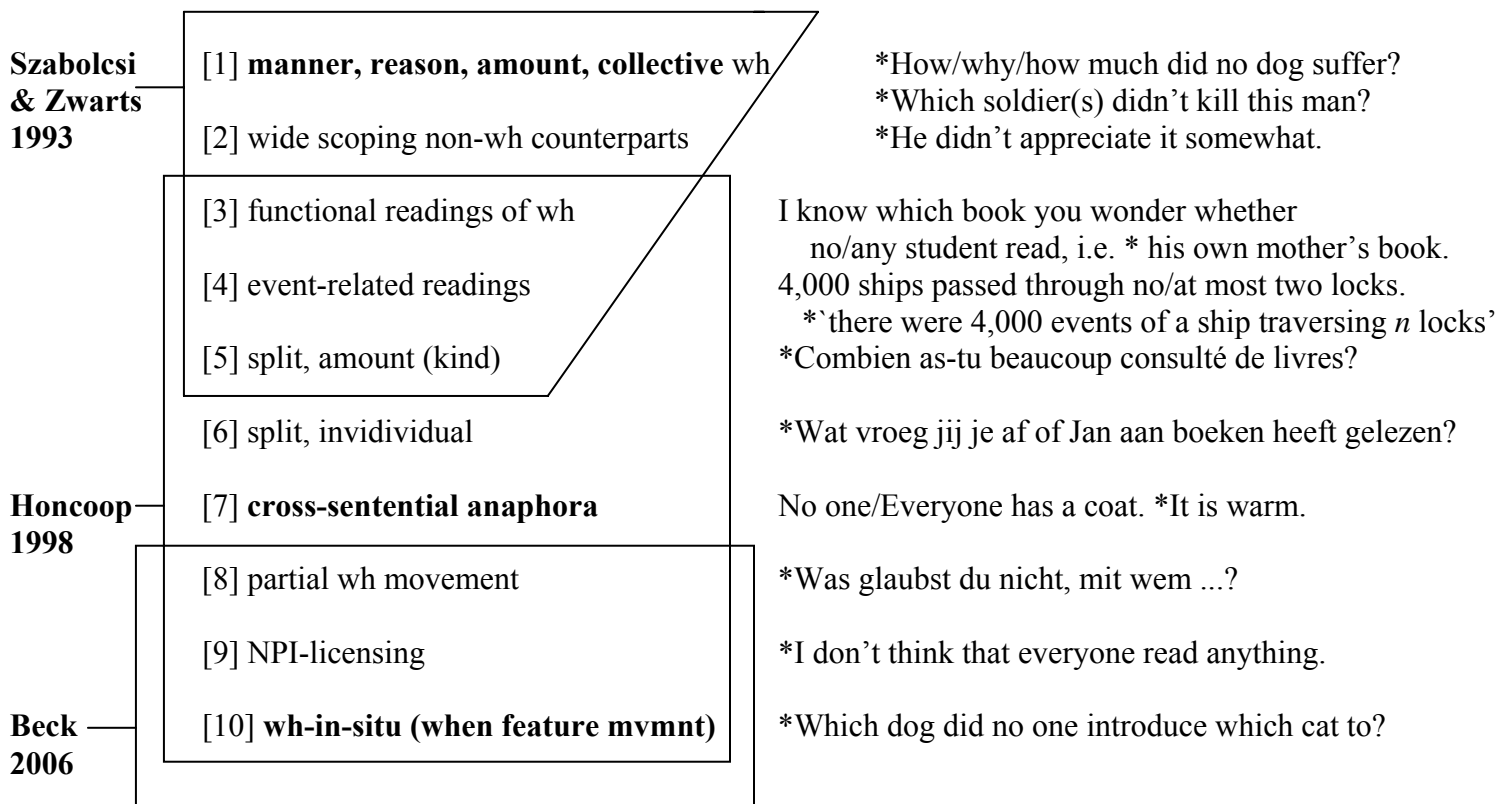


What Natural Classes of (Weak) Islands?

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- Weak island (intervention) sensitive constructions and the coverage of some theories:



- Interveners that induce weak islands:

Wh-phrases, *only*, *no*, *every*, *each*, *less/more than five*, *more students than teachers*, etc. that scope between two terms of the Weak Island sensitive construction.

Some operators only take scope in situ; their mere intervention at spell-out is bad enough (wh, decreasing op, modified numeral). Some others may scope out, or scope independently, so interpretation must be attended to:

Which book did every student read?

`Tell me about every student which book he read'

`After all that fuss, do you know

which book every student read?'

`Which book was in the intersection of the students' reading lists?'

How much pain did every patient endure?

`Tell me ab't every patient how much pain he endured'

`After all that fuss, do you know

how much pain every patient endured?'

*** `How much pain did the patient who endured the least pain endure?'**

- Similarities between expressions that escape from weak and strong islands: individual denoting DPs

Which boy(s) / *About which boy(s) / *How much didn't you ask?

Which boy(s) / *About which boy(s) / *How much did you file the report without asking?

