

Introduction

This monograph advocates a relativized approach to the binding-theoretic notions of binder and SUBJECT, making it possible to subsume polarity items under the Binding theory. The Binding theory was primarily designed to cover locality conditions between anaphors and pronominals and their antecedents. I will defend the view that binding/obviation principles only happened to be formulated for reflexives/pronouns first, but that there is no reason to think that they are restricted to them. In fact, in a maximally restrictive model, the same locality conditions should hold for all dependent and anti-dependent phenomena. Since reflexives and negative polarity items are both dependent, they both must be in the scope of (or bound to) their licenser or antecedent, and since pronouns and positive polarity items are both anti-dependent, they both must be interpreted outside of the scope of a local antecedent.

These scope properties of polarity items must be stipulated in other frameworks, but follow directly from the binding analysis. It is a long-noted puzzle that negative polarity items always receive narrow-scope interpretation with respect to negation, and that positive polarity items must receive a wide-scope interpretation with respect to local negation, but either narrow or wide-scope interpretation with respect to super-ordinate negation. This sets polarity items apart from other quantifiers, which enter freely into scope ambiguities with negation, exhibiting both wide- and narrow-scope readings (cf many and every in (1)).

- (1) Many/every arrow(s) didn't hit the target.
 - (a) For every/many X, it is true that X did not hit the target.
 - (b) It is not true for every/many X that X hit the target.

Negative Polarity Items = NPIs (e.g. *any*) are licensed in negative, but not in the corresponding affirmative sentences:

(2) John did not insult anyone.



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- (3) I do not say that John insulted anyone.
- (4) *John insulted anyone.

They are also licensed in questions, antecedents of conditionals, complements of adversative predicates, etc:

- (5) Did Mary insult anyone?
- (6) If Mary insulted anyone, she should apologize.
- (7) I doubt that Mary insulted anyone.

NPIs will be differentiated from the homophonous free-choice items (FCIs), which are typically licensed by modals:

(8) Anyone can climb that tree.

Positive Polarity Items = PPIs (e.g. *some*), on the other hand, cannot appear in the scope of a clausemate negation, but are licit elsewhere, e.g. with superordinate negation and in affirmative contexts:

- (9) #Mary did not insult someone.
- (10) I don't say that Mary insulted someone.
- (11) Mary insulted someone.

(The symbol '#' indicates that *someone* must be interpreted as taking wide scope with respect to negation.)

It will be argued that the best way to capture the distribution and interpretation of negative and positive polarity items is within the Binding Theory (for semantically based approaches to polarity, e.g., Ladusaw's (1980) and Linebarger's (1981), see chapter 8). More precisely, I will argue that negative polarity items obey Principle A, whereas positive polarity items obey Principle B:

- (12) NPIs are subject to Principle A of the Binding Theory.
- (13) PPIs are subject to Principle B of the Binding Theory.

A potential binder for polarity items is an A'- polarity operator: either negation or an empty polarity operator (Op) generated in Comp (see Aoun (1985, 1986) for Generalized Binding, and also section 0.2.3.).

The arguments presented in this monograph are based on data from English and Serbian/Croatian¹, a language which exhibits two different types of NPIs and therefore provides good insight into the nature of NPI-licensing. References are also made to other languages, such as Catalan,



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Chinese, French, Icelandic, Italian, Korean, Russian, and Turkish, to further support the analysis.

The first part of the introduction (0.1.) is an overview of the analysis of polarity items within the Binding Theory. The second part (0.2.) offers a brief discussion of the Binding Theory adopted in the monograph. Section 0.3. offers a chapter-by-chapter overview of the book.

0.1. Polarity

0.1.1. Parallelism between anaphora and polarity

Just as reflexives are local (see section 0.2.1. for a local account of longdistance reflexives), so are NPIs in many languages. Example (14) shows that a reflexive must take a clausemate antecedent, whereas examples (15) to (23) illustrate that NPIs must be licensed by a clausemate negation across languages:

English:

(14) Jane, believes [that Mary, respects herself*i/j.]

Serbian/Croatian:

- (15) Marija *(ne) voli ni(t)ko-ga.²
 Mary not loves noone-ACC
 'Mary does not love anyone.'
- (16) *Ne tvrdi-m da Marija voli ni(t)ko-ga. not claim-1SG that Mary loves noone-ACC 'I do not claim that Mary loves anyone.'
- (17) *Da li Marija voli ni(t)ko-ga? that Q Mary loves noone-ACC 'Does Mary love anyone?'

