3rd Person Possessives in Brazilian Portuguese:
On the Syntax-Discourse Relation*

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0   Introduction

My aim in this paper is twofold. First, I want to suggest a solution for a descriptive problem well-known to the literature on Brazilian Portuguese [BP, from now on]: the restrictions on the anaphoric behavior of the 3rd person possessive pronoun. Second, I want to point to some ramifications the solution I propose has for the nature of the interaction between syntactic and discourse conditions on anaphoric forms.

Spoken BP is usually said to have the following properties: the 'old' 3rd person possessive *seu* is a form for (notional) 2nd person, and the periphrastic form *dele* 'of-him' is the possessive for 3rd person. In section 1 I will argue that the real generalization to be explained is: *seu* is strongly disfavored as an anaphoric form for 3rd person *referential* antecedents. In section 2 I demonstrate that even this restriction on the 3rd person use of *seu* can be overcome if appropriate discourse conditions hold: this happens when the antecedent is 'highly accessible' (cf. Ariel 1990; e.g., when the antecedent has the point of view in a narrative). In section 3 I suggest that the behavior of *seu* in BP can be understood if this form is (in a process of becoming) an anaphor; and the restriction on 3p referential antecedents follows from a syntactic condition on anaphoric dependencies, namely, the Chain Condition (cf. Reinhart & Reuland 1993, Menuzzi 1995). This analysis, however, raises the following question: if the restriction on 3rd person referential antecedents is a consequence of a *syntactic* condition, the Chain Condition (cf. section 3), how is it possible that the restriction can be overcome by appropriate *discourse* circumstances (cf. section 2)? In section 4 I briefly discuss this issue, suggesting the following answer: Chain Theory applies to sentential anaphora because it is the way *syntax* interprets Accessibility principles, which govern *discourse* anaphora.

1   3rd Person Possessives in Spoken BP

Romance and many other languages may express 3rd person possessive anaphora by two means: either by 3rd person possessive pronouns properly, or by the genitive construction formed with the preposition 'of' and a personal pronoun, as exemplified by the Spanish pair in (1) below (*de él* needs some discourse justification, such as emphasis, cf. Schwartz 1986; see also Bentivoglio 1983):[1]

(1)   *Juan* habia visto {*su* patrón/?el patrón *de él*} en el cine
         Juan had seen {*his* boss/?the boss *of him*} in the cinema

The descriptive literature on Portuguese has often observed, however, that these alternatives are not equally available in BP: though in written language *seu* is still the favored possessive for 3rd person, this is not the case in spoken language, in which the following generalizations appear to hold (see Thomas 1969:79-80, Cuesta & da Luz 1971:174, Parkinson 1988:149-50):

[1] I use the following abbreviations in this paper:

f = feminine, m = masculine (i.e., non-feminine); 1,2,3p = 1st, 2nd, 3rd person; pl = plural, s = singular (i.e., non-plural); inf = informal, fml = formal. Judgments are marked in the following way: no mark = sentence is OK, perfectly acceptable and natural; favored over ? ; ? = sentence acceptable, perhaps not very natural; discourse justification may be needed (e.g., focus or emphasis); ?? = sentence marginal or inappropriate; it may become appropriate if specific discourse justification is available (e.g., specific register or type of discourse); * = unacceptable. Varying judgments are abbreviated in the following way: (?) = from OK to ? ; (?)? = from ? to ?? ; (?)* = from ?? to * .

(2)   *3rd Person Possessives in Spoken BP*[2]
      a. the 'old' 3p possessive *seu* is used for (notional) 2p;
      b. the possessive form for (notional) 3p is the periphrastic genitive *dele*.

