
        'How many books will Jan read? (How many book do you think that Jan will read?)'

    a.   B: [DP TWEE boeken]i denk ik [CP dat Jan ti zal lezen].
              two   books   think I   that Jan t will read
      'I think that Jan will read TWO books.'
    b.   B: **?** Ik had [DP TWEE boeken]i gedacht [CP dat Jan ti zou lezen].
            I   had   two   books   thought   that Jan t would read
      'I had thought that Jan would read TWO books.'

(26)   A: Wat zal Jan lezen (Wat denk je dat Jan zal lezen), een boek of een krant?
        'What will Jan read (What do you think that Jan will read), a book or a paper?'

    a.   B: [DP een BOEK]i denk ik [CP dat Jan ti zal lezen].
              a   book   think I   that Jan t will read
      'I think that Jan will read a BOOK (but not paper).'
    b.   B: **?** Ik had [DP een BOEK]i gedacht [CP dat Jan ti zou lezen].
            I   had   a   book   thought   that Jan t would read
      'I had thought that Jan would read a BOOK (but not paper).'

The question of A in (25) asks the number of books that Jan will read. So, the number is new information in both (25a) and (25b). Both LDS and LDF fit with the question, which indicates it is natural for new information, or foci to undergo those operations. The question in (26) provides the contrastive set 'a book or a paper'. In such a case, elements as 'a book' in both (26a) and (26b) are interpreted as the contrastive foci. The informants claim that those answers (26a) and (26b) to the question with the contrastive set fit better with the question than the question with no contrastive set in (25). This is consistent with the fact that Dutch

LDS and LDF draw focal stress and yield contrastive interpretations.

Now I turn to the topic cases. The examples for topics are in (27) and for contrastive topics are in (28). The diagnostic tests in (27) and (28) are explained in footnote17.

(27)　　A: Kun je mij iets vertellen over dat boek?

　　　　'Can you tell me something about that book?'

　　a.　B: ??[DP DAT BOEK]i denk ik [CP dat Jan ti zal lezen].

　　　　　　　that　book　think I　　that Jan t will read

　　　'I think that Jan will read THAT BOOK.'

　　b.　B: ??Ik had [DP DAT BOEK]i gedacht [CP dat Jan ti　zou lezen].

　　　　　　I　had　　that　book　thought　　that Jan t would read

　　　'I had thought that Jan would read THAT BOOK.'

(28)　　A: Kun je mij iets vertellen over dat boek en Max Havelaar?

　　　　'Can you tell me something about that book and Max Havelaar (a title of a book)?'

　　a.　B: ??[DP DAT BOEK]i denk ik [CP dat Jan ti zal lezen].

　　　　　　　that　book　think I　　that Jan t will read

　　　'I think that Jan will read THAT BOOK.'

　　b.　B: ??Ik had [DP DAT BOEK]i gedacht [CP dat Jan ti zou lezen].

　　　　　　I had　　that　book　thought　　that Jan t would read

　　　'I had thought that Jan would read THAT BOOK.'

Both questions of A in (27) and (28) ask B to tell about 'that book'. So, for the answers in (27) as well as (28), 'that book' becomes a topic of these answers. Moreover the question in (28) gives the contrastive set and so the topics in (28a.b) are contrastive topics. Despite the difference between (27) and (28), i.e. a normal and a contrastive topic, both are claimed as being basically the same thing[34]. As for the question marks in front of those sentences, informants claim they are grammatical but awkward as an answer to the questions. Some of them clearly point out that the topic of those sentences is 'Jan' and this is inconsistent with the question which asks you to tell about 'that book'. This incompatibility with topics also suggests focus movement nature of both Dutch LDS and LDF.

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[34] This is inconsistent with the property of the contrastive topic, which is usually consistent with focal movement. The results would be different if the sentences describe both 'that book' and 'Max Havelaar'.

Now I turn to Japanese LDS cases and compare them with LDT. As in the subchapter 3.1, the LDS construction with a radical reconstruction is not available since Information Structure properties are hard to define for wh-phrases. So, here I use examples based on those from Saito (1992).

(29)　　A: Hanako-ga [CP Taro-ga nani-o katta to] omotteiru no?
　　　　'What does Hanako think that Taro has bought?'

　　a.　B: Hanako-ga [CP Taro-ga [DP Sono hon-o]　katta　　to] omotteiru.
　　　　　Hanako-Nom Taro-Nom　　That book-Acc bought Comp　think
　　　　'Hanako thinks that Taro has bought that book.'
　　b.　B:**??**[DP Sono hon-o]i　　Hanako-ga [CP Taro-ga ti　katta　to] omotteiru.
　　　　　　That book-Acc Hanako-Nom Taro-Nom t bought Comp　think
　　　　'Hanako thinks that Taro has bought that book.'　　　　　　　Saito(1992)
　　c.　B: [DP SONO HON-o]i　　Hanako-ga [CP Taro-ga ti　katta　to] omotteiru.
　　　　　　That book-Acc　　Hanako-Nom Taro-Nom t bought Comp　　think
　　　　'Hanako thinks that Taro has bought THAT BOOK.'

As indicated by the question, 'that book' in the three sentences is new information. The example in (29a) is an unscrambled sentence. Here, 'that book' is in the preverbal focus position. In contrast, (29b) is a scrambled counterpart of (29a), which is awkward since the scrambled element is scrambled from the new information position to the left periphery and the preverbal focus position is occupied by 'Taro', which is old information[35]. (29c) indicates that focal stress on the displaced element helps the awkwardness of the answer, where the words to the right of the stressed element is deaccented (Ishihara 2001), i.e. n-stress in the preverbal focus position has vanished. Now let's turn to examine the cases of contrastive focus. See the following examples.

(30)　　A: Hanako-ga [CP Taro-ga nani-o katta to] omotteiru no? Kono hon? Sono hon?
　　　　'What does Hanako think that Taro has bought, this book or that book?'

　　a.　B: Hanako-ga [CP Taro-ga [DP Sono hon-o]　katta　　to] omotteiru.
　　　　　Hanako-Nom Taro-Nom　　That book-Acc bought Comp　think
　　　　'Hanako thinks that Taro has bought that book.'

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[35] Null Thoery of Cinque predicts n-stress to fall on the lowest element in the syntactic structure, which is the preverbal element in an unscrambled sentence as (a). Then we expect n-stress to fall on the verb after scrambling. However n-stress falls on the preverbal position in (b). To allow this, I assume V-T movement takes place as Miyagawa (1998, 2001 etc.)

b. B:**??**[DP Sono hon-o]ᵢ   Hanako-ga [CP Taro-ga tᵢ   katta   to] omotteiru.
        That book-Acc Hanako-Nom Taro-Nom t bought Comp   think
   'Hanako thinks that Taro has bought that book.'   Saito(1992)

c. B: [DP SONO HON-o]ᵢ   Hanako-ga [CP Taro-ga tᵢ   katta   to] omotteiru.
        That book-Acc   Hanako-Nom Taro-Nom t bought Comp   think
   'Hanako thinks that Taro has bought THAT BOOK.'

In the question, 'that book' is given as an option, so 'that book' in the three answers is a contrastive focus. In this case, again the scrambled sentence in (30b) is awkward for the question. Although I did not indicate which of the two sentences (30a) or (30c) is better than the other, the sentence in (30c) is slightly better than (30a), since the focal stress indicates the displaced element is interpreted as contrastive.

Finally I will look at the cases of normal topics and contrastive topics. See the following examples.

(31)   A: Sono hon-nitsuite nanika oshiete kudasai.
        'Tell me something about that book, please.'

a. B: **??**Hanako-ga [CP Taro-ga [DP Sono hon-o]   katta   to] omotteiru.
        Hanako-Nom Taro-Nom   That book-Acc bought Comp   think
   'Hanako thinks that Taro has bought that book.'

b. B:**?**[DP Sono hon-o]ᵢ   Hanako-ga [CP Taro-ga tᵢ   katta   to] omotteiru.
        That book-Acc Hanako-Nom Taro-Nom t bought Comp   think
   'Hanako thinks that Taro has bought that book.'   Saito(1992)

c. B: [DP Sono hon-wa]ᵢ   Hanako-ga [CP Taro-ga tᵢ   katta   to] omotteiru.
         That book-Top   Hanako-Nom Taro-Nom t bought Comp   think
   'As for that book, Hanako thinks that Taro has bought.'