Russian:

- (18) Maria *(ne) vidit nikogo.

 Mary not sees noone

 'Mary does not see anyone.'
- (19) *Peter ne skazal, [čto Maria vidit nikogo].

 Peter not says that Mary sees noone

 'Peter did not say that Mary can see anyone.'



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(20) *Ja somnevayus', [čto Maria vidit nikogo].

I doubt that Mary sees noone
'I doubt that Mary can see anyone.'

Chinese (Audrey Y.-H. Li, p. c.):

- (21) Ta *conglai* meiyou kanjian Mali. he ever did-not see Mary 'He has never seen Mary.'
- *Zhangasan meiyou shuo ta *conglai* kanjian quo Mali.

 John did-not say he ever see Asp Mary

 'John did not say that he had ever seen Mary.'
- (23) *Ta conglai kanjian Mali ma? he ever see Mary Q 'Has he ever seen Mary?'

(See also Milner (1979) for *personne* in French, Sedivy (1990) for Czech, Hasegawa (1987) for Japanese, Linebarger (1981) for strict NPIs in English, etc.)

On the other hand, just as pronouns must be obviative from a local antecedent, as in (24), so must PPIs take wide scope with respect to local negation (as in (25)):

(24) Mary_i saw $her_{*i/i}$.

(narrow)

(25) #Mary did not insult someone.

There is a person X such that Mary didn't insult X. (wide-scope reading)

*Mary insulted no one. (narrow-scope reading – unavailable)

Likewise, just as a pronoun can be either bound to, or obviative from, a non-local antecedent, so can a PPI take either wide or narrow scope with respect to a non-local negation:

- (26) Peter_i doesn't say that John insulted $him_{i/i}$.
- (27) Peter doesn't say that John insulted someone.
 There is a person X such that Peter doesn't say that Mary insulted X. (wide)
 Peter doesn't say that Mary insulted a person/any person.

The following crucial question arises: why should obviation correspond to wide-scope reading (Richard Kayne, personal communication)? Generally speaking, wide scope corresponds to "outside of the influence



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of," whereas narrow scope with respect to something corresponds to "within the influence of something." For example:

(28) John did not shoot many arrows.

On the wide-scope reading, many escapes the influence of negation, and has its dictionary meaning: a great number. On the narrow-scope reading, on the other hand, it amalgamates with negation (in the sense of Cinque 1990, pp. 80-81), falls within the influence of negation, to result in something corresponding to few. Likewise, someone (meaning one person) when in the scope of a universal quantifier can refer to different individuals:

(29) Everybody loves someone.

Only on the wide-scope reading is its dictionary meaning (one person) unaffected. If one can indeed claim that wide-scope corresponds to "outside the influence of," then it must be that obviation, rather than binding, should be subsumed under this notion. While a bound expression draws its reference and all features from its antecedent, an obviative expression avoids such an influence on its reference completely.

Furthermore, polarity items show the same behavior as reflexives and pronouns in Exceptional Case Marking (ECM) environments:

- (30) John considers [IP himself (to be) intelligent].
- (31) John_i considers [IP $him_{*i/j}$ (to be) intelligent].

Serbian/Croatian:

- (32) Milan ne smatra [IP ni(t)ko-ga vredn-im Milan not regards no-one-ACC worthy-INSTR tolik-e pažnj-e]. such-GEN attention-GEN 'Milan does not regard anyone worthy of so much attention.'
- (33) #John doesn't consider [IP someone worthy of so much attention]. There is someone (a person) who John does not consider worthy of so much attention. (wide)
 - *John considers no one worthy of so much attention. (narrow)

Obviously, in the ECM subject position all the four items extend their domain.

Next, the domain for both anaphora and polarity extends in subjunctive clauses (for an analysis of subjunctive, see chapter 6):



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Reflexives:

Icelandic: (Hyams and Sigurjónsdóttir (1990))

- (34) Jón_i segir að Pétur_j raki sig _{i/j} John says that Peter shaves-SUBJ self
- (35) Jón_i veit að Pétur_j rakar $sig_{*i/j}$ John knows that Peter shaves-IND self

Italian (Giorgi (1984)):

- (36) Gianni_i suppone che tu sia innamorato della *propria* 'Gianni_i supposes that you are-SUBJ in love with self's_i moglie.

 wife.'
- (37) *Gianni_i mi ha detto che tu sei innamorato della *propria*; moglie. 'Gianni_i told me that you are-IND in love with self's; wife.'

