Soft & Hard Constraints on Anaphoric Forms

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1. Introduction

- Central tenets of optimality-like approaches (cf. Prince & Smolensky 1993, Burzio 1995): (i) grammatical constraints are universal and violable, or soft; (ii) grammatical structures are the winners of competition (among alternative outputs for the same input).
- Some of the issues that arise:
  1. a) how to solve conflicts between constraints?
     b) Are all grammatical conditions soft, or are there hard constraints, too?
     c) Is there any systematic difference between soft and hard constraints?

OT: focus on (1a), which motivates constraint ranking! This talk: bringing (1b,c) to the agenda by looking at soft versus possible hard constraints in binding, i.e., in the competition between anaphors and pronouns.

2. Binding & Soft Constraints

- Std BT: anaphors vs. pronouns determined by absolute conditions specific on NP types (Conditions A and B).
  i) independent conditions on NP types make complementary distribution an accident:

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<tr>
<th>Reflexives</th>
<th>Antecedents</th>
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<tr>
<td>Type</td>
<td>Paradigm</td>
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<td>Inflected:</td>
<td>English objects</td>
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<td>Uninflected:</td>
<td>Russian objects</td>
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<td>Romance objects</td>
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<td>Danish Possessives</td>
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<td>English possessives</td>
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✓ = reflexives allowed, pronouns excluded
✗ = reflexives excluded, pronouns allowed

ii) the distributional patterns correlate with properties of anaphors only, not with properties of pronouns: locally bound pronouns only where no anaphor is available, independently of the restriction on the anaphor!

Burzio’s solution (roughly):

(2) MORPHOLOGICAL ECONOMY [ME]: A bound NP must be maximally underspecified (= Binding Hierarchy: anaphors > pronouns > R-expressions)

(3) LOCALITY [LOCAL]: Anaphors must be locally bound.

For ME, anaphors are always the best choice; an anaphor’s violation of LOCAL, or absence of anaphors, turn the pronoun the best option, despite ME; i.e., ME is a soft constraint!!

i) No GENDER: antecedents such as ‘nobody’, ‘who’, ‘everybody’, are strongly disfavored with pronominal forms specified for gender (gender of a pronominal form is determined by range of antecedents; exx. in Sp): \^\[\]

(4) a) Juan cree que {___/ él} es un tonto
Juan believes that {pro/he} is a fool
‘Juan believes that he is a fool’

b) Nadie cree que {___/ *él} es un tonto
Nobody believes that {pro/*he} is a fool
‘Nobody believes that he is a fool’

(5) a) Juan cree que {su patrón/? el patrón de él} es un tonto
Juan believes that {SE(poss) boss/? the boss of-him} is a fool
‘Juan believes that his boss is a fool’

b) Nadie cree que {su patrón/* el patrón de él} es un tonto
Nobody believes that {SE(poss) boss/* the boss of-him} is a fool
‘Nobody believes that his boss is a fool’

(6) a) Juan cargaba {con él/? consigo} una bolsa llena de dinero
Juan carried {with him/? with-SE} a bag full of money
‘Juan carried a bag full of money with himself’

b) Nadie ha cargado {* con él/? consigo} la bolsa con el dinero
Nobody has carried {* with him/? with-SE} the bag with the money
‘Nobody carried a bag full of money with himself’

(7) NO GENDER: *[NOBODY, ... X [+gender], ]

ii) NoGENDER is soft: (a) strong effects only when genderless forms are available (e.g., no strong effects in Std Eng, but in Dutch and German, which have genderless anaphors); (b) *NoGENDER (on overt pronouns) interacts with *LOCAL (on anaphors): *LOCAL may not be strong enough to supplant *NoGENDER (exx. in BP):

(8) a) O João jamais reconheceria [NP uma foto {de ?? sildele}] tirada pela Maria ✓ NoGENDER, *LOCAL
João recognized [NP a picture {of ?? SElof-him}] taken by Maria

b) Ninguém jamais reconheceria [NP uma foto {de sî/dele}] tirada pela Maria *LOCAL > *NoGENDER
Nobody ever would-recognize [NP a picture {of SE/*of-him}] taken by Maria

(9) a) O João jamais me ouviu [IP t falar mal {de (?)* sildele}]
João never me heard [IP t speak ill {of (?)* SElof-him}]

b) Ninguém jamais me ouviu [IP t falar mal {de ?sî/dele}]
Nobody ever me heard [IP t speak ill {of ?SE/*of-him}]

(10) a) O João jamais admitiria [CP que a Maria desconfiasse de {*sî/ele}]
João never would-admit [CP that Maria be-suspicious of {*SE/him}]

b) Ninguém admitiria [CP que a Maria desconfiasse de {?sî(?)* ele}]
Nobody would-admit [CP that Maria be-suspicious of {(?)SE/*him}]

But *LOCAL is incremental (proportional to embedding) and eventually supplant *No Gender:

(11) Ninguém jamais admitiria [CP que o Paulo contasse ao João [CP que a Maria desconfiava de {sî/ele}]]
Nobody never would-admit [CP that Paulo tell João [CP that Maria was-suspicious of {*SE/*him}]]

**NoGENDER > **LOCAL

** CONCLUSION: there are at least three _soft_ constraints on anaphoric forms: MORPHOLOGICAL ECONOMY, LOCALITY and NO GENDER.