The answer in (31a) is awkward to the corresponding question, since the DP 'that book', which is old information i.e. a topic, occupies the preverbal focus position. The sentence in (31b) is better than (31a), since the scrambled DP has left the preverbal focus position, although it is worse than (31c), since topics are most naturally expressed with the topic marker 'wa'. Those examples again indicate that scrambling does not affect semantic/pragmatic content of the sentence, but its position is sensitive to semantic/pragmatic interpretations. I move to the case of contrastive topics:

(32)   A: Sono hon to kono hon-nitsuite nanika oshiete kudasai.
         'Tell me something about that book and this book, please.'

   a.   B: ??Hanako-ga [CP Taro-ga [DP Sono hon-o]   katta   to] omotteiru.
            Hanako-Nom Taro-Nom   That book-Acc bought Comp   think
            'Hanako thinks that Taro has bought that book.'

   b.   B:?[DP Sono hon-o]$_i$ Hanako-ga [CP Taro-ga t$_i$ katta   to] omotteiru.
            That book-Acc Hanako-Nom Taro-Nom t bought Comp   think
            'Hanako thinks that Taro has bought that book.'   Saito(1992)

   c.   B: [DP Sono hon-wa]$_i$ Hanako-ga [CP Taro-ga t$_i$ katta   to] omotteiru.
            That book-Top   Hanako-Nom Taro-Nom t bought Comp   think
            'As for that book, Hanako thinks that Taro has bought.'

The question provides the contrastive set containing 'that book' and 'this book' and thus 'that book' in the three answers is a contrastive topic. As for the Dutch examples, I feel no difference from the normal topic cases.

Both Dutch LDS and LDF require focal stress on the displaced elements. This property indicates that the contrastive interpretation plays a central role in these Dutch operations, while this is not the case in Japanese. From this it is evident that Dutch LDS has a semantic import and a motivation for the movement and thus can be reconciled with the Minimalist view of the 'movement as last resort' nature.

3.3 A- or A'-movement

In the influential paper of Mahajan(1990), he successfully proved that LDS of Hindi is solely A'-movement, while local scrambling is A-movement triggered by EPP feature on T, or is A'-movement as LDS. In the light of Mahajan, researchers such as Saito (1992); Miyagawa (1998, 2001) etc. also consider LDS as an A'-movement as indicated in 1.2. As for Dutch LDS, Barbiers (2002) showed this is A'-movement, by using diagnostic tests where as anaphor and variable binding, obligatory reconstruction or WCO is testified (in 1.3). Thus below, I merely re-examine A'-properties of both Japanese and Dutch LDS. First I begin with Dutch LDS. See the following examples:

(33) a.   [DP Een BOEK over zichzelf$_j$]$_i$ denk ik [CP dat Jan$_j$ t$_i$ zal   lezen].
         a book   about himself   think I   that Jan   t will read
       'I think that Jan$_j$ will read a BOOK about himself$_j$.'

b. **?**Ik had [DP Een BOEK over zichzelf_j]_i gedacht [CP dat Jan_j t_i zou lezen].

     I had   a   book about himself   thought   that Jan t would read

     'I had thought that Jan_j would read a BOOK about himself_j.'

c. [DP Zijn_j BOEK]_i denk ik [CP dat iedere jongen_j t_i zal lezen].

     his   book   think I   that every boy   t will read

     'I think that every boy_j will read his_j BOOK.'

d. **??**Ik had [DP Zijn_j BOEK]_i gedacht [CP dat iedere jongen_j t_i zou lezen].

     I had   his book   thought   that every   boy t would read

     'I had thought that every boy_j would read his_j BOOK.'

These examples above show the reconstruction property of Dutch LDS both for anaphor binding, i.e. (33a) and (33b), and variable binding, i.e. (33c) and (33d), which are a property of typical A'-movement such as wh-movement. For anaphor binding, although the LDS case is slightly more marginal, both LDF and LDS are grammatical. This fact indicates that the displaced element is reconstructed below in its in-situ position and is bound by the antecedent 'Jan'[36]. The same is true for (33c). On the other hand (33d) is considered as quite marginal, or even ungrammatical by the informants. However I consider it is still grammatical, since the example is claimed to be better if focal stress falls on 'his', or 'own' is inserted between 'his' and 'book'. The following examples examine the obligatory reconstruction property of A'-movement.

(34) a. ***[DP Een BOEK over Jan_j]_i denk ik [CP dat hij_j t_i zal lezen].

        a   book about Jan   think I   that he   t will read

     'I think that he_j will read a BOOK about Jan_j.'

b. ***Ik had [DP Een BOEK over Jan_j]_i gedacht [CP dat hij_j t_i   zou lezen][37].

     I had   a book about Jan   thought   that he t would read

     'I had thought that he_j would read a BOOK about Jan_j.'

The two examples above exhibit cases where the obligatory reconstruction occurs. This is a property of an A'-movement. Since the displaced element is reconstructed in the lower in-situ position, the R-expression 'Jan' is bound by the coindexed pronoun in its domain. This causes a violation of Binding Principle C, which requires R-expression such as 'Jan' should be free in

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[36] In the light of Copy Theory, the higher copy is deleted and only the lower copy becomes visible at LF.

[37] These two examples are actually accepted by some informants. However I consider this is not the case, since first of all they claim these sentences are ungrammatical if the DP is not 'a BOOK about Jan' but 'Jan's BOOK' and secondary, except for these two, their intuition indicates A'-movement properties of LDS and LDF in all the other diagnostic tests.

its domain. As Barbiers (2002) observed, LDS and LDF are sensitive to Island Constraints.

(35) a.   *[DP Twee BOEKEN]i ontmoet ik [DP-ISL iemand [CP die ti zal lezen.]

two   books   meet   I   someone   who t will read

'I meet someone who will read two BOOKS'.

   b.   *Ik had [DP Twee BOEKEN]i iemand ontmoet [DP-ISL die ti zou   lezen.]

I had   two   books   someone   met   who t would read

'I had met someone who would read two BOOKS'.

   c.   * [DP Twee BOEKEN]i   vraag ik   me   af [WH-ISL waar Jan ti zal lezen.]

two   books   wonder I Reflex Prefix   where Jan t will read

'I wonder where Jan will read two BOOKS.'

   d.   *Ik had   me [DP twee BOEKEN]i afgevraagd [WH-ISL waar Jan ti zou   lezen.]

I had Reflex   two   books   Prefix-wondered   where Jan t would read

'I had wondered who would read two BOOKS.'

The sensitivity to Complex DP Island in (35a) and (35b) and to Wh-Island in (35c) and (35d) indicate both LDS and LDF are an A'-movement in Dutch, as observed in Barbiers (2002). To summarize, all the diagnostic tests above show that Dutch LDS and LDF are both an A'-movement.

Now I look at Japanese LDS and LDT. I expect this will be an A'-movement. This is true according to the following examples. First the two examples in (36a) and (36b) examine reconstruction property for anaphor binding and the following two examples (36c) and (36d) for variable binding. The last two examples (36e) and (36f) exhibit the parasitic gap licensing, which again is a property of an A'-movement. See the examples:

(36) a.   [DP Zibunj-nitsuite-no   dono hon-o]i Taro-ga [CP Jiroj-ga ti yonda ka]

himself-about-Gen which book-Acc Taro-Nom Jiro-Nom t read   Q

shiritagatteiru koto.[38]

want to know   fact

'The fact that Taro wants to know which book about himselfj Jiroj read.'

   b.   [DP Zibunj-nitsuite-no hon-wa]i   Taro-ga [CP Jiroj-ga ti yonda to]   omotteiru koto.

himself-about-Gen book-Top Taro-Nom   Jiro-Nom t read Comp   think   fact

'The fact that, as for a book about himselfj, Taro thinks that Jiroj read.'