These generalizations are attested by examples like the following, cited by Silva (1982:225; judgment marking was adapted for the conventions of this paper):

"Another fact which confirms the form *seu* to be more of the 2nd than of the 3rd person is exemplified by the following [discourse], found in *Cebolinha* 47:61 [a comic book], [involving] three characters A, B and C. A says to B to open C's mouth, for C has a tooth pain:

A: Abra a *sua*$_C$ boca.
   open the SE$_C$ mouth
   'Open his$_C$ mouth'

B understands (as expected) that he has to open his own mouth, which he does. A, then, says:

A: Não a *sua*$_B$ boca, a *dele*$_C$.
   Not the SE$_B$ mouth, the (one) of-him$_C$
   'Not your$_B$ mouth, but his$_C$'

If *seu* were used equally for both persons, we should be able to find:

A: ??Não a *sua*$_B$ boca, a *sua*$_C$.
   Not the SE$_B$ mouth, the SE$_C$ (one)
   'Not your$_B$ mouth, but his$_C$'

or, if we wanted to avoid ambiguity,

A: ??Não a boca *de você*$_B$, a *sua*$_C$.
   Not the mouth of you$_B$, the SE$_C$ (one)
   'Not your$_B$ mouth, but his$_C$'

Not only have we never found any of such forms, but also, when they were presented to native speakers, these had difficulty to understand them".

The same observations can be made on the basis of quantitative analysis. For example, in her careful sociolinguistic study of possessive forms in BP, Silva has shown that the generalizations in (2) are robust in spoken language, in which alternative possessive forms for 2p and 3p have a very low probability of occurrence, though written language favors *seu* as a 3p possessive. In percentage, she has found the following frequencies:

Table 1: distribution of 3p and 2p possessives in BP (cf. Silva 1982:179, 196)

	3p		2p		
	seu	*dele*	*seu*	*teu*[3]	*de você/do senhor*
Spoken	25%	**75%**	**92%**	1,6%	6,4%
Written	**86%**	14%	-	-	-

The distributional pattern seen in table 1 is reproduced within written language itself when the type of text resorts to written-like and spoken-like registers. For example, in novels story-telling may proceed either

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[2] The 'old' 3p possessive *seu* is adjective-like in that it agrees in number and gender with the possessed noun (*seu*, m.s.; *sua*, f.s.; *seus*, m.pl.; *suas*, f.pl.). And it is like the 3p anaphors *se/si* in that it is unspecified for the gender and number of its antecedent; hence, the common gloss 'SE' for *se/si*, *seu* and unspecified anaphors in this paper (following Reinhart & Reuland 1991, 1993).

[3] *Teu* is the possessive form of the standard 2ps paradigm, whose nominative *tu* has been substituted for by *você* in most of Brazil. Other forms of this paradigm, however, are still in use (see Cuesta & da Luz 1971:159-60, 173-4; Teyssier 1976:101).

through a 3rd person indirect report or *narration* properly (NAR), or by direct report or *quotation* of the characters' speech or thought (QUOT). If we compare the distribution of the possessive forms in these two modes of report, we find results like the following (sample: the first hundred pages of Rubem Fonseca's *Agosto*; Silva 1982:183 has found a similar conditioning in her written corpus):

Table 2: distribution of 3p *seu* according to report mode

Occs.			Perc.		
NAR	QUOT	Total	NAR	QUOT	Total
103	6	109	**94,5**	5,5	100

Table 3: distribution of *seu* in QUOT according to interpretation

Occs.			Perc.		
3p	2p	Total	3p	2p	Total
6	59	65	9,2	**90,8**	100

Table 4: distribution of 3p *seu* vs. *dele* according to report mode

	Occs.			Perc.		
	seu	*dele*	Total	*seu*	*dele*	Total
NAR	103	12	115	**89,6**	10,4	100
QUOT	6	35	41	14,6	**85,4**	100

Table 2 shows that 3p occurrences of *seu* appear mainly in narration (above 90%), and that they are negligible in quoted speech (around 5%). Table 3 tells us that in quoted speech occurrences of *seu* mainly refer to 2p (90%) rather than to 3p (9%). Finally, table 4 reflects the pattern seen in table 1 above for 3p possessives: in narration properly the favored form is *seu* (around 90%), correlating with written language in table 1 (with 86%), while in quoted speech the favored form is *dele* (around 85%), correlating with spoken language in table 1 (with 75%). Thus, it appears that there is substantive evidence confirming the generalizations in (2) above, as well as the fact that *seu* is still a favored 3p form in written language.

