

On Island Constraints and Violations*

LIN Hui, MENG Fan-mao

Linyi University, Linyi, China

There are some grammatical rules of pure syntactic restrictions on grammar rules of operation, a complex one of which is the fronting, i.e., extraction from the island. This paper centers on the “island” that is the terminology in syntactic theory, and mainly focuses on the definition, the types and the analyses of the “island”.

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Introduction

“Island” is the terminology in syntactic theory, which is the most important one of the grammatical rules of pure syntactic restrictions on grammar rules of operation that has been proposed since the 1960s. It is first proposed by Ross (1967), then developed by Chomsky et al, which was included into the framework of grammar binding (GB) generated in the 70s and 80s, forming the central part of the boundary theory (ZHANG, 2002). The Island condition refers to certain syntactic structures like isolated island, where components can not be extracted as at random as theme. Island constraints include: (1) Complex NP Constraint; (2) Sentential Subject clause Constraint; (3) Coordinate Structure Constraint; (4) WH-Island Constraint; (5) Left Branch Condition; (6) Adjunct Constraints; and (7) Non-bridge-verb Constraints.

Definition of An “Island”

An island is a term in syntactic theory. It refers to a clause or structure from which a word cannot be moved. Let’s look at the following English sentences first: (quoted from JIN, 1994)

Example (1) a. *Stuffed eggplant* Jill says she can’t stand. (Soames & Perlmutter, 1979)

b. *Phyllis* I don’t believe that Harold likes. (Ibid)

c. *That picture* no one is likely to buy from you. (Baker, 1997)

d. *That kind of thing* I don’t think I’d ever do. (Radford, 1981)

e. *These points* I’m going to ask Bill to make the old geezer take up later. (Ross, 1967)

Example (2) a. *Nobody* likes that man.

b. *That man*, nobody likes ____.

c. *That man*, John said that nobody likes ____.

d. *That man*, Mary believes John said nobody likes ____.

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LIN Hui, Class 6, Grade 2015, School of Foreign Languages, Linyi University.

MENG Fan-mao, Master, Professor, School of Foreign Languages, Linyi University.

e. *That man*, the newspaper said Mary believes John said nobody likes _____. (Culicover, 1982)

Example (3) a. *Those people* Sally said she had forgotten to tell Joe to remind Sue to invite _____.

b. *Those people* Sally said she had forgotten to tell Joe to remind _____ to invite Louise.
(Soames & Purlmutter, 1979)

In each of these sentences, there is an italicized part, which is moved to the left periphery of the sentence in order to be topicalized for the purpose of pragmatic function. Each of the blank in Example (2) and (3) indicates the empty trace left by the moved part.

But what do you think of it if someone vagariously wants to topicalize “Bob” from “That she knew Bob” in the following sentence?

Example (4) a. That she knew Bob bothered John.

a'. Bob that she knew bothered John.

* a". Who did that she knew bother John?

As is known to all, (4a') and (4a") are not acceptable, just because “That she knew Bob” is an island, and the sentential subject as in “That she knew Bob bothered John”, does not allow topicalizing or questioning of its internal object, that is to say, in such a case, some movement rule must be conformed to.

Types of Island Constraints in English

Island constraints are restrictions of movement rules by which some words or constructions or structures can't be moved out from islands. Ross (1967) develops the notion of syntactic “islands” whose constituents cannot be questioned or extraposed. While traditional accounts posit constraints on movement rules (“island constraints”) for this phenomenon, Goldberg (1995) attempts an explanation in terms of constructional mismatch: The sentential-subject construction and the interrogative construction are each associated with particular information structure properties. These properties clash in the starred sentence above and render it unacceptable. Goldberg also argues that “islands” are pragmatically backgrounded constructions that encode presupposed information. Hence, it is pragmatically anomalous to make these constructions prominent through questioning.

Since the notion of island constraints is raised on the basis of the English language, it is very necessary for us to revisit varieties of island constraints in English. The problem first springs up: how many types of island constraints are there in English according to those linguists? According to Ross (1967), English island constraints fall into the following seven categories:

Complex Noun Phrase Constraints

A complex noun phrase here refers to a construction with the structure of a noun which is followed by a relative clause or by an appositive clause, that is, “an antecedent + a relative clause” (as in (5a)) or “an antecedent + an appositive clause” (as in (6a)).

Example (5) a. Zhang San is the only person [**who knows that man**].

* b. That man, Zhang San is the only person [**who knows _____**].

Example (6) a. I don't believe the claim [**that Harold likes Phyllis**].

* b. Phyllis I don't believe the claim [**that Harold likes _____**].