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[38] . Below all the examples comparing LDS with topicalisation are modified to become a subordinate clause putting 'koto (=fact)' at the end of the sentence due to the fact a topicalised element behaves differently in matrix clauses.

c. [DP Zibunj-no   dono hon-o]i   Taro-ga [CP subete-no shonenj-ga ti yonda ka]
   himself-Gen which book-Acc Taro-Nom   every   boy-Nom   t read   Q
   shiritagatteiru koto.
   want to know   fact
   'The fact that Taro wants to know which of his ownj books every boyj read.'
d. [DP Zibunj-no   hon-wa]i   Taro-ga [CP subete-no shonenj-ga ti yonda to]
   himself-Gen book-Top   Taro-Nom   every   boy-Nom t   read Comp
   omotteiru koto
     think   fact
   'The fact that, as for his ownj book, Taro thinks that every boyj read.'
e. [DP Dono hon-o]i   Taro-ga [PP Jiro-ga *ei* yomu mae-ni] [Saburo-ga   ti yonda
     which book-Acc Taro-Nom Jiro-Nom e read   before Saburo-Nom t   read
     ka] shiritagatteiru koto.
     Q   want to know   fact
   'The fact that Taro wants to know which book Suburo read before Jiro reads (it).'
f. [DP sono hon-wa]i   Taro-ga [PP Jiro-ga *ei* yomu mae-ni] [CP Saburo-ga   ti yonda
     that book-Acc   Taro-Nom Jiro-Nom e read   before   Saburo-Nom t read
     to] omotteiru koto.
   Comp   think   fact
   'Taro thinks that Suburo read THAT BOOK before Jiro reads (it).'

As the first two examples (36a) and (36b) indicate, both movement operations can be reconstructed in in-situ position at LF for anaphor binding. The same is true for variable binding as in (36c) and (36d). Finally both operations can license parasitic gap, which exhibits an A'-movement property. All the examples in (36) suggest LDS and LDT are an A-movement. The following four examples in (37) also indicate this is the case:

(37) a.   *[DP Jiroj-nitsuite-no   dono hon-o]i   Taro-ga [CP karej-ga ti yonda ka]
           Jiro-about-Gen which book-Acc Taro-Nom   he-Nom   t read   Q
         shiritagatteiru koto.
           want to know fact
         'The fact that Taro wants to know which book about Jiroj hej will read.'
   b.   *[DP Jiroj-nitsuite-no   hon-wa]i Taro-ga [CP karej-ga ti yonda to] omotteiru koto
           Jiro-about-Gen book-Acc   Taro-Nom   he-Nom t   read Comp think   fact
         'The fact that, as for a book about Jiroj, Taro thinks that hej will read.'
   c.   *[DP Darej-o]i Taro-ga [CP karej-no haha-ga   ti aisiteiru ka] shiritagatteiru koto
           Who-Acc Taro-Nom he-Gen mother-Nom   t   love   Q   want to know fact
         'The fact that Taro wants to know whomj hisj mother loves.'

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d.   *[DP Jiro_j-wa]_i Taro-ga [CP kare_j-no haha-ga   t_i aisiteiru to] omotteiru koto
        Jiro-Acc Taro-Nom   he-Gen mother-Nom t   love   Comp think   fact
      'The fact that Taro wants to know whom_j his_j mother loves.

In (37a) and (37b), both scrambled and topicalized elements are obligatorily reconstructed in their in-situ positions at LF and R-expression 'Jiro' is bound by its coindexed pronoun in its domain. This leads the sentence to the violation of Binding Principle C since it requires that R-expressions must be free in its domain. This is again a property of typical A'-movement. The following two cases (37c) and (37d) exhibit WCO violation, where the DPs move across their coindexed pronoun. So far, all diagnostic tests indicate Japanese LDS and LDF are A'-movement. From this point, I expect that Japanese LDS and LDF are sensitive to Island Constraints as an example of A'-movement.

(38) a.   [DP Dono hon-o]_i   Taro-ga [DP-ISL [CP Jiro-ga t_i yonda ka]-ni-tsuite-no houkokusho-o]
             which book-Acc Taro-Nom   Jiro-Nom t read   Q   about-Gen   report-Acc
           dashita koto
           submitted fact
           'The fact that Taro submitted a report about which book Jiro read.'
     b.   [DP Sono hon-wa]_i Taro-ga [DP-ISL [CP Jiro-ga t_i yonda to] houkokusho-o] dashita koto
             that book-Top Taro-Nom   Jiro-Nom t read Comp report-Acc   submitted fact
           'The fact that, as for that book, Taro submitted a report that Jiro read.'
     c.   [DP Dono hon-o]_i   Taro-ga [WH-ISL Jiro-ga   doko-de   t_i yonda ka]
             which book-Acc Taro-Nom   Jiro-Nom where-Loc t   read   Q
           shiritagatteiru koto
           want to know   fact
           'The fact that Taro wants to know where Jiro read which book.'
     d.   [DP Sono hon-wa]_i   Taro-ga [WH-ISL Jiro-ga   doko-de   t_i yonda ka]
             that book-Top   Taro-Nom   Jiro-Nom where-Loc t   read   Q
           shiritagatteiru koto
           want to know   fact
           'The fact that, as for that book, Taro wants to know where Jiro read.'

As we have seen in 1.3, Japanese LDS and LDT are not sensitive to the Island Constraint effect. This result contradicts what I have found above, where Japanese LDS and LDT have clearly exhibited A'-properties. In (38a) and (38b), the scrambled and topicalised DPs are extracted out of the embedded clause contained in the Complex DPs without any problem. Moreover the scrambled and topicalised DPs in (38c) and (38d) are also extracted out of the Wh-Island and it is still grammatical. I assume these results are due to the fact that Japanese is a head-final language, where a head of CP or DP comes at the end and scrambled elements

do not have to cross those heads[39]. I suppose Island Constraints should not be a good diagnostic test for languages such as Japanese.

3.4 How many clauses can LDS cross?

Here I examine in both languages how many clauses LDS and LDF/LDT can cross. As for Dutch I provide the following example where the scrambled element crosses two clauses.

(39) a. **?**[DP Twee BOEKEN]i denk ik [CP dat Wim zegt [CP dat Jan ti zal lezen.]]

           Two   books   think I   that Wim says   that Jan t will read.

    'I think that Jan says that Jan will read two BOOKS (and not two articles).'

   b. *****[DP Twee BOEKEN]i weet ik [CP dat Wim zegt [CP dat Jan ti zal lezen.]]

           Two   books   know I   that Wim says   that Jan t will read.

    'I know that Wim says that Jan will read two BOOKS (and not two articles).'

   c. **??**Ik had [DP Twee BOEKEN]i gedacht [CP dat Wim zei [CP dat Jan ti   zou lezen.]]

          I had   Two   books   thought   that Wim said   that Jan t would read.

    'I had thought that Wim said that Jan would read two BOOKS (and not two articles).'

Some informants hesitate to allow the sentence (a), so I put '?' in front of it. However all of them claim this sentence is better than (b), which is ungrammatical since LDS cannot be extracted out of factive clauses such as this (Barbiers 2002). The same is true for (c), which is quite hard to accept but still better than ungrammatical examples. From this aspect I conclude that crossing more than two clauses is possible for Dutch LDS and LDF, though it becomes harder to process when the number of clauses increases. Now I turn to Japanese LDS and topicalisation. See the following examples:

(40) a. **??**[DP Dono hon-o]i   Taro-ga [CP Jiro-ga [CP Saburo-ga   ti yonda ka] shiritagatteiru

          which book-Acc Taro-Nom Jiro-Nom   Saburo-Nom t   read   Q   wants to know

    to]   omotteiru koto

    Comp   think   fact

    'The fact that Taro thinks that Jiro wants to know which book Saburo read.'

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[39] Another possibility is as follows: Japanese allows two or more elements to be scrambled to the left periphery (Multiple scrambling). This could be parallel to some Slavic languages that allow two or more wh-elements to move up to the beginning of sentences. Some of those Slavic languages are assumed to have two or more Spec, positions for cyclic movement and multiple wh-movement is possible.

b. **?**[DP Sono hon-wa]ᵢ   Taro-ga   [CP Jiro-ga [CP Saburo-ga   tᵢ yonda to]   itta   to]
        that book-Top   Taro-Nom   Jiro-Nom   Saburo-Nom t   read Comp said Comp
    omotteiru koto
        think   fact
    'The fact that, as for that book, Taro thinks that Jiro said which book Saburo read.'

c. **??/***[DP Dono hon-o]ᵢ Taro-ga [CP Jiro-ga [CP Saburo-ga [CP Shiro-ga tᵢ yonda ka]
        which book-Acc Taro-ga   Jiro-Nom   Saburo-Nom Shiro-Nom t read   Q
    shiritagatteiru to]   kangaeteiru to] omotteiru koto
    want to know Comp   consider Comp] think   fact
     'The fact that Taro thinks that Jiro considers that Saburo wants to know which book
     Shiro read.'

