

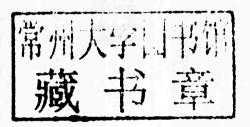
MÁRTA ABRUSÁN

# Weak Island Semantics

OXFORD STUDIES IN SEMANTICS AND PRAGMATICS 3

# Weak Island Semantics

MÁRTA ABRUSÁN





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## General preface

Oxford Studies in Semantics and Pragmatics publishes original research on meaning in natural language within contemporary semantics and pragmatics. Authors present their work in the context of past and present lines of inquiry and in a manner accessible both to scholars whose core areas of expertise are in linguistic semantics and pragmatics, and to researchers in related and allied fields such as syntax, lexicology, philosophy, and cognitive science. The series emphasizes rigorous theoretical analysis grounded in detailed empirical investigation of particular languages.

This is a companion series to Oxford Surveys in Semantics and Pragmatics. The Surveys series provides critical overviews of the major approaches to core semantic and pragmatic phenomena, a discussion of their relative value, and an assessment of the degree of consensus that exists about any one of them. The Studies series equally seeks to put empirical complexity and theoretical debate into comprehensible perspective, but with a narrower focus and correspondingly greater depth. In both series, authors develop and defend the approach and line of argument which they find most convincing and productive.

In this volume, which exemplifies the role of meticulous empirical investigation in the development of semantic theory, Márta Abrusán argues that weak islands are essentially semantic in nature. Weak islands are 'islands' because some expressions get trapped within them, that is, the expressions are blocked from undergoing syntactic movement. The islands are 'weak' because they selectively trap some wh-phrases but not others. Building on work of Fox and Hackl, Abrusán proposes that weak island effects arise when the entailments or the presuppositions of a wh-question are necessarily inconsistent or contradictory. This hypothesis allows her account to provide broader empirical coverage than Szabolcsi and Zwarts' classic analysis, explaining the weak island properties of factive predicates, the ability of modals to ameliorate weak island effects, and more. Abrusán's approach also has consequences for the theory of degrees, favoring an interval-based approach to the semantics of gradable adjectives. It furthermore leads to a reconsideration of the role that logicality and analycity play in the circumstances under which an utterance will count as deviant (ungrammatical) by virtue of necessarily expressing a contradiction.

## Acknowledgments

This book has distant roots in my dissertation (Abrusán 2007). Chapters 1 and 6 are entirely new and have been written following the suggestions of the editors. Chapters 2, 3, 4, and 5 have been substantially revised since the dissertation.

A number of people helped to improve this work over the past couple of years. I would like to express my immense gratitude to Danny Fox, whose inspirational, critical, and constructive comments have been invaluable for this book to come to exist. I am also indebted to Benjamin Spector for directing my attention to interval-based semantics that became the foundation of many of the ideas in this book. Our joint work on negative degree islands (Abrusán and Spector 2011) forms the basis for some of the material presented in Chapter 3. Irene Heim, Gennaro Chierchia, Giorgio Magri, Jon Gajewski, and David Pesetsky have been incredibly helpful at the early stages of this research. The work presented here has also benefitted greatly from the insightful comments of Denis Bonnay, Emmanuel Chemla, Paul Egré, Vincent Homer, Roni Katzir, Uli Sauerland, Philippe Schlenker, Anna Szabolcsi, and the audiences at SALT18, JSM8, WCCFL27, ZAS Berlin, Oxford, UCL, The Islands Workshop in Vitoria and the Workshop on Logicality, Lexical Meaning, and Semantic Invariance in Barcelona.

Chapter 2 reproduces part of the content of Abrusán (2011a) that appeared in *Natural Language Semantics*. Chapter 3 contains in part material from Abrusán (2011a) and Abrusán and Spector (2011) originally published in the *Journal of Semantics*, and the bulk of Chapter 4 reproduces Abrusán (2011b) that appeared in *Semantics and Pragmatics*. I am grateful for the editors and the anonymous reviewers of the above-mentioned journals for their extremely helpful input. I am also grateful to the publishers for permission to reproduce some of the above material in this book.

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### Introduction

Writing, when properly managed, (...) is but a different name for conversation. As no one, who knows what he is about in good company, would venture to talk all;—so no author, who understands the just boundaries of decorum and good breeding, would presume to think all: The truest respect which you can pay to the reader's understanding, is to halve this matter amicably, and leave him something to imagine, in his turn, as well as yourself.