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1 Acceptability judgements: no mark = sentence is OK, i.e., fully acceptable and natural; ? = acceptable, perhaps not very natural; additional discourse justification may be needed; ?? = marginal; perhaps acceptable with strong discourse justification; * = sentence is unacceptable. Conventions for ‘conflated’ judgments: (?) = from OK to ?; (?) = from OK to ??; (?)* = from ?? to *; (?)* = from ? to *; (*) = from OK to *.
3. Hard Constraints on Anaphoric Forms

Candidates to hard constraints: whose interaction with soft constraints is unattested. In Romance:

1) **NULL LICENSED:**

i) Null pronouns are available only in specific, licensed positions; in Romance, only subjects (exx. in Sp):

(12)

a. \(\{\text{Él/___}\}\) es inteligente

\(\{\text{He/pro}\}\) is intelligent

b. María \(\{\text{lo/_}^*\}\) vió

María \(\{\text{him/}^*\}\) saw

c. María siempre habla de \(\{\text{el/}^*\}\)

María always speaks of \(\{\text{him/}^*\}\)

ii) *NULL LICENSED never wins over *OTHERCOND's, e.g., over *NOGENDER (see also Montalbetti 1984):

(13)

a. Nadie dijo que \(\{\text{él/_}^*\}\) es inteligente

\(\checkmark\) NULLLICENSED, *NOGENDER

Nobody said that \(\{\text{he/pro}\}\) is intelligent

b. Nadie dijo que María \(\{\text{lo/}^*_\}\) vió

\*NOGENDER > *NULLLICENSED

Nobody said that María \(\{\text{him/}^*\}\) saw

c. Nadie dijo que María siempre habla de \(\{\text{éll/}^*_\}\)

\(\checkmark\) Nobody said that María always speaks of \(\{\text{him/}^*\}\)

2) **CASE COMPATIBILITY [CASECOMP]:**

i) Case-specified NPs occupy only positions compatible with their specification, e.g. clitics in EP:

(14)

a. O João disse que a Maria \(\{\text{o/}^*\text{lhe}\}\) viu no cinema (Accusative, Gender-marked: *NOGENDER)

João said that Maria \(\{\text{him/}^*\text{to-him}\}\) saw in-the cinema

‘João said that Maria saw him in-the cinema’

b. A Maria disse que o João \(\{\text{a/}^*\text{lhe}\}\) viu no cinema

Maria said that João \(\{\text{her/}^*\text{to-her}\}\) saw in-the cinema

(15)

a. O João disse que a Maria \(\{\text{lhe/}^*\}\) deu um presente (Dative, Genderless: \(\checkmark\) NOGENDER)

João said that Maria \(\{\text{to-him/}^*\}\) gave a present

b. A Maria disse que o João \(\{\text{lhe/}^*\text{a}\}\) deu um presente

Maria said that João \(\{\text{her/}^*\text{to-her}\}\) gave a present

c. Ninguém admitiu que o João \(\text{lhe/}\) tivesse dado propinas

Nobody admitted that João \(\text{to-him/}\) had given bribes

ii) *CASECOMP never wins over *OTHERCOND's, e.g. *NO GENDER:

(16)

Ninguém admite que a Maria \(\{\text{?o/}^*\text{lhe}\}\) tenha visto no cinema

\*NOGENDER > *CASECOMP

Nobody admits that Maria \(\{\text{?him/}^*\text{to-him}\}\) has seen in-the cinema

‘Nobody admits that María has seen him in-the cinema’

iii) where it appears *CASECOMP* *NO GENDER: actually, ‘old’ Dat form is synchronically compatible with Acc, e.g., BP (also, ‘leista’ Sp):

(17)

a. Ninguém admite que a Maria tenha \(\{\text{?lhe}\}\) visto \(\{\text{?ele}\}\) recebendo propinas

Nobody admits that Maria has \(\{\text{?to-him}\}\) seen \(\{\text{?him}\}\) receiving bribes

b. O senhor não admite que a Maria tenha \(\text{lhe/}\) visto recebendo propinas

The gentleman not admits that a María has \(\text{to-him/}\) seen receiving bribes

‘You(fml) do not admit that María has seen you receiving bribes

3) **LD CL SE [No Long-Distance-Bound Clitic SE Anaphor]:**

Hard versus Soft Constraints on Anaphoric Forms

Ninguém

Soft constraints concern the relation between the anaphoric form and the antecedent.