In the first two examples (40a) and (40b) respectively scrambled and topicalised elements
cross two clauses. Moreover the example (40c) shows the case where the scrambled element
crosses three clauses. In contrast to Dutch, Japanese subordinate CPs are embedded between
the subject and the verb in a higher clause. Therefore multiple embedding as in the examples
above yields a sequence of subjects and then a sequence of verbs, which makes processing of
such a sentence much more difficult than the Dutch counterparts. However from the fact that
the degree of grammaticality from (40a) and (40c) differs, I claim that LDS in Japanese can
cross more than two clauses, although it becomes harder to process.

3.5 Which element can be subject to LDS in both languages

As we have seen in 1.2, a target of local scrambling in Dutch is restricted to definite DPs
(generalised quantifier type). In this paragraph I explore further what sort of DPs can be
subject to LDS and LDF/LDT in both Dutch and in Japanese. First of all, I examine
R-expressions (3.5.1) and then anaphora and pronouns (3.5.2). Then I turn to definite DPs
(3.5.3) and indefinite DPs/quantified DPs (3.5.4).

3.5.1 R-expressions

Let's begin with R-expressions. The following examples are used to examine whether or not
R-expressions can be subject to LDS and LDF in Dutch:

(41) a.   [DP WIM (en MARIE)]$_i$ denk ik [CP dat Jan t$_i$ zal ontmoeten.]^{40}

           Wim (and Marie$_i$) think I   that Jan t will   meet

    'I think that Jan will meet WIM (and MARIE) (and not Jaap and Janneke)'

  b.   **??**Ik had [DP WIM (en MARIE)]$_i$ gedacht [CP dat Jan t$_i$ zou ontmoeten.]

         I   had   Wim (and Marie$_i$)   thought   that Jan t would   meet

    'I had thought that Jan would meet WIM (and MARIE) (and not Jaap and Janneke)'

(41a) is an example of LDF and (41b) is one of LDS. All the informants claim the former is grammatical. In contrast, only two informants out of five accept the latter as grammatical. However here I assume (41b) is still grammatical due to the following two reasons: (i) the informants who claim (41b) is ungrammatical, tend to have difficulties to accept LDS sentences generally and (ii) one of them claims (41b) is better than ungrammatical examples such as Complex DP Island violation^{41}.

Here I turn to the Japanese cases. As for Japanese LDS, I cannot use the typical LDS case, which shows the radical reconstruction property, since this construction requires scrambled elements to be wh-phrase and not R-expressions. So, I provide the examples as follows:

(42)   A: Saburo-ni-tsuite oshiete kudasai.

       'Tell me about Saburo, please.'

  a.   B: [DP Saburo-wa]$_i$ Taro-ga [CP Jiro-ga   t$_i$ naguru to] omotteiru (koto).

           Saburo-Top Taro-Nom   Jiro-Nom   t   hit Comp   think   fact

    '(The fact that,) as for Saburo, Taro thinks that Jiro hits.'

  b.   B: [DP Saburo-o]$_i$ Taro-ga [CP Jiro-ga   t$_i$ naguru to] omotteiru (koto).

           Saburo-Acc Taro-Nom   Jiro-Nom t   hit Comp   think   fact

    '(The fact that) Taro thinks that Jiro hits Saburo.'

Given A's utterance, the displaced R-expression 'Saburo' is a topic of the sentences in (42a) as

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[40] Both 'WIM' and 'WIM en MARIE (Jan and Marie)' are controlled by the Dutch informants, since in the case where 'JAN' is scrambled out of the embedded clause it is hard to distinguish whether 'JAN' is the subject or object of the sentence and the result would be affected by it. However in both cases the informant rejected the sentences.

[41] Some informants claim R-expression such as Max Havelaar, the title of 19th century Dutch book fits better with the structure than 'Wim en Marie'. Here I assume one of such factors indicates how well scrambled elements is identifiable. In 4.3.3. DPs with the definite article are allowed to be scrambled when you can directly point out the very reference. In this case the interpretation of the sentence will be exhaustive i.e. 'X and only X'. This is somewhat parallel to the fact that Max Havelaar is a well known book title and therefore is easy to identify, while there are of course more than one Jan and Marie and it is then relatively difficult to identify them without further information.

well as in (42b). As a result, 'Saburo' in (42a) undergoes topicalisation and thus carries the topic marker 'wa'. In contrast, 'Saburo' in (42b) is extracted out of the embedded clause, but has no topic marker, while it is a topic according to the context. So, here I consider this movement is neither topicalisation nor focal movement, but LDS. Both operations in (42a) and (42b) allow the R-expression to be extracted out of the embedded clause without any problem.

To summarize, both LDS and LDF/LDT in both languages allow the R-expression to undergo those operations.

3.5.2 Pronouns and anaphors

Here I will examine anaphora and pronouns whether they are subject to LDS compared to LDF. I begin with the pronouns. See the following examples:

(43) a.　**?**[DP MIJ / JOU]i denk ik [CP dat Jan ti zal ontmoeten.]
　　　　　　　me / you　think I　　that Jan t will　meet
　　　　'I think that Jan will meet ME / YOU (and not him or her).'
　　b.　**??**Ik had [DP MIJ / JOU]i gedacht [CP dat Jan ti zou ontmoeten.]
　　　　　I　had　　me / you　　thought　that Jan t would　meet
　　　　'I had thought that Jan would meet ME / YOU (and not him or her).'
　　c.　[DP DAT]i denk ik [CP dat Jan ti zal lezen.]
　　　　　　That think I　　that Jan t will read.
　　　　'I think that Jan will read THAT (and not this).'
　　d.　**?**Ik had [DP DAT]i gedacht [CP dat Jan ti zou lezen.]
　　　　　I had　　that　thought　that Jan t would read.
　　　　'I had thought that Jan would read THAT (and not this).'

The examples (43a) and (43c) are Dutch LDF cases, while (43b) and (43c) are LDS cases. The first two examples show the case where the first- and the second-person singular pronouns in the accusative Case are displaced. The LDS case is less acceptable. The following two examples show the displacement of 'dat (=that)', which is a stressed variant of 'het (=it)'. The informants claim the latter two examples are easier to accept than the first two, although these examples are also grammatically possible. Now I turn to the anaphor cases. See the following examples.

(44) a.　[DP ZICHZELF]i denk ik [CP dat Jan ti zal bekritiseren.]
　　　　　　　himself　　think I　　that Jan t will　criticise
　　　　'I think that Jan will criticise HIMSELF.'

b. **??**Ik had [DP ZICHZELF]i gedacht [CP dat Jan ti zou bekritiseren.]

     I had himself thought that Jan t would criticise.

'I had thought that Jan would criticise HIMSELF.'

For LDF, it yields no problem to extract an anaphor out of embedded clauses as shown in (44a). In contrast, most of the informants do not accept the sentence in (44b). However again they claim it is slightly better than ungrammatical examples. I again assume that the LDS of anaphora is possible.

Then I explore Japanese LDS and LDT. The examples are provided as follows:

(45)   A: Anata / kare-ni-tsuite oshiete kudasai.

        'Tell me about me / he, please.'

   a.   B: [DP Watashi / kare-wa]i Taro-ga [CP Jiro-ga ti naguru to] omotteiru koto.

          I / him-Top Taro-Nom Jiro-Nom t hit Comp think fact

       'The fact that, as for me / him, Taro thinks that Jiro hits.'

   b.   B: [DP Watashi / kare-o]i Taro-ga [CP Jiro-ga ti naguru to] omotteiru koto.

          me / him Taro-Nom Jiro-Nom t hit Comp think fact

       'The fact that Taro thinks that Jiro hits me / him.'