1 Szabolcsi—Zwarts (Weak islands and an algebraic semantics of scope taking, NLS 1, 1993)

The contribution of operators is cashed out as Boolean operations (complement, intersection, union):

what <u>Mary read</u>	$\{x: M \text{ read } x\}$
<u>Mary did not read</u>	$-\{x: M \text{ read } x\}$
<u>every girl read</u>	$\{x: M \text{ read } x\} \cap \{x: K \text{ read } x\} \cap \{x: S \text{ read } x\}$
<u>two or more girls read</u>	$\{\{x: M \text{ read } x\} \cap \{x: K \text{ read } x\}\} \cup \{\{x: K \text{ read } x\} \cap \{x: S \text{ read } x\}\} \cup \dots$

Intervention effects arise when the denotation of a stretch of the sentence (scope, extraction domain) cannot be computed; specifically, when that scope does not denote a set and thus does not lend itself to all Boolean operations. This is to a large extent determined by the nature of the gap in that scope. [caveat below]

Interveners are those operators that want to perform Boolean operations that cannot be performed on (the relevant part of) the denotation of this scope.

how <u>Mary behaved</u>	$\lambda x[M \text{ behaved } x\text{-ly}]$
* <u>Mary did not behave</u>	$\# \lambda x[\neg M \text{ behaved } x\text{-ly}]$
* <u>every girl behaved</u>	$\# \lambda x[M \text{ behaved } x\text{-ly}] \cap \lambda x[K \text{ behaved } x\text{-ly}] \cap \lambda x[S \text{ behaved } x\text{-ly}]$
* <u>two or more girls behaved</u>	$\# [\lambda x[M \text{ behaved } x\text{-ly}] \cap \lambda x[K \text{ behaved } x\text{-ly}]] \cup \dots$

Caveat: multiple-event readings may have set denotations and be therefore immune:

- *Yesterday at 5:00pm she solved this problem only elegantly. (*one whole manner; not a set*)
- In all her life, she solved problems only elegantly. (*a set of whole manners*)
- *How didn't you behave last night? (*one whole manner; not a set*)
- How did you never behave? (*a set of whole manners*)

2 Honcoop (Dynamic Excursions on Weak Islands, PhD, Leiden U., 1998)

Weak island inducers are exactly those that create inaccessibility in non-c-command anaphora:

I have <u>a new coat</u> . <u>It</u> is grey.	dynamic binding (Groenendijk & Stokhof)
I don't have <u>a new coat</u> . * <u>It</u> is grey.	
Every boy has <u>a new coat</u> . * <u>It</u> is grey.	
Two or more boys have <u>a new coat</u> . * <u>It</u> is grey.	
\$ (... <u>indefinite</u> ...) ...* <u>pronoun</u> ...	dynamic binding blocked by operator \$

Dekker 1993 (L&P): Existential Disclosure, ED:

- | | |
|--|---|
| (a) $\exists x[M \text{ arrived from}(x)]$ | \Rightarrow ED, involving dynamic binding |
| (b) $\{y: \exists x[M \text{ arrived from}(x)] \ \& \ y = \underline{x}\}$ | $=$ |
| (c) $\{y: M \text{ arrived from}(y)\}$ | |

Intervention sensitive constructions are those whose interpretation necessitates the removal of an existential quantifier and thus the use of Existential Disclosure.

Interveners are those operators \$ that create inaccessible domains for non-c-command anaphora and thus block Existential Disclosure.

- *combien ...(\$... de camions)... (split, amount; \exists *de camions*)
- *wat ... (\$... aan boeken) ... (split, individuals; \exists *boeken*)
- *kyaa ... (\$... kahaan ...) ... (partial wh-movement, Dayal; \exists *kahaan*)
- *no one ... (\$... anything) ... (compute scalar alt's; \exists *anything*: no split but ED needed)

2.1 Extensions of Honcoop:

- Szabolcsi 2004 (NLLT 42): Resumptive quantifier analysis of NPI licensing: operator/restrictor split

*No one gave every beggar anything: *no<x,y>[person x ... \$... thing y]

- Pesetsky 2000 (MITPress): Feature movement is operator/restrictor split

Which cat did you introduce to which dog? Which dog did you introduce which cat to ?

covert phrasal movement (wh) feature movement

Feature movement, though not overt or covert phrasal movement, superficially appears to violate superiority and is blocked by intervention:

Which cat did {only you } introduce to which dog? *Which dog did {only you } introduce which cat to?
 {every boy}

If Pesetsky is correct, this provides a new set of weak island sensitive relations that Honcoop but not Szabolcsi--Zwarts account for.

- Butler—Mathieu 2004 (Palgrave): Adjuncts reconstruct (Williams), hence operator/restrictor split

$$[_{CP} \text{ how...}] \Rightarrow [_{CP} Q \dots [_{TP} \dots \text{how...}]]$$

Problems: *in which of these ways* and D-linked-*how* are adjuncts but immune to intervention;
 direct object *what/how much* and collective arguments are not adjuncts but intervention sensitive.

3 Szabolcsi—Zwarts vs. Honcoop:

Purely denotational semantics vs. a particular logico-syntax of anaphora & split in syntax proper.

Predict different intervention sensitive relations.

Predict essentially the same interveners.

4 Beck (Intervention effects follow from focus interpretation, NLS 14, 2006)

Background: Rooth's theory of focus: Mary only $[_{VP} \text{ introduced Bill}_F \text{ to Sue}]$.

Focus semantic value of VP (alternatives induced by focus on *Bill*):

$$C = \{ \wedge \text{introduced Bill to Sue}, \wedge \text{introduced Mary to Sue}, \dots \}$$

$$\text{only}(C)(\sim C(VP))(mary) : \quad \forall P[(P \in C \ \& \ P(mary)) \rightarrow P=VP']$$

for every property P, where P comes from the set C and holds of Mary, P is VP'

where $\sim C(VP)$ is the ordinary semantic value of VP and C is a contextually relevant subset of the focus semantic value of VP, i.e., $C \subseteq \{P: \text{Ey}[P= \wedge \{x: \text{introduce}(x,y,s)\}]\}$