The fact that *seu* is used as a possessive form for notional 2p is not surprising. The standard Portuguese paradigm for 2p has been substituted in most of Brazil by originally honorific expressions (see fn. 3): *você* 'you(inf)' has come out of *vossa mercê* 'your grace', and *o senhor* 'you(m,fml)' could be translated literally as 'the gentleman'. These expressions kept their 3p grammatical specification, as attested by verbal agreement, explaining why they are compatible with 3p anaphoric forms such as the reflexive *se* and the possessive *seu*. Thus, generalization (2a) appears to be a consequence of the diachronic source of (notional) 2p forms in BP. When considered together with (2b), however, the question it raises is:

(3) if *seu* is used with the new (notional) 2p forms because these are grammatically 3p, why is it that *seu* is not used anymore for 3p properly speaking?

It has been suggested that *seu* became incompatible with a 'pure' 3rd person referent/antecedent because it was 'reanalized' as a form belonging to the new 2nd person paradigm (cf. Perini 1985, Cerqueira 1993, among others; but see Kato 1985). This implies, however, that there should be no regular 3rd person use for the possessive in contemporary BP. As we have seen, 3p use of *seu* is quite robust at least in written language, a fact which might be explained by the normative pressures written language is subject to. But this cannot explain the fact that, though really disfavored with *referential* 3p antecedents, *seu* improves considerably, up to full acceptability, if the antecedent is a *quantificational* NP:

(4) a.   *O João* já viu um retrato {*(?)?seu/dele*} no jornal?
         João already saw a picture {*(?)?SE/of-him*} in-the newspaper
         'Has João already seen a picture of himself in the newspaper?'

   b.   *Aquelas garotas* nunca confiaram na {*(?)?sua* professora/professora *delas*}
         Those girls never trusted in-the {*(?)?SE* teacher/teacher *of-them*}
         'Those girls never trusted in their teacher'

   c.   *Quem* esqueceu {*seu* livro/(?)*o livro *dele*} em casa?
         Who forgot {*SE* book/(?)*the book *of-him*} at home?
         'Who forgot his book home?'

   d.   *Cada um* deve fazer {*seu* trabalho/(?)*o trabalho *dele*} sozinho
         Each one must do {*SE* work/(?)*the work *of-him*} alone
         'Each one must do his own homework alone'

   e.   *Qualquer linguista* quer ter {*seus* artigos/os artigos *dele*} lidos por Chomsky
         Every linguist wants to-have {*SE* articles/the articles *of-him*} read by Chomsky
         'Every linguist wants to have his articles read by Chomsky'

   f.   *Muita mulher* gostaria de se livrar de {*seu* marido/o marido *dela*}
         A-lot-of woman would-like of SE to-set-free of {*SE* husband/the husband *of-her*}
         'Many women would like to get rid of their husband'

These judgments are also reflected in the frequency of possessive forms in spoken language: Silva (1982:243-4) reports a categorical use of *seu* when the antecedent is a NP whose domain ranges over feminine and masculine individuals, like *quem* 'who' in (4c) and *cada um* 'each one' in (4d). More recently, Silva found the following pattern of distribution in spoken language:

Table 5: distribution of *seu* (versus *dele*) according to antecedent (cf. Silva 1991:94)

Antecedent	Occs. of *seu*	Perc.
totally general (e.g., *todos* 'everyone', *qualquer um* 'anybody')	66/66	100%
non-referential indefinites (e.g., *um cara* 'a guy', *mulher* lit. 'woman', meaning 'women')	13/23	56,52%
non-referential definites (e.g., *o cara* lit. 'the guy' meaning 'one', *o ser humano* 'the human being')	17/110	15,45%
definites denoting group of ilimited size (e.g, *os padres* 'the priests', *as crianças* 'the children')	3/46	6,52%
definites denoting group of limited size (e.g, *meus netos* 'my grand-children', *meus alunos* 'my students')	2/40	5%
totally definite (e.g., proper names)	14/924	1,44%