Both LDS and LDF accept pronouns to be subject to them. Then I look at the case of anaphora. See the following examples:

(46) a.   [DP Jibun-wa]i Taro-ga [CP Jiro-ga ti naguru to] omotteiru koto.

       himself-Top Taro-Nom Jiro-Nom t hit Comp think fact

       'The fact that, as for himself, Taro thinks that Jiro hits.'

   b.   [DP Jibun-o]i Taro-ga [CP Jiro-ga ti naguru to] omotteiru koto.

       himself-Acc Taro-Nom Jiro-Nom t hit Comp think fact

       'The fact that Taro thinks that Jiro hits himself.'

In this case there are no corresponding sentences that ask you to tell about the anaphor in (46a) and in (46b), so I use identical examples as in (45) for the descriptive purposes. Both sentences indicate that the anaphor 'jibun (=himself)' is accepted to undergo both LDS and LDT.

To summarize, both languages accept pronouns and anaphora as the target of LDS as well as LDF/LDT.

3.5.3 definite DPs with the definite article or the demonstrative.

Here I explore definite DPs whether they undergo LDS and LDF/LDT. For the Dutch examples I use DPs with the definite article, while for Japanese I use DPs with the demonstrative, since the latter does not have any articles. As for the Dutch language, see the following examples:

(47) a. [DP DIE TWEE BOEKEN]i denk ik [CP dat Jan ti zal lezen.]
          Those   two   books   think I   that Jan t will read.
        'I think that Jan will read THOSE TWO BOOKS.'
    b. **?**Ik had [DP DIE TWEE BOEKEN]i gedacht [CP dat Jan ti   zou lezen.]
          I had   those two   books   thought   that Jan t would read.
        'I had thought that Jan would read THOSE TWO BOOKS.'

Besides the familiar marginality for LDS in the Dutch language, those definite DPs can undergo both LDS and LDF. According to informants, this sentence is possible when (i) one can directly refer to 'the two books' with pointing out them or (ii) it is obvious in context that there are the other books contrasted with 'the two books'. The latter case is apparently inconsistent with the result in 3.1.2, where LDS is incompatible with old information, or topics, since 'the two book' is already known in the context. However see the following question-answer pair.

(48)   A: Wat denk je dat Jan zal lezen, die twee boeken of die drie kranten?
        'What do you think that Jan will read, those two books or those three papers?'

        B: [DP DIE TWEE BOEKEN]i denk ik [CP dat Jan ti zal lezen.]
              Those two   books   think I   that Jan t will read.
        'I think that Jan will read THOSE TWO BOOKS.'

So, the definitive DP 'the two books' in (48) is not a topic as in (47), but rather a contrastive focus and the contrastive set such as given in the question in (48) are formed contextually. Then this is consistent with what the informants claim. Now I turn to the Japanese example in (49):

(49)   A: Sono hon-ni-tsuite oshiete kudasai.
        'Tell me about that book, please.'

a. B: [DP Sono hon-wa]i   Taro-ga [CP Jiro-ga   ti yomu to] omotteiru koto.
          that book-Top Taro-Nom   Jiro-Nom t read Comp   think   fact
   'The fact that, as for that book, Taro thinks that Jiro reads.'

b. B: [DP Sono hon-o]i   Taro-ga [CP Jiro-ga   ti yomu   to] omotteiru koto.
          that book-Acc Taro-Nom   Jiro-Nom t   read Comp   think   fact
   'The fact that Taro thinks that Jiro reads that book.'

These examples are already examined in the course of this paper. As you see, definite DPs are subject to LDS and LDT in Japanese.

3.5.4 Indefinite DPs and quantified DPs

Finally I want to examine indefinite and quantified DPs whether or not they can undergo LDS and LDF/LDT. As we have already seen in 3.1.1, indefinite DPs can be subject to both operations. See the following examples in (50):

(50) a.   [DP TWEE boeken]i   denk ik [CP dat Jan ti zal lezen.]
              two   books   think I   that Jan t will read.
          'I think that Jan will read only TWO books (but not three or four).'

    b.   **?**Ik had [DP TWEE boeken]i gedacht [CP dat Jan ti   zou lezen.]
            I had   two   books   thought   that Jan t would read.
          'I had thought that Jan would read only TWO books (but not three or four).'

Both cases, LDF in (50a) and LDS in (50b), allow the indefinite DPs as their target. Now let's see what happens for quantified DPs as follows in (51):

(51) a.   [DP SOMMIGE boeken]i denk ik [CP dat Jan ti zal lezen.]
              Some   books   think I   that Jan t will read.
          'I think that Jan will read SOME books.'

    b.   **??**Ik had [DP SOMMIGE boeken]i gedacht [CP dat Jan ti zou   lezen.]
            I had   Some   books   thought   that Jan t would read.
          'I had thought that Jan would read SOME books.'

    c.   **?**[DP IEDER boek]i denk ik [CP dat Jan ti zal lezen.]
              Every book   think I   that Jan t will read
          'I think that Jan will read EVERY book.'

    d.   **??**Ik had [DP IEDER boek]i gedacht [CP dat Jan ti   zou lezen.]
            I had   every   book   thought   that Jan t would read.
          'I had thought that Jan would read EVERY book.'

The LDF cases in (51a) and (51c) are allowed as grammatical, although some informants hesitate to accept (51c). In contrast, in (51b) and in (51d), the LDS cases, are evaluated as quite marginal, although they are claimed to be much better than the cases where quantified DPs are extracted out of factive clauses, which is ungrammatical. So, I conclude that Dutch LDS and LDT allow both indefinite DPs and quantified DPs to undergo those operations.

Now let's turn to Japanese LDS and LDT. Since Japanese has neither the definite nor the indefinite article, I use bare DPs, which usually are interpreted as indefinite DPs, DPs with 'some / a certain', DPs quantified with the numeral classifier and DPs with quantifier 'every/all'. First I provide the following examples.

(52)   A: Taro-ga Jiro-ga nani-o yonda to omotteiru no?
        'What does Taro think that Jiro read?'

   a.   B: Taro-ga [CP Jiro-ga   kino   [DP Hon-o] yonda to]   omotteiru (koto)[42].
        Taro-Nom Jiro-Nom yesterday book-Acc read Comp   think   fact
        'Taro thinks that Jiro read (a) book yesterday.'

   b.   **?**B: [DP Hon-o]i   Taro-ga [CP Jiro-ga   kino   ti yonda to] omotteiru (koto).
        (a) book-Acc Taro-Nom   Jiro-Nom yesterday t read Comp   think   fact
        'Taro thinks that Jiro read (a) book yesterday.'

   c.   **?**B: [DP Aru hon-o]i   Taro-ga [CP Jiro-ga   kino   ti yonda to]   omotteiru (koto).
        some book-Acc Taro-Nom   Jiro-Nom yesterday t read Comp   think   fact
        'Taro thinks that Jiro read some book yesterday.'

   d.   **?**B:[DP Hon-o nan-satsuka]i Taro-ga [CP Jiro-ga   kino   ti yonda to] omotteiru (koto)
        book-Acc   Some-CL   Taro-Nom Jiro-Nom yesterday t read Comp   think   fact
        'Taro thinks that Jiro read some books yesterday.'

   e.   **?**B:[DP Zenbu-no   hon-o]i   Taro-ga [CP Jiro-ga   kino   ti yonda to] omotteiru (koto)
        Every-Gen book-Acc Taro-Nom Jiro-Nom yesterday t read Comp   think   fact
        'Taro thinks that Jiro read every book yesterday.'