For my own part, I am eternally paying him compliments of this kind, and do all that lies in my power to keep his imagination as busy as my own.

Lawrence Sterne: The Life and Opinions of Tristram Shandy

#### 1.1 Introduction

Question formation in English and other languages can involve displacement of the constituent that is being questioned. For example in the sentence in (1a) the question word what that ranges over the things George has read does not appear in the canonical, postverbal position for objects, shown in (1b). Instead, it occupies the sentence-initial position. Since the question word what is still interpreted as ranging over the possible objects of the verb, it is usually assumed that it establishes some formal link with the object position of the verb: this might be a movement dependency, as in the Chomskyan generative grammar tradition (cf. Chomsky 1973, 1977, 1981, 1986, 1995, 2000, etc.) or a relational dependency with a gap position, as in representational theories such as HPSG (Pollard and Sag 1994), LFG (Kaplan and Bresnan 1982) or construction grammar (Goldberg 1995), or another, roughly equivalent relation. In the following examples, I represent the object position with which the question word needs to establish a relation with a "\_\_". It is generally agreed that grammar imposes no upper bound per se on such long-distance dependencies. Thus it has been often observed that (1a) can be extended with countless further

embeddings as in (1c). Modulo limitations of working memory, the result is still well formed and interpretable:

- (1) a. What has George read \_\_?
  - b. George has read Tristram Shandy.
  - c. What did Bill say that John thought that Mary knew that... George has read \_\_?

Nevertheless, some long-distance dependencies do seem to be unacceptable, as shown by the following examples. (I provide intended possible answers in parentheses. "\*" indicates unacceptability.)

- (2) a. \*Which book did you leave because Bill talked about \_\_? (I left because Bill talked about Oblomov.)
  - b. \*How did John ask who behaved\_\_?(John asked who behaved irresponsibly.)
  - c. \*How tall isn't John \_\_?

    (John is not 197cm tall)

Why are some long-distance dependencies good and others bad? Clearly, this is not a question of the length of the dependency. To explain the difference between the examples in (1) and examples such as the ones in (2), syntacticians have postulated that certain syntactic configurations are closed for long-distance dependencies. Ross (1967) coined the term 'islands' for such domains, the intuition being that islands prevent the displacement ('escape') of elements contained in them. For example in (2), the subordinate clause beginning with *because* (example a), the domain of the embedded question beginning with *who* (example b), or negation (example c) are assumed to be island domains from which extraction is not possible for the elements shown. But as long as there is no island in the structure, as in (1), extraction in principle is unbounded, sanctioned only by limitations of working memory.

Two major types of syntactic islands are usually distinguished: strong and weak islands (see Szabolcsi 2006 for an overview). Strong islands are domains that are closed for every type of element, while weak islands are only closed for some elements. In (2a,b), the *because*-clause and the tensed embedded *who*-question are paradigmatic examples of strong islands: no element can be moved out from these domains. Negation, which leads to the unacceptability of (2c), is only considered a weak island: *wh*-words ranging over individuals or clearly individuated entities can be moved out from the scope of negation, as shown here:

# (3) Which book haven't you read \_\_? (I haven't read Oblomov.)

Ever since the 1960s, the discovery and explanation of island constraints was one of the major issues in the development of syntactic theory (Chomsky 1973, 1977, 1981, 1986, 1995, 2000, etc.). The principles of grammar proposed to explain island constraints (Barriers, Relativized Minimality, *Wh*-Island constraint, Minimal Link Condition, Subjacency, etc.) were—and many still are—among the major candidates for rules of Universal Grammar (UG). Islands have gained central status in syntax as theoretical and diagnostic tools, and have become the cornerstone of linguistic theorizing.

This book pursues a competing line of thought concerning weak islands. It is proposed that weak islands are unacceptable because they lead to a semantic problem. In particular, I argue that weak islands lead to a contradiction. This can come about in two ways. Some weak islands are unacceptable because they carry a presupposition that is contradictory. As no context can entail a contradictory set of propositions, these questions always lead to presupposition failure, hence they cannot be asked felicitously in any context. For the remaining weak islands a contradiction arises in a different manner; here the problem is that the condition according to which questions must have a unique most informative answer (cf. Dayal 1996, Fox and Hackl 2007) cannot be met. Therefore, any complete (exhaustive) answer to such questions is bound to state a contradiction. The difference between the various types of extractees in weak islands (i.e. wh-items over individuals which are generally extractable vs. wh-items over manners, degrees, and other elements that are normally not extractable) is predicted by the fact that the former do not lead to a contradiction due to the different properties of their domain.