Table 5 appears to confirm the judgments in (4). Quantified NPs like *todos* 'all' and *qualquer um* have the behavior of *quem* and *cada um* in (4c,d): they are compatible only with *seu* (100% of the occurrences), not with *dele* (no occurrence). Quantified NPs like *um cara* and *mulher* have the behavior of *qualquer linguista* and *muita mulher* in (4e,f): they are compatible with both *seu* and *dele* (around 55% and 45%, respectively). But the most significant break in the scale appears between *quantificational* NPs (general and indefinite NPs), which favor *seu* (55% up to 100% of the occurrences), and *non-quantificational NPs* (definites), which disfavor *seu* (15% down to 1% of the occurrences). The above data indicate, then, that the alleged restriction on the 3rd person use of *seu* is rather a restriction on its use with antecedents like *o João*, *aquelas garotas* in (4a,b), and other definite NPs, in particular, those that are *referential*: table 5 shows clearly that the unavailability of *seu* increases proportionally to the referentiality of its antecedent. That is, *seu* is fine with quantificational antecedents because these are not referential. Now, it is obvious that quantificational NPs are 3p expressions, and so *seu* has to be compatible with a 3p use.

   Thus, we conclude that the 3p possessive *seu* cannot be considered compatible only with (notional) 2p in contemporary spoken BP, and that the hypothesis that *seu* was reanalized as a 'pure' 2nd person form is incorrect. The facts I reviewed above suggest, then, that question (3) should be rephrased as:

(5)   if *seu* is used with the new 2p forms because these are grammatically 3p, why is it that *seu* is *not* used anymore for 3p *referential* antecedents?

Actually, even this way of stating the problem might be misleading, since, as I will show in the next section, the restriction on referential antecedents can be lifted under appropriate discourse circumstances.

2   BP 3p Possessives in Narratives

According to Ariel (1990, 1994), choice of specific NP forms in a discourse is a function of the role NPs play in the retrieval of discourse referents. More specifically, what an NP encodes in its form is the level of its antecedent's *accessibility*, that is, of the antecedent's level of activation in memory. Accessibility is conditioned by the following factors (see Ariel 1990, sections 0.3 and 0.42):

(6) a. *Distance*: the distance between the antecedent and the anaphor;
    b. *Competition*: the number of competitors for the role of antecedent;
    c. *Saliency*: the level of prominence of the antecedent, mainly whether it is a topic or non-topic;
    d. *Unity*: whether antecedent and anaphoric form belong to the same discourse unit (frame, world, episode/point of view, paragraph, etc.).

Thus, different types of NPs sign different levels of accessibility of a discourse referent. More specifically, cross-linguistic evidence leads to the following scale of NP types, where the level of the antecedent's accessibility decreases from left to right (adapted from Ariel 1990:73; see also Givón 1983:17):

(7)   *The Accessibility Marking Scale*:
        zeros < reflexives < agreement markers < cliticized pronouns < unstressed pronouns < stressed pronouns < proximal demonstratives < distal demonstratives < first names < last names < short definite descriptions < long definite descriptions < full names

The principle behind (7) appears to be clear: the 'less marked' an NP is, the more accessible the antecedent.[4] That is, the accessibility marking scale is basically the result of some principle of *functional economy*: the speaker has to provide as much 'information' as necessary for an efficient retrieval of the relevant discourse referent, and nothing more than that.