Given A's question, the target DPs are all 'new information', i.e. foci in B's answers. In (52a), the unscrambled bare DP 'hon (=book)' occupies the preverbal new information focus position. As a result, this sentence fits well to the question. In (52b), the bare DP has left from the new information focus position, which yields slight awkwardness. Since there is no semantic motivation for this movement, this is LDS. The same is true for (52c), (52d) and (52e). Besides

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[42] The time adverb 'kino (=yesterday)' is inserted to avoid the result that the DP 'Jiro' occupies the preverbal new information focus position in the scrambled sentences, since the DP is not new information.

the awkwardness in terms of information structure, the indefinite and quantified DPs are allowed to undergo LDS in Japanese. As for topicalisation, see the following examples in (53):

(53) a. [DP Hon-wa]i   Taro-ga [CP Jiro-ga   kino   ti yonda to] omotteiru koto.
        (a) book(s)-Top Taro-Nom   Jiro-Nom yesterday t read Comp think   fact
        'The fact that, as for books, Taro thinks that Jiro read yesterday.'

    b. ??[DP Aru hon-wa]i   Taro-ga [CP Jiro-ga   kino   ti yonda to]   omotteiru koto.
          some book-Top Taro-Nom Jiro-Nom yesterday t read Comp   think   fact
        'The fact that, as for some book, Taro thinks that Jiro read yesterday.'

    c. ??[DP Hon-wa nan-satsuka]i Taro-ga [CP Jiro-ga   kino ti yonda to] omotteiru koto
          book-Top   Some-CL   Taro-Nom Jiro-Nom yesterday t read Comp   think   fact
        'The fact that, as for some books, Taro thinks that Jiro read yesterday.'

    d. [DP Hon-wa]i Taro-ga [CP Jiro-ga   kino   ti nan-satsuka yonda to] omotteiru koto
        book-Top Taro-Nom Jiro-Nom yesterday t   Some-CL   read Comp   think   fact
        'The fact that, as for books, Taro thinks that Jiro read some yesterday.'

    e. [DP Zenbu-no   hon-wa]i   Taro-ga [CP Jiro-ga   kino   ti yonda to] omotteiru koto
        Every-Gen book-Top Taro-Nom Jiro-Nom yesterday t read Comp   think   fact
        'The fact that, as for every book, Taro thinks that Jiro read yesterday.'

In (53a), topicalisation of the bare DP is allowed, while the sentences in (53b) and (53c) are quite marginal. The marginality of (53b) indicates indefinite DPs such as 'some book' are semantically incompatible with topicalisation, which picks up contextually know items. However, this sentence is acceptable, when the topic is a comtrastive topic, i.e. contextually given/old information provided with the contrastive set including it. Thus, I conclude indefinite DPs are syntactically compatible with topicalisation. The latter indicates the numeral classifier cannot be pied-piped with a topicalised phrase, which is clearly different from the LDS counterpart. (53d) shows topicalisation is possible in this case, when the classifier is left in its in-situ position. In (53e), the quantified DP can be topicalised. Since the quantified DP such as 'every book' in (53e) is grammatical, I assume the marginal result of (53c) is due to the pied-piping of the classifier, but topicalisation of quantified DPs itself is allowed.

To summarise, in this chapter I have seen what sort of elements can be subject to LDS and LDF/LDT operation in Dutch and in Japanese. As for Dutch operations, both LDS and LDF show similar properties in all the aspects I have examined. In both operations only stressed contrastive foci are allowed to undergo these operations. In terms of Information Structure, thus contrastive focus cases fit the best both with LDS and LDF, while both normal and contrastive topic cases sound awkward in the context. Moreover both operations show A'-movement properties and thus sensitive to Island Constraints. They can cross more than

two clauses, although the more the clauses, the harder to process the sentences. Finally as for target elements, R-expressions, anaphora, pronouns, definite DPs, indefinite DPs and quantified DPs are all allowed to undergo LDF and LDS.

As for Japanese, both operations, LDS and LDT can be displaced without carrying focal stress and thus there are no restrictions such as in the Dutch language. As for Information Structure, the two operations indicate different properties. However this is mainly due to the difference of semantic import, e.g. topicalisation fits naturally with topic cases, while LDS does not etc. Furthermore, both operations indicate A'-properties of movement in terms of reconstruction and WCO. However they are not sensitive to Island Constraints. I assume this is due to other reasons. Finally I examine them in terms of target elements of the two operations as Dutch cases. There are no restrictions on elements which undergo the two operations, except for some minor differences for instance that the numeral classifier cannot be pied-piped with topicalised elements. Besides the radical reconstruction property of LDS and the unclear semantic effect, LDS in Japanese is quite similar to topicalisation. These results are summarised in tables in the following chapter.

4. Conclusion

In this chapter I draw a conclusion from the comparison in chapter 3. Then I try to answer the question: Where is the landing site of LDS?

4.1.1 Comparison of Dutch LDS and LDF

Before I draw a conclusion, let's see the overview of the results of the previous chapter. First of all, I provide the result of comparison between Dutch long distance focal movement and LDS in the following table 1.

DUTCH	LDF (focal movement)	LDS
Stress	required	required
Foci	only contrastive Foci	only contrastive Foci
Topics	incompatible	incompatible
Landing Site (A or A')	A'-position	A'-position
Island Constraints	sensitive	sensitive
LDS across more than two clauses	possible to cross more than two clauses	possible to cross more than two clauses
Subject of LDF/LDS		
E-expressions	possible	difficult, but possible
Pronouns	possible, especially stressed pronouns 'dat' and 'die'	difficult, but possible, especially stressed pronouns 'dat' and 'die'
Anaphora	possible	difficult, but possible
Definite DPs	possible	possible[43]
Indefinite DPs	possible	possible
Quantified DP	Existential Quantifier: possible Universal Quantifier: possible	Existential Quantifier: difficult, but possible Universal Quantifier: difficult, but possible

Table 1: Comparison of LDS and LDF in Dutch

As you see in the table, Dutch LDS has almost the same properties as LDF in terms of the aspects in the left column, although LDS is less acceptable than focal movement in most cases. In addition LDS has an obvious semantic contribution to the sentences[44]. Moreover in

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[43] In both operations, displacement of definite DPs is possible, when they are interpreted as contrastive focus, as I have indicated in 3.3.4.

[44] However given that the contrastive focus is available in its in-situ position with focal stress,

contrast to the fact that Dutch clause-internal scrambling restricts its target to definite DPs, no such a restriction is observed in Dutch LDS. From these aspects, I conclude the Dutch LDS observed in Barbiers (2002) is a sort of LDF.

4.1.2 Comparison of Japanese LDS and LDT

Now I look at the Japanese cases of topicalisation and LDS which are presented in the following table 2:

JAPANESE	LDT (topicalisation)	LDS
Stress	not required	not required
Foci	incompatible	possible with stress
Topics	possible	difficult, but possible
Landing Site (A or A')	A'-position	A'-position
Island Constraints	not sensitive / not observed	not sensitive / not observed
LDS across more than two clauses	possible to cross more than two clauses	possible to cross more than two clauses
<u>Subject of LDF/LDS</u>		
E-expressions	possible	possible
Pronouns	possible	possible
Anaphora	possible	possible
Definite DPs	possible	possible
Indefinite DPs	possible	possible
Quantified DP	Existential Quantifier: possible Universal Quantifier: possible	Existential Quantifier: possible Universal Quantifier: possible

Table 2: Comparison of LDS and LDT in Japanese

Besides the radical reconstruction property, LDS shows almost the same properties as LDT in all aspects given above, except for compatibility of foci and topics. Given the arguments against the radical reconstruction in LDS (Nishiguchi 2002; Miyagawa 2006) as in paragraph 2.1, I conclude LDS in Japanese is a sort of the long distance fronting including LDT.

However the following question is still left behind: Given that LDS is compatible with topics without the topic marker, what semantic feature triggers the movement? I leave this question

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it is not clear whether this semantic contribution triggers the movement.

open for further research.

4.1.3 Comparison of Dutch and Japanese LDS

Finally I compare the LDS of Dutch with the LDS of Japanese. See the following table 3:

	DUTCH LDS	JAPANESE LDS
Stress	required	not required
Foci	only contrastive Foci	possible with stress
Topics	incompatible	difficult, but possible
Landing Site (A or A')	A'-position	A'-position
Island Constraints	sensitive	not sensitive / not observed
LDS across more than two clauses	possible to cross more than two clauses	possible to cross more than two clauses
Subject of LDF/LDS		
E-expressions	difficult, but possible	possible
Pronouns	difficult, but possible, especially stressed pronoun 'dat' and 'die'	possible
Anaphora	difficult, but possible	possible
Definite DPs	possible	possible
Indefinite DPs	possible	possible
Quantified DP	Existential Quantifier: difficult, but possible Universal Quantifier: difficult, but possible	Existential Quantifier: possible Universal Quantifier: possible

Table 3: Comparison of Dutch and Japanese LDS

Besides the fact that Dutch LDS allows only contrastive foci with focal stress and that Japanese LDS is not sensitive to Island Constraints, these scrambling operations in both languages are similar to each other. This is consistent with the observation that Dutch as well as Japanese LDS have similar properties to their long distance fronting operations.

From these aspects and the conclusions in 4.1.1 and 4.1.2, I conclude the Dutch and Japanese LDSs are not a special phenomenon, but a sort of a long distance fronting operation.