**CONCLUSION:**

(18) a La signora lascia [che io giaccia presso di sè] (LD sè Italian)
The woman allows [that I lie near of SE]
b *La signora permette [che io si baci]
The woman allows that I SE kiss

ii) even if competing forms violate some constraint, e.g. NOGENDER or CASE COMP (exx. in EP):

(19) Ninguém admite [CP que a Maria {(?)?of/"lhe/"se} tenha visto no cinema]
Nobody admits [CP that Maria {(?)?him/"to-him/"SE} has seen in-the cinema]

iii) *LD Cl SE is not *LOCAL: with non-clitic si, *NOGENDER>**LOCAL, but *LOCAL>*NOGENDER:

(20) a Ninguém jamais admitiria [CP que o Paulo contasse ao João [CP que a Maria desconfiava de {*si/?ele}]]
Nobody never would-admit [CP that Paulo tell João [CP that Maria was-suspicious of {*SE/?him}]]
b Ninguém admitiria [CP que a Maria desconfiasse de {?si(?)*ele}]
Nobody would-admit [CP that Maria be-suspicious of {?SE/?him}]

CONCLUSION: there are three candidates to hard constraints: NULL LICENSED, CASE COMPATIBILITY and NO LD CLITIC SE.

4. **Conclusion: Hard versus Soft Constraints on Anaphoric Forms**

(21) a Soft constraints: MORPHOLOGICAL ECONOMY, LOCALITY and NO GENDER
b Hard constraints: NULL LICENSED, CASE COMPATIBILITY and NO LD CLITIC SE

MORPHOLOGICAL ECONOMY in (2): applies to bound forms in general, hence, to binding.

LOCALITY in (3): binding of anaphors has to be local.

NO GENDER in (7): on binding of gender-specified forms by NOBODY-type of NP’s!

GENERALIZATION 1: soft constraints concern a relation between anaphoric form and antecedent!

NULL LICENSED: available theories attribute licensing of null pronominals to properties of governing head:
i) Rizzi (1986): the governing head must be a formal licenser and phi-feature-specified;
ii) Jaeggli & Safir (1989): must belong to a morphologically uniform paradigm and assign Case.

CASE COMPATIBILITY: Nominal Case is determined by governing head: in English, INFL assigns Nom, Vs and Ps Acc/Obl, and Ns Gen; in Romance, INFL assigns Nom, Vs Acc and Dat, Ps assign Obl; etc.

GENERALIZATION 2: hard constraints concern a relation between anaphoric form and governing head!

• *LD Cl SE?
  ii) Reuland (1990): [Romance] cliticization is a morphological operation; hence, a reflexive clitic ‘operates’ in the domain of the morphological unit it cliticizes to, i.e., the verbal head ⇒ This is compatible with Generalization 2: clitic SE is ‘licensed’ by a property of the verbal head (relexivity at the argument structure representation)!!
    ⇒ Also fully compatible with Burzio’s (1986) account of Romance reflexive SE: either (a) a base-generated clitic, and all relations involving base-generated clitics must exist at all levels (most importantly, at D-Structure!), or (b) SE is a lexical affix absorbing subject θ-role and object Case. In particular, wrt. (a): D-Structure is a representation of the thematic structure of heads!!

(22) **Hard versus Soft Constraints on Anaphoric Forms:**

a Hard constraints concern the local relation between the anaphoric form and a governing head;
b Soft constraints concern the relation between the anaphoric form and the antecedent.

• How to distinguish violable/soft from inviolable/hard constraints in OT?
  i) **Constraint Ranking** is no good: if different constraint rankings define different grammars, no explanation for the systematic highest-ranking of universally hard constraints!!
ii) Hard constraints as properties of *Generator*: candidates violating hard constraints would never be generated, hence, never considered for evaluation wrt. the set of soft constraints!!

**CONSEQUENCES**, if (22) is to be generalized:

i) from (22a): constraints on the relations between heads and head-governed elements (e.g., on Case- and θ-Role-assignment) should be incorporated into syntactic *Gen*, that is, follow from the procedure of building up syntactic representations, rather than being checked after the representation was built!

ii) from (22b): constraints on antecedence relations (e.g., binding, antecedent-government, chain-formation) should be checked after the syntactic representation was built!

**References**