On the basis of this proposal I suggest that the grammar is simpler than generally agreed in the syntactic literature, as there is no need to postulate syntactic rules of UG such as Relativized Minimality (Rizzi 1990) or the Minimal Link Condition (Chomsky 1995) to explain the deviance of weak islands. The compositional semantics of questions supplies everything we need for the explanation of weak islands, without invoking any further special rules. Note that the aim is not to trade syntactic constraints for semantic ones. Rather, the argument is that closely paying attention to the regular compositional semantics and pragmatics of the problematic examples itself can explain the facts

without the postulation of any new constraints. Further, I argue that the present proposal can address two outstanding problems that syntactic proposals of weak islands face. The first is that context seems to play an enormous role in the acceptability of some of the key examples of weak island effects. The second is that the insertion of various extra modal elements in weak island contexts can improve the problematic examples, which is at odds with the syntactic explanations (see Kuno and Takami 1997, Fox and Hackl 2007). I will show that the semantic account has a natural solution to both of these problems.

Another outcome of the study presented in this book is a further understanding of the role that contradiction and analyticity in general can play in natural language. Since Barwise and Cooper's (1981) analysis of the unacceptability of strong quantifiers in there-existential sentences, various analyses have been proposed that trace back unacceptability of some structure to the analytical nature of the sentence (see Dowty 1979, Chierchia 198, von Fintel 1993, etc.) and such analyses have seen a strong revival recently (Chierchia 2004, 2013, Menéndez-Benito 2007, Fox and Hackl 2007, Gajewski 2008, etc.). But the underlying question ever since the first such analysis has been why would the analytic nature of the sentence lead to ungrammaticality? Gajewski (2002) has argued that we need to distinguish between contradictions that result from non-logical arguments and contradictions that result from the logical constants alone: only sentences that express a contradiction or tautology by virtue of their logical constants are ungrammatical. The present proposal roughly falls under Gajewski's (2002) generalization. However, in the last chapter of this book I will suggest that certain modifications of the proposal by Gajewski are necessary.

Semantic approaches to weak islands have been already articulated, most famously by Szabolcsi and Zwarts (1993). While Szabolcsi and Zwarts (1993, 1997) offer a very elaborate account for intervention created by quantifiers and negation, their proposal for factive and wh-islands remained very tentative. Neither did they notice or explain important cases of island obviation. Honcoop's (1998) proposal is tailored for the Germanic what-for split, and is not clear that it is extendable to classic islands nor the obviation facts. Negative degree islands such as (2c) have enjoyed a great deal of specialized attention (Rullmann 1995, Fox and Hackl 2007), the latter offering an ingenious solution for the obviation problem in the case of negative degree questions as well. Still it has remained unclear whether these accounts

can be extended to negative islands that arise with other extractees (e.g. islands created by manners), or to other types of islands, e.g. islands created by factives or wh-words. Indeed Rullmann (1995) expresses skepticism that such a unified account is at all possible. Fox (2007) laid out a blueprint for the conditions that an analysis of negative islands created by manner questions would have to fulfill, but does not provide such an analysis, nor does he discuss the case of other types of islands. Finally, we might mention Oshima (2007), who proposed a partial account for certain cases of factive islands, vet his account does not extend to factive islands with degree questions, nor to the negative islands or the obviation facts. In contrast to the above approaches, this book proposes a uniform analysis of weak islands that traces back their unacceptability to a contradiction at some level of interpretation: either at the level of the presupposition of the question, or because extending Fox and Hackl's (2007) idea for negative degree islands-a complete answer to them would express a contradiction.

The fact that I am advocating a semantic solution to weak islands should not be taken to suggest that there are absolutely no syntactic constraints in grammar: strong islands, the coordinate structure constraint, etc. might well be examples of such rules (though see Dor and Jablonka 2000, Truswell 2007 for a semantic approach to certain strong islands). Further, it is well possible that cognitive constraints of language processing can also interact with or partially explain some grammatical constraints (cf. Deane 1991, Kluender 1991, 1992, 1998, 2004, Kluender and Kutas 1993, Hofmeister et al. 2007, Sag et al. 2007, Hofmeister and Sag 2010); although I consider it unlikely that processing considerations provide an exhaustive solution, see a critical discussion in Sprouse et al. (2012a,b), Pearl and Sprouse (2013), and Phillips (2013). I hope that by gaining a deeper understanding of what does not have to be part of grammar, we can also get a clearer picture of what grammatical constraints we do need to postulate, and about their interaction with semantic and processing factors.