4.2 Where is the landing site of LDS?

Finally, I explore where is the landing site of LDS in Japanese as well as in Dutch.

As for Japanese LDS, I claim the landing site is some A'-position in the left periphery. First of all, as indicated in (54), the scrambled element 'book' precedes the sentential adverb 'fortunately'

(54)　　　　Hon-o$_i$　saiwai　　Taro-ga [$_{CP}$　Hanako-ga t$_i$　katta　to] omotteiru.

　　　　　　book-Acc fortunately Taro-Nom　Hanako-Nom t bought Comp think

　　　　　　'Fortunately Taro thinks that Hanako bought a book.'

Given that the sentential adverb modifies IPs, this type of adverbs should appear higher than the clause-internal periphery, which is located between VP and IP. Consequently the landing site of LDS as in (54) should be higher than the lower periphery. From this point, it is natural to assume the landing site is located in the left periphery.

However it is difficult to specify where exactly is the landing site within the left periphery. Within the framework of Rizzi (1997), the movement to the left periphery is driven by semantic/pragmatic feature on the head of FP such as the focus or topic feature. Given that this approach is on the right track, one has to specify what sort of a semantic/pragmatic feature attracting Japanese LDS. However as I mentioned in paragraph 4.1.2, it is not clear what sort of sementic/pragmatic motivations trigger LDS in Japanese.

From these points I merely assume that the landing site of LDS in Japanese is a specifier poisition of some FP in the left periphery.

In contrast, Dutch LDS has a clear semantic motivation: the scrambled element is interpreted as a contrastive focus. Within the framework of Rizzi, a focal movement is motivated by the focus feature on FocP. Thus I assume that the landing site of the scrambled element in LDS is a specifier position of FocP. Then the remaining question is whether or not such a FocP is located in the left periphery or in the clause-internal periphery.

In 2.3.1, I assumed that the root finite verb occupies the head of FinP in the left periphery. See the following example (55). (55b) and (55c) are the examples from Barbiers (2001).

(55) a.　**?** Ik had [$_{DP}$ een BOEK]$_i$ gedacht [$_{CP}$ dat Jan t$_i$　zou　kopen].

　　　　　 I　had　　a　book　　thought　　that Jan t　would buy

　　　　　'I had thought that Jan would buy a BOOK.'

　　b.　**?** Ik had niet [$_{DP}$ in de　TUIN]$_i$ gedacht [$_{CP}$ dat het feest t$_i$　zou zijn].

　　　　　 I had not　　in the garden thought　　　that the party t would be

　　　　　'I had not thought that the party would be in the GARDEN.'

c.　*　Ik had [DP in de　TUIN]i niet gedacht [CP dat het feest ti　zou zijn].

　　　I had　　　in the garden　　not　　thought　　that the party t would be

Given the assumption that the root finite verb is in the head of FinP, the scrambled DP 'a book' in (55a) occupies some A'-position lower than the FinP. Consequently the landing site of LDS should be a Spec, FocP in the clause-internal periphery. The examples from Barbiers (2002) as in (55b) and (55c) also support this view. The latter two examples exhibit the scrambled element occupies a position even lower than NegP. From all these aspects, I conclude that the landing site of the scrambled element in Dutch LDS is a Spec, FocP in the clause-internal periphery.

5. Literature

Bailyn, John. F. 2001. On scrambling: A reply to Bošković and Takahashi. *Linguistic Inquiry*, 32 (4): 635-358.

Bailyn, John. F. 2002. Generalized inversion. Unpublished MS, State University of New York, Stony Brook.

Bailyn, John. F. 2003. Does Russian Scrambling Exist? In Karimi, S. (ed.) *Word order and scrambling*. 156-176. Oxford: Blackwell.

Barbiers, Sjef. 2002. Remnant stranding and the theory of Movement. In Alexiadou, A., Anagnostopoulou, E., Barbiers, S. and Gärtner, H-M. (eds.) *Dimentions of Movement*. 47-67. John Benjamins Publishing Company: Amsterdam/Philadelphia.

Belletti, Adriana. (2001). Inversion as focalization. In *Subject Inversion in Romance and the Theory of Universal Grammar,* Aafke Hulk and Jean-Yves Pollock (eds.), 60–90. Oxford: Oxford University Press.

Belletti, Adriana. (2004). Aspects of the low IP area. In Rizzi, L. (ed.) *The Structure of IP and CP. The Cartography of Syntactic Structures, vol. 2*, New York: Oxford University Press.

Belletti, Adriana. (2005). Extended doubling and the VP periphery. *Probus*, 17: 1-35.

Benincà, Paola, and Cecilia Poletto. 2004. Topic, Focus and V2. In Rizzi, L. (ed.) *The Structure of CP and IP: The Cartography of Syntactic Structures*, vol 2. Oxford: Oxford University Press.

Bošković, Željko, and Daiko Takahashi 1998. Scrambling and Last Resort. *Linguistic Inquiry* 29:347–366.

Chocano, Gema. 2007. *Narrow Syntax and Phonological Form*. John Benjamins Publishing Company: Amsterdam/Philadelphia.

Chomsky, Noam. 1991. Some notes on economy of derivation and representation. In Freidin, R. (ed.) *Principles and Parameters in Comparative Grammar*, 417-454. Cambridge, Mass: MIT Press

Chomsky, Noam. 1993. A minimalist program for linguistic theory. In Hale, K. and Keyser, S. J. (eds) *The view from Building* 20: Essays in linguistics in honor of Sylvain Bromberger, 1-52. Cambridge, Mass.: MIT Press.

Chomsky, Noam. 1995. *The Minimalist Program*. Cambridge, Mass.: MIT Press.

Chomsky, Noam. 2000. Minimalist inquiries. In Martin, R., Michaels, D. and Uriagereka, J. (eds.) *Step by step: Essays on minimalism in honor of Howard Lasnik*, 89-155. Cambridge, Mass.: MIT Press.

Chomsky, Noam. 2001. Derivation by phase. In Kenstowicz, M. (ed.) *Ken Hale: A life in language*, 1-52. Cambridge, Mass.: MIT Press

Chomsky, Noam, and Morris Halle. 1968. *The sound pattern of English*. New York: Harper & Row, Publishers.

Chomsky, Noam and Howard Lasnik 1977. Filters and control. *Linguistic Inquiry* 8: 425-504

Cinque, Guglielmo. 1993. A null theory of phrase and compound stress. *Linguistic Inquiry* 24:239-298.

Cinque, Gugliermo. 1999. *Adverbs and functional heads*. Oxford: Oxford University Press.

De Hoop, Helen. 2003. Scrambling in Dutch: Optionality and Optimality. In Karimi, S. (ed.) *Word order and scrambling*. 201–216. Oxford: Blackwell.

Den Besten, Hans. 1983. The Verbal Complex in Continental West Germanic. In Abraham, W. (ed.) *On the Formal Syntax of the West Germania,* 155-216. John Benjamins, Amsterdam.

Deprez, Viviane. 1994. Parameters of object movement. In Cover, N. and van Riemsdijk, H. (eds.) *Studies on Scrambling. Movement and non-movement approaches to free-word-order phenomena*. 101-152. Berlin: Mouton de Gruyter.

É Kiss, Katalin. 1994. Scrambling as the base generation of random complement order. In Cover, N and van Riemsdijk, H. (eds.) *Studies on Scrambling. Movement and non-movement approaches to free-word-order phenomena*. 221-256. Berlin: Mouton de Gruyter.

É Kiss, Katalin. 1998. Discourse-configurationality in the languages of Europe. In Siewierska, A. ed. *Constituent Order in the Languages of Europe*. 681-729. Berlin: 245-273.

É Kiss, Katalin. 2003. Argument Scrambling, Operator Movement, and Topic Movement in Hungarian. In Karimi, S. ed. *Word order and scrambling*, 23-43. Oxford: Blackwell.

Fanselow, Gisbert. 1990. Scrambling as NP movement. In Grewendorf, G, and Sternefeld, W. (eds.) *Scrambling and Barriers*. 113-140. Amsterdam: John Benjamins.

Fiengo, Robert. 1977. On trace theory. *Linguistic Inquiry* 8:35–62.