See also Pica (1985) for French data.

Negative polarity:

French (Kayne (1981)):

(38) ?Je n'ai exigé qu'ils arrêtent personne.
I neg-have required that they arrest nobody

Italian (Rizzi (1982)):

(39) Non pretendo che tu arresti *nessuno*. neg require-I that you arrest no-one

The consistent parallelism between reflexives and NPIs, on the one hand, and between pronouns and PPIs, on the other, seems to call for a unified analysis.

0.1.2. Polarity: a binding analysis

A binding analysis of polarity seems highly desirable since it offers a costfree way to capture the near-complementary distribution between NPIs and PPIs, also attested for reflexives and pronouns. Let us propose that negative and positive polarity items are subject to the same locality conditions that have been embodied in the Binding Theory:

(40) NPIs are subject to Principle A: they must be bound to negation (or other truth-functional operator) in their governing category (see Milner (1979), Aoun (1985, 1986), Progovac (1988, 1991, 1992b))



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(41) PPIs are subject to Principle B: they must not be bound to (fall within the scope of) negation (or a truth-functional operator) in their governing category (see Progovac 1988, 1991, 1992b).

This immediately explains the basic polarity facts established in examples

- (2) to (11) above:
- (42) NPIs (as anaphoric) need a licenser.

The licenser for NPIs has to be local.

PPIs (as pronominal) need no licenser.

PPIs cannot be bound to a local truth-conditional operator.

One potential obstacle for treating NPIs on a par with reflexives comes from the fact that the domain for the two rarely coincides in any given language. Thus English has local reflexives, but long-distance NPIs. On the other hand, Russian has long-distance reflexives, but local NPIs. However, there is no reason to expect the same domain for reflexives and NPIs, on the assumption that governing categories and binders are relativized. While potential antecedents for reflexives in English are NPs in specifier positions (see section 0.2.1.), potential antecedents for NPIs are functional categories: negation in Infl or a truth-conditional operator in Comp. In fact, there are many languages in which even different types of reflexives have different binding domains, as illustrated below for ziji and ta ziji in Chinese:

(43) Zhangsan_i renwe [Lisi_j zhidao [Wangwu_k xihuan ziji_{i/j/k} / thinks knows likes self ta ziji*_{i/*j/k}]] he-self

'Zhangsan thinks that Lisi knows that Wangwu likes himself.'

Here, the simple reflexive *ziji* shows no domain effect, whereas the complex reflexive *ta ziji* is strictly clause-bound, just like English *himself*. We will see in section 0.2.1. that this difference need not be stipulated, but follows from the different morphological properties of these reflexives and, thus, from a different choice of binder.

Besides capturing the basic (anti)licensing of polarity items by negation, this approach also extends successively to non-negative polarity contexts, such as conditionals, questions, etc:

- (44) Did Mary insult anyone/someone?
- (45) If Mary insults anyone/someone, she will regret it.



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In English and Serbian/Croatian, licensing in non-negative contexts patterns with licensing by superordinate negation, rather than by clausemate negation, in that both NPIs and PPIs are allowed. I argue that a null polarity operator appears in the Comp of all non-negative polarity clauses (see Progovac (1988, 1992b) and Laka (1990)). Since the first potential antecedent for polarity items is negation in Infl (or NegP), the governing category for these items cannot extend further than IP. This explains why NPIs and PPIs must be in complementary distribution only within IP. An Operator in Comp does not anti-license PPIs since it is outside of the binding domain. Only those NPIs which can raise in LF higher than IP can extend their domain and be bound to the operator.

Informally, the Op is assumed to represent a switch with a +/- value, reflecting the fact that all the clauses headed by Op have an indeterminate truth value (e.g., questions, conditionals, etc.). The negative value of Op is now responsible for NPI licensing, reducing it to negation. Three pieces of evidence are presented for the Comp involvement in NPI licensing, dealing with (i) complements to adversative predicates, (ii) complements to universal quantifiers and (iii) comparatives. In each case it is only in clausal (as opposed to phrasal) complements that NPIs are licensed. The following contrast illustrates the point for adversative predicates:

- (46) I doubt [CP Op that John understood anything].
- (47) *I doubt anything.