#### 1.1.1 Islands: a brief overview

Strong islands, roughly speaking, are domains from which no element can be extracted (cf. Ross 1967, 1984, Fiengo and Higginbotham 1981, Huang 1982, Lasnik and Saito 1984, 1992, Chomsky 1986, Cinque 1990, Manzini 1992, Pollard and Sag 1994, Postal 1998, for some of the main references). Classic examples of strong islands are listed here for ease of

reference, and to set the stage for the discussion of weak islands, the main focus of this book. As the examples illustrate, in the case of strong islands it does not make a difference whether the extractee ranges over individuals or degrees or manners or time intervals or places, extraction is equally unacceptable. See Szabolcsi (2002, 2006) and Boeckx (2008, 2012) for useful overviews. Many of the examples listed here are borrowed from Szabolcsi's (2002) review.

### (4) Complex DP

- a. \*Which man did you hear <the/a rumor that my dog bit \_\_>? (I heard the rumor that your dog bit Jones)
- b. \*Where did you hear <the/a rumor that I put the keys \_\_>? (I heard the rumor that you put the keys in the drawer)

### (5) Definite DP

- a. \*Which man did you discover <Mary's poem about \_\_>? (I discovered Mary's poem about Jones)
- b. Which man did you discover <a poem about \_\_>?(I discovered a poem about Jones)

### (6) Subject islands

- a. \*Which man does <everyone who knows\_\_> admire his modesty?
   (Everyone who knows Jones admires his modesty)
- b. \*How did <everyone who behaved \_\_> get a distinction? (Everyone who behaved well got a distinction)

### (7) Adjunct islands

- a. \*Which book did you leave <because Mary talked about\_\_>?(I left because Mary talked about Jane Eyre)
- b. \*How fast did you get a fine <because you drove\_\_>?
  (I got a fine because I drove 190km/h)

### (8) Coordinate structures

- a. \*Which man did you invite <Mary and \_\_>?(I invited Mary and Bill)
- b. \*Where did you see Mary <in the park and \_\_>?(I saw Mary in the park and in the café)

### (9) Tensed wh-islands (in English)

a. \*Which topic did John ask <who was talking about \_\_>? (John asked who was talking about astronomy) b. \*How did John ask <who behaved \_\_>?

(John asked who behaved bravely)

NB: in these, only examples of strong islands created by *wh*-movement are shown. But in the literature it is assumed that the operations of topicalization and relativization are subject to the same constraints.

Weak islands are domains from which some but not all elements can be extracted, in other words domains that are transparent to some but not all operator-variable dependencies. For this reason, they are also sometimes called selective islands. The paradigmatic cases of weak island creating domains are the ones listed now, in the order following Szabolcsi's (2006) classification. Note that while tensed wh-islands are strong islands in English<sup>1</sup> (cf. (9)), infinitival wh-islands are only weak islands, as shown in (10):

- (10) Tenseless wh-islands
  - a. Which man are you wondering <whether to invite \_>? (I am wondering whether to invite Bill)
    - b. \*How are you wondering <whether to behave\_>? (I am wondering whether to behave indecently)
    - c. \*How many books are they wondering <whether to write next year\_>?(They are wondering whether to write five books)
- (11) Negative and other affective operators
  - a. Who did Bill <not invite \_\_ to the party> ?
    (Bill did not invite Jones to the party)
  - b. \*How many children <doesn't Jones have>? (Jones does not have five children)
  - c. \*How did <only John think that you behaved\_>? (Only John thought that you behaved impolitely)
- (12) Factive and response stance (negative) predicates vs. volunteered stance predicates
  - a. Who does John <regret that he invited \_\_ to the (factive) party>?(John regrets that he invited Jones to the party)

<sup>&</sup>lt;sup>1</sup> In some languages, e.g. Italian and Hungarian, tensed *wh*-islands are weak islands as well (cf. Szabolcsi and Zwarts 1993).