Fukui, Naoki (1993) "Parameter and Optionality in a Grammar," *Linguistic Inquiry* 24, 399–420.

Gill, K.-H. and G. Tsoulas 2004. Peripheral Effects without Peripheral Syntax: The Left Periphery in Korean. In Adger, D., De Cat, C. and Tsoulas. (eds.) *Peripheries: Syntactic Edges and their Effects*. 121-142. Dordrecht: Kluwer.

Haegeman, Liliane. 1995. *The Syntax of Negation*, Cambridge University Press.

Haider, H. 1988. θ-tracking systems: Evidence from German. In Marácz, L, and Muysken, P (eds.) *Configurationality* 185-206. Dordrecht: Foris.

Hale, Ken. 1980. Remarks on Japanese phrase structure: Comments on the papers on Japanese syntax. In MIT working papers in linguistics 2: *Theoretical issues in Japanese linguistics*, 185-203. MITWPL, Department of Linguistics and Philosophy, MIT, Cambridge, Mass.

Hale, Ken. 1983. Warlpiri and the grammar of non-configurational languages. *Natural Language and Linguistic Theory*, 1: 5-47.

Halle, Morris and Jean-Roger Vergnaud. 1987. *An essay on stress*. Cambridge, MA: MIT Press.

Holmberg, Anders. 1986. Word order and syntactic features: In the Scandinavian languages and English. Unpublished doctral dissertation, University of Stockholm, Stockholm.

Ishihara, Shinichiro. 2001. Stress, focus, and scrambling in Japanese. In Guerzoni, E. and Matushansky, O. (eds.) *A few from Building 39: Papers in syntax, semantics and their interface*, 142–175. MIT Working Papers in Linguistics 39. Cambridge, Mass.: MIT, Department of Linguistics and Philosophy, MITWPL.

Ishii, Yasuo. 2001. Presuppositional Effects of Scrambling Reconsidered. COE International Symposium, Kanda University of International Studies.

Karimi, Simin. 1999. Specificity Effect: Evidence from Persian. *The Linguistic Review*, 16. 125-141.

Kim, A. H. O. 1988. Preverbal Focusing and Type XXIII Languages. In Hammond, M, Moravcsik, E, and Wirth, J. (eds.) Studies in Syntactic Typology. Amsterdam: John Benjamins, 147-172.

Kuroda, S.-Y. 1988. Whether we agree or not: A comparative syntax of English and Japanese. *Lingvistic Investigationes* 12:1–47.

Lasnik, Howard, and Mamoru Saito. 1999. On the subject of infinitives. In Lasnik, H. (ed.) *Minimal analysis*, 7–24. Oxford: Blackwell.

Lavine, James. 1998. The syntax of feature-checking, focus structure, and sentential stress. Paper presented at the annual conference of the American Association of Teachers of Slavic and East European Languages (AATSEEL), San Francisco.

Mahajan, Anoop. 1990. *The A/A-bar Distinction and Movement Theory*, PhD dissertation, MIT.

Mahajan, Anoop. 1994. Toward a unified theory of scrambling. In Karimi, S. (ed.) *Word order and scrambling*. 301-330. Oxford: Blackwell.

May, Robert. 1977. The grammar of quantification. Doctoral dissertation, MIT, Cambridge, Mass.

Miyagawa, Shigeru. 1997. Against optional scrambling. *Linguistic Inquiry* 28:1–26.

Miyagawa, Shigeru. 2001. EPP, scrambling, and *wh*-in-situ. In Kenstowicz, M. (ed.) *Ken Hale: A life in language*. 293–338. Cambridge, Mass.: MIT Press.

Miyagawa, Shigeru. 2003. A-movement scrambling and options without optionality. In Karimi, S. (ed.) *Word order and scrambling*. 177–200. Oxford: Blackwell.

Miyagawa, Shigeru. 2006. On the "Undoing" Property of Scrambling: A Response to Bošković. *Linguistic Inquiry* 37: 607–624

Müller, Gereon and Wolfgang Sternfeld. 1994. Scrambling as A-bar movement. In Cover, N and van Riemsdijk, H. (eds.) *Studies on Scrambling. Movement and non-movement approaches to free-word-order phenomena*. 331-385. Berlin: Mouton de Gruyter.

Nagahara, Hiroyuki. 1994. *Phonological phrasing in Japanese*. Ph.D. dissertation, University of California, Los Angels.

Neeleman, Ad. 1994. Scrambling as a D-structure phenomenon. In Cover, N and van Riemsdijk, H. (eds.) *Studies on Scrambling. Movement and non-movement approaches to free-word-order phenomena.* 387-429. Berlin: Mouton de Gruyter.

Neeleman, Ad and Tanya Reinhart. 1998. Scrambling and the PF interface. In Butt, M. and Gueder, W. (eds.) *The Projection of Arguments Lexical and Compositional Factors*, 309-353. Stanford, California: CSLI Publications.

Neeleman, Ad and Fred Weerman. 1999. *Flexible Syntax: A Theory of Case and Arguments.* Kluwer Academic Publishers. Dordrecht / Boston / London

Nishigauchi, Taisuke. 2002. Scrambling and reconstruction at LF. *Gengo Kenkyu* 121:49–105.

Cover, Nobert, and Henk van Riemsdijk 1994. *Studies on Scrambling. Movement and non-movement approaches to free-word-order phenomena.* Berlin: Mouton de Gruyter.

Reinhart, Tanya. 1981. Pragmatics and Linguistics: An analysis of Sentence Topics. Philosophica 27: 53-94

Reinhart, Tanya. 1995. *Interface strategies.* OTS Working Papers, Utrecht University.

Rizzi, Luigi. 1991. Residual verb second and the Wh criterion. *Technical Reports in Formal and Computational Linguistics* 2, University of Geneva.

Rizzi, Luigi. 1997. The fine structure of the left periphery. In Haegeman, L. (ed.) *Elements of Grammar: Handbook in Generative Syntax*, 281-337. Dordrecht: Kluwer Academic Publishers.

Rizzi, Luigi. (2004). Locality and the left periphery. In Belletti, A. (ed.) *Structures and Beyond. The Cartography of Syntactic Structures, vol. 3*, New York: Oxford University Press.

Ross, John R. 1967. Constraints on variables in syntax. Doctoral dissertation, MIT, Cambridge, Mass.

Saito, Mamoru. 1985. Some asymmetries in Japanese and their theoretical implications. Doctoral dissertation, MIT, Cambridge, Mass.

Saito, Mamoru. 1989. Scrambling as semantically vacuous A′-movement. In Baltin, M. R. and Kroch, A. S. (eds.) *Alternative conceptions of phrase structure*, 182–200. Chicago: University of Chicago Press.

Saito, Mamoru. 1992. Long distance scrambling in Japanese. *Journal of East Asian Linguistics* 1:69–118.

Saito, Mamoru and Hajime Hoji. 1983. "Weak Crossover and Move α in Japanese," *Natural Language and Linguistic Theory* 1, 245–259.

Selkirk, Elisabeth. 1995. Sentence prosody: Intonation, stress, and phrasing. In Goldsmith, J. A. (ed.) *The Handbook of Phonological Theory*, 550-569. London: Basil Blackwell.

Santorini, Beatrice. 1991. *Scrambling and INFL in German.* Unpublished MS, University of Pennsylvania, Philadelphia.

Strawson, P.F. 1964. Identifying Reference and Truth-Values. *Theoria* 30: 86-99.

Takahashi, Daiko. 1993. Movement of *wh*-phrases in Japanese. *Natural Language & Linguistic Theory* 11: 655–678.

Tsai, Wei-Tien Dylan. 1994. On nominal islands and LF extraction in Chinese. *Natural Language & Linguistic Theory* 12:121–175.

Watanabe, Akira. 1992. Subjacency and S-Structure movement of *wh*-in-situ. *Journal of East Asian Linguistics* 1:255–291.

Webelhuth, Gert. 1989. *Syntactic saturation phenomena and the modern Germanic languages*. Ph.D. dissertation, University of Massachusetts, Amherst.

Wyngaerd, Guido. vanden. 1989. Object shift as an A-movement rule. In Branigan, P., Gaulding, J., Kubo, M. and Murasugi, K. (eds.) MIT *Working Papers in Linguistics* 11: 256-271. Cambridge, MA: MITWPL.