In (5a) and (6a), the words in bold letters can't be topicalized as they are in the islands “who knows that man” and “that Harold likes Phyllis” respectively. Extraction can hardly occur out of such a clause that is

embedded under a noun. A complex noun phrase can be represented by:

Example (7) [NP...[S...]]

Sometimes, a relative clause or an appositive clause may involve an interrogative clause. It cannot be interpreted as a question in such a case. Many relative pronouns in English have the same form as the corresponding interrogative words (which, who, where, etc.), as is demonstrated in Example (5), but they are not really questions.

According to the rules of the topical-transformational theory, no sentence element can be moved out from a complex noun phrase construction because it is restricted to the noun phrase serving as antecedent. In contrast, extraction out of object clauses is easily possible (if those clauses are not embedded under nouns, as is shown in Example (8)).

Example (8) a. He told me that his mother is a teacher.

b. His mother, he told me, is a teacher.

Sentential Subject Constraints

A sentential subject refers to a clause which serves as subject. It can be expressed by (9):

Example (9) [S₁[NP[S₂]...]VP...[S...]]

Let's consider the following sentences first:

Example (10) a. [That Tom will marry Phyllis] is obvious.

* b. Phyllis that Tom will marry ____ is obvious.

Example (11) a. It is obvious [that Tom will marry Phyllis].

b. Phyllis it is obvious that Tom will marry ____.

It is obvious that, (10b) is not acceptable, while (11b) is accepted. This is because the nominal clause in Sentence (11a) is not the subject in the structure of tree diagram any longer after (10a) is converted to (11a) through extraposition. Only in such a case can "Phyllis" be moved to the left periphery to be topicalized. Accordingly, sentential subjects are also constrained structures. Ross (1967) argues that when a noun phrase itself is subject to a clause, it can't be extrapositioned to the front for topicalization, but (11a) is an exception.

And to a somewhat lesser extent, *wh*-movement is strongly marginal out of subject phrases, as is shown in Example (12).

Example (12) a. [The story about Susan] was funny.

* b. Susan the story about ____ was funny.

c. Who was the story about ____ funny?

The important insight here is that *wh*-extraction out of object clauses and phrases is quite possible. There is therefore an asymmetry across subjects and objects with respect to *wh*-movement.

Coordinate Structure Constraints

A coordinate structure is a construction in which two grammatical structures are at the same level and have the same syntactic function. Constraints also befall coordinate structures. Let's look at the following examples:

Example (13) a. The teacher likes [William and Mary].

* b. Mary the teacher likes William and ____.

Example (14) a. You may [drink soda or eat hot dogs].

* b. Soda you may drink ____ or eat hot dogs.

* b'. Hot dogs you may drink soda or eat ____.

Example (15) a. John likes Susan and Susan likes Bill.

* b. Susan John likes ____ and Susan likes Bill.

* b'. Bill John likes Susan and Susan likes ____.

From these examples, we can clearly see that Sentences (13b), (14b), (14b'), (15b) and (15b') are all unacceptable, that is, no element can be moved out from a coordinate structure (Culicover, 1982). This can be shown as follows:

Example (16) [C [C and C]]

In coordination, however, extraction out of a conjunct of a coordinate structure is possible only if this extraction affects all the conjuncts of the coordinate structure equally, that is, extraction must extract the same syntactic expression out of each of the conjuncts simultaneously. For example:

Example (17) a. Sam likes to eat [beans and broccoli].

b. [Beans and broccoli] Sam likes to eat.

Example (18) a. He is [waiting for you] and [trying to call you].

b. Who is he [waiting for ____] and [trying to call ____]?

In Example (17), extraction succeeds because it occurs equally out of both conjuncts; and in Example (18), *wh*-extraction out of a conjunct of a coordinate structure is possible only if it can be interpreted as occurring equally out of all the conjuncts simultaneously.

Adjunct Constraints

An adjunct is a construction that is part of a sentence but not essential to its meaning and can be omitted without making the sentence ungrammatical. An adjunct island is a type of island formed from an adjunct clause. *Wh*-movement is not possible out of an adjunct clause. Adjunct clauses include clauses introduced by “because”, “if”, and “when”, as well as relative clauses. Examples are shown as follows:

Example (19) a. Margaret went there [because she wanted to see Harry]?

b. * Harry Margaret went there because she wanted to see ____?

Example (20) a. [When he had finished his homework], he took a short rest.

b. * His homework when he had finished ____, he took a short rest.

In Sentences (19b) and (20b), the attempt to extract out of an adjunct clause fails because the gap appears in an adjunct clause.