Back to the issue of the distribution of 3p possessives in BP, the prediction the accessibility scale in (7) makes is: *seu* ranks higher in the scale than *dele*. This is so because *seu* is a 'less marked' form – it is 'less informative' in the sense that it does not specify neither the number nor the gender of its antecedent (cf. fns. 2 and 4) –, and less informative NPs are higher in the Accessibility Marking Scale. To check this prediction, I inspected the distribution of *seu* versus *dele* in Rubem Fonseca's narration according to all four factors in (6) using the following criteria (see Menuzzi in progress for details):

a) *distance*: number of finite clauses intervening between the last mention of the antecedent and the anaphoric form (0 = in the same clause; 1 = antecedent in the previous clause, etc.);
b) *ambiguity*: whether another NP in the previous sentences might (Yes) or not (No) be, semantically and pragmatically, the antecedent of the anaphoric form;

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[4] Ariel argues that the following three basic factors determine 'markedness' of an NP (hence, the rankings in (7) above):

(i)   *Informativity*: the more lexical information a form incorporates, the lower the accessibility of its antecedent;
(ii) *Attenuation*: the more attenuated a form is (the less phonetic substance it has), the higher the accessibility of its antecedent;
(iii) *Rigidity*: the more rigid a form is in picking up one particular entity in a potentially ambiguous context, the lower the accessibility of its antecedent;

Informativity would be responsible, for example, for the fact that less specified forms such as SE anaphors rank higher in the scale than more specified forms such as full pronouns; attenuation, for the fact pronominal clitics rank higher than free pronouns; rigidity, for the fact that first names rank higher than last names. See Ariel (1990, section 4.21) and Givón (1983:17-23).

c) *topicality*: whether another NP in the previous sentences might (Yes) or not (No) be the topic for that stretch of narrative (topic = what the narrative is about, cf. Reinhart 1980);

d) *point of view*: whether the antecedent has (Yes), could have (?), or has not (No) the point of view of the narrative (point of view = the perspective from which the episode is narrated, cf. Ehrlich 1990).

The tables below provide the quantitative results for these factors (sample: first 70 occurrences of *seu* and all 30 occurrences of *dele* in narration; occurrences in quoted speech were ignored because they follow the distributional pattern of colloquial spoken language, as shown in tables 1 to 4 above):

Table 6: seu vs. *dele* according to *distance*

	Occs.					Perc.				
	0C	1C	2C	3C	Tot.	0C	1C	2C	3C	Tot.
seu	45	24	1	0	70	**64,3**	34,3	1,4	0	100
dele	7	17	5	1	30	23,3	**56,7**	16,7	3,3	100

Table 7: seu vs. *dele* according to *ambiguity*

	Occs.			Perc.		
	Yes	No	Total	Yes	No	Total
seu	6	64	70	8,6	**91,4**	100
dele	15	15	30	50,0	50,0	100

Table 8: seu vs. *dele* according to *topicality*

	Occs.			Perc.		
	Yes	No	Total	Yes	No	Total
seu	13	57	70	18,6	**81,4**	100
dele	19	11	30	**63,3**	36,7	100

Table 9: seu vs. *dele* according to *point of view*

	Occs.				Perc.			
	Yes	?	No	Tot.	Yes	?	No	Tot.
seu	43	12	15	70	**61,4**	17,2	21,4	100
dele	9	5	16	30	30,0	16,7	**53,3**	100

All the results above conform to the prediction made by Accessibility Theory for BP possessives. In particular, *seu* marks very highly accessible antecedents in the sense that, for all factors enhancing accessibility, *seu* antecedents appear to score very high. Thus, according to table 6, *seu* is specialized for the shortest distance (64% of its occurrences are within the same finite clause as the antecedent, while 56% of the occurrences of *dele* have the antecedent in the previous finite clause); according to table 7, *seu* is strongly disfavored by the presence of another potential antecedent (91% of its occurrences are in contexts there is no other potential antecedent, while occurrences of *dele* do not appear to be conditioned by this factor); according to table 8, it is also strongly disfavored by the presence of another potential topic that is not its antecedent (81% of occurrences when no such intervening potential topic is available, against 63% of occurrences of *dele* when there is an intervening potential topic); and, finally, according to table 9 *seu* is specialized as a marker of point of view (almost 60% of its occurrences are when the antecedent clearly has the point of view, against around 20% of occurrences when it does not; the pattern with *dele* reverses:

more than 50% occurrences of *dele* are when the antecedent clearly does not have the point of view, against 30% of occurrences when it does).