The NPI is licensed in (46) because the complement of *doubt* is sentential, and therefore hosts a Comp position. On the other hand, in (47) there is no Comp position for Op selection. In addition to strict locality of negative polarity in numerous languages, contrasts like that between (46) and (47) argue strongly against treating polarity in purely semantic terms (for additional arguments, see chapter 8).

Although I argue that LF movement of NPIs does not in itself constitute an explanation for their scope properties, I do not exclude the possibility that they raise in LF, the way other quantifiers do. In fact, there is evidence for movement of English *any*, as discussed in chapter 2 (see Progovac (1988, 1992b) and *nessuno* (see Longobardi (forthcoming)). This explains why English *any* can be bound outside its local clause, in fact, in all polarity contexts:

- (48) John did not insult anyone.
- (49) I don't say that John insulted anyone.



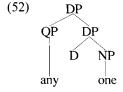
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- (50) Did Mary insult anyone?
- (51) I doubt that Mary insulted anyone.

The main empirical advantage of the binding approach to polarity sensitivity is in its ability to predict variation in NPI-licensing across languages (see chapter 4). A wide range of attested variation can be captured by the interplay of two separate factors: different raising options and being subject to different binding principles. Some NPIs do not raise at all, and therefore remain strictly local, e.g., ni(t)ko-type NPIs illustrated above. The inability to raise will be reduced to their morphological complexity. Some NPIs raise either by IP-adjunction or by movement through Comp, e.g., English any, and can consequently be bound either by truth-conditional operators in Comp, or by superordinate negation. Some NPIs can move only by IP-adjunction, e.g., certain NPIs in Romance and Chinese, and can thus be bound by operators in Comp, but not by superordinate negation. Those NPIs which move only through Comp can be bound by superordinate negation, but not by operators in Comp, e.g., NPIs in Turkish.

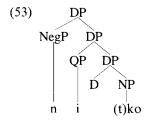
Along the binding dimension, all NPIs must be bound by negation or a truth-conditional operator. Most NPIs are subject to Principle A, e.g., NPIs in English, Italian, Chinese, etc. Some NPIs, however, can obey Principle B, e.g., Serbian/Croatian I-NPIs, resulting in the requirement that they be bound only outside their local clause, either by superordinate negation, or by operators, but not by clausemate negation. PPIs, on the other hand, can be subject either to Principle B only, as in English and Serbian/Croatian, or to Principle C (which subsumes Principle B), as in Russian. In Russian, PPIs must be disjoint from (i.e., fall outside the scope of) not only local negation, but any polarity licenser in the sentence, including superordinate negation.

What distinguishes the NPIs that move from those that do not? I take the ni(t)ko type NPIs in Russian and Serbian/Croatian to be local due to their morphological complexity. The item ni(t)ko consists of three morphemes: n-i-(t)ko (neg-any-who), and thus contrasts with English any:





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If only QPs, i.e., any part could raise, then we have an explanation for the strict locality for ni(t)ko: the raising of i in ni(t)ko would result in a minimality violation, where the trace of i would be minimally governed by morphological negation (for details, see section 2.2).

0.2. Binding theory

The purpose of this section is to discuss the essentials of the binding theory, on which I base my analysis of polarity. I assume the original formulation of Principles A and B but argue for a relativization of the notions 'binder' and 'SUBJECT.'

0.2.1. Principle A: relativized SUBJECT

What is appealing about the original formulation of the binding principle A, given in (54), is its simple intuition that the first potential antecedent (i.e., SUBJECT) closes off the binding domain for an anaphor (Chomsky (1981)):

- (54a) Principle A: An anaphor must be bound in its governing category.
- (54b) The governing category for an anaphor is the smallest maximal projection containing the anaphor, the governor for the anaphor, and a SUBJECT accessible to the anaphor. SUBJECTS for reflexives are [NP,IP], [NP,NP], or AGR.

The core-binding facts illustrated below thus follow from the formulation in (54), where binding across either [NP,IP] or [NP,NP] subject is prohibited:

- (55) Mary_i believes [that Jane_i respects $herself_{*i/i}$].
- (56) Mary_i believes [Jane_j to respect $herself_{*i/j}$].
- (57) Mary_i admires [Jane's_j stories about $herself_{*i/j}$].