Wh-word Constraints

A *wh*-word is a word which begins with a *wh*- (exclusive of “how”), and is used to introduce a common type of *wh*-question in English. These include “who”, “whom”, “whose”, “which”, “what”, “when”, “where”, “why” and “how”. A *wh*-island is created by an embedded sentence which is introduced by a *wh*-word. Consider the following examples:

Example (21) a. John wonders [where Eric went to buy a gift]?

b. A gift John wonders where Eric went to buy ____?

Example (22) a. Susan asked [why Sam was waiting for Fred].

* b. Fred Susan asked why Sam was waiting for ____?

Sentence (22b) is unacceptable because the attempt to extract an expression out of a *wh*-island is impossible. Whereas, in (21), extraction out of a *wh*-island is at best strongly marginal. *Wh*-islands are weaker than adjunct islands since extraction is often quite awkward, but they are not necessarily considered to be ungrammatical by all speakers (O' Grady, 2005:118).

Left Branch Constraints

One of the constraints on extraction formulated by Ross (1967) says that no noun phrase on the left branch of another noun phrase may be extracted from that noun phrase. Modifiers that would appear on a left branch under a noun (i.e. they precede the noun that they modify) cannot be extracted. The left branch constraint captures the fact that possessive determiners and attributive adjectives in English and many related languages necessarily pied-pipe the entire noun phrase when they are fronted. Examples are shown as follows:

Example (23) a. I haven't read [Mary's book] yet.

* b. Mary's I haven't read book yet.

* c. Whose haven't you read book yet?

Example (24) a. He bought [an expensive car].

* b. How expensive did he buy a __ car?

c. How expensive a car did he buy?

Example (23b), (23c), and (24b) are not acceptable because extraction is not possible out of left branches, that is to say, the attempt to extract from a left branch under a noun fails because the extracted expression corresponds to a left branch modifier of a noun.

In Example (24c), however, extraction succeeds if the entire noun phrase is pied-piped. Pied-piping occurs when a fronted *wh*-word (or otherwise focused word) pulls an entire encompassing phrase to the front of the sentence with it. Pied-piping is sometimes obligatory. That is, in order for a *wh*-expression to be fronted, an entire encompassing phrase must be fronted with it. These examples illustrate that pied-piping is often necessary when the *wh*-word is inside a noun phrase or adjective phrase. When the *wh*-word appears underneath a blocking category or in an island, the entire encompassing phrase must be fronted (Ross, 1967).

The following extractions (25b) and (25c) are also permitted by many linguists, although they seemingly look very awkward, esp. (25c).

Example (25) a. Mary saw [a friend of John's brother].

b. A friend of John's brother Mary saw.

c. A friend of whose brother did Mary see?

In some other cases, however, pied-piping can be optional. In English, this occurs most notably with prepositional phrases. The *wh*-word is the object of a preposition. A formal register will pied-pipe the preposition, whereas more colloquial English prefers to leave the preposition in situ. Let's look at the following examples:

Example (26) a. She revealed her secret [to Tom].

b. To whom did she reveal her secret?

c. Who did she reveal her secret to?

- Example (27) a. He is hiding [behind the red door].
 b. Behind which door is he hiding?
 c. Which door is he hiding behind?

Non-bridge-verb Constraints

Extraction out of object *that*-clauses serving as complements to verbs may show island-like behavior if the matrix verb is not a so-called “bridge verb”— a verb that permits movement across it. Non-bridge verbs include manner-of-speaking verbs, such as “whisper” or “shout”, as are demonstrated in the following examples:

- Example (28) a. She thinks that he died in his sleep.
 b. In his sleep she thinks that he died.
 c. How does she think that he died ____?

- Example (29) a. She whispered that he had died in his sleep.
 * b. In his sleep she whispered that he had died.
 * c. How did she whisper that he had died ____?

Extraction out of object clause is easily possible with a matrix bridge verb (as is shown in Example (28)), while extraction across a non-bridge verb is impossible (as is shown in Example (29)).

Summary

From those previous sections, whether an element can be moved or not, it depends. And a case should also be very necessarily stated, that is, although an element can't be extracted out of an island, the whole island may be extrapositioned. For example:

- Example (30) a. A story which made me angry appeared in the papers.
 b. A story appeared in the papers which made me angry. (Culicover, 1982)

It can be illustrated by the following:

- Example (31) [S1[NP A story [S2 which made me angry]] [VP appeared in the papers]]

Island constraints is proposed by generative linguistics for English. As a matter of fact, island constraints, which have been posited by syntacticians (Ross, 1967), are grammatically imposed restrictions preventing any constituents from escaping from certain configurationally defined environments. But in recent years, more and more counterexamples have been found out; and proposals have been made to treat counterexamples in various ways, for example, by introducing ad hoc exception principles, by questioning the status of certain gap-binding dependencies, or by assigning “marginal” status to the counter exemplifying data. As a result, island effects need to be reassessed.

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