Of course, these results might only indicate that novels, being written in the standard language, may resort to forms which are not available anymore in spoken language. In particular, under the hypothesis that *seu* has become a 2p form in colloquial language, 3p use of *seu* in written language might be taken as the result either of normative pressure, or of bilingualism. In the latter case, there would be *two* grammars in conflict, that of the standard and that of the vernacular; the first would have two 3p possessives, *seu* and *dele*, and the second, only one, *dele*. As a consequence, use of *dele* in the vernacular should fully cover the possessive uses of *seu* and *dele* in the standard, that is, 3p *seu* in the standard would be functionally equivalent to *dele* in the vernacular.

We have already an argument against the possibilities sketched in the previous paragraph: 3p use of *seu* is idiomatic with quantificational NPs. Secondly, if the occurrences of *seu* were a pure matter of normative pressure, they should be either categorical or randomly distributed. But the fact that they are conditioned in *Agosto*'s narration by specific factors known to be relevant for discourse anaphora shows that *seu* is interacting with the author's narrative competence. Finally, in many cases native speakers not only agree with Rubem Fonseca's anaphoric choice, but also the relevant choice appears to be the only appropriate one, which shows that 'standard' *seu* is not functionally equivalent to 'vernacular' *dele*. This is exemplified by the excerpts in (8), (9) and (10) below (Rubem Fonseca's original expression is in bold; judgments reported are the average of the four speakers, including myself):[5]

(8)   [Mattos] Pegou o livro de direito civil. Ele botava os sujeitos na cadeia como polícia; como juiz ia fazê-los apodrecer num xadrez imundo de delegacia. Grandes perspectivas. Teve vontade de jogar o livro na parede. Se começasse a jogar livros nas paredes estava realmente ruim da cabeça. Voltar a advogar? [1] {***Seu último cliente**/?o último cliente dele*} lhe dera uma galinha como pagamento de honorários. Quer dizer, a mãe do cliente, que estava preso. Uma mulher infeliz como a mãe de todos os criminosos que eram apanhados. A pobre mulher havia decidido que precisava pagá-lo de alguma forma. Lembrava-se da cara satisfeita da mulher quando lhe dera a galinha, viva, embrulhada em papel de jornal, com as pernas presas por um barbante.

  Contara o episódio para Alice. [2] {***Sua ex-namorada**/*a ex-namorada dela*} ficara perturbada. [3] {*??O **seu** mundo**/**o mundo **dela***} era outro, não havia nele galinhas de pernas amarradas embrulhadas em papel jornal. Alice. (p.24)

"He [Mattos] took the book of civil law. He put people in jail as a policeman; as a judge he would leave them to rot in a dirty cell of some police station. Great prospects. He felt like throwing the book against the wall. If he started throwing books against the wall, he'd gone really mad. Back to practice? [1] *His last client* gave him a hen as payment. Or, rather, his client's mother – the client himself was in jail. She was an unhappy woman, as is the mother of every criminal who's been caught. The poor woman had decided she needed to pay him somehow. He remembered the contented face she had when she gave him the hen, wrapped in a newspaper, legs tied.

  He told the episode to Alice. [2] *His girlfriend* got shaken. [3] *Her world* was different, there were no hens with tied legs wrapped in newspaper in it. Alice."

(9)   Lacerda se despediu do major [Vaz] e caminhou com o filho para a porta da garagem do edifício. Vaz foi em direção ao carro. Alcino atravessou a rua e atirou em Lacerda, que correu para o interior da garagem. O estrondo do revólver ao disparar surpreendeu *Alcino*$_i$, que por instantes ficou sem saber o que fazer. Notou então que *o major*$_j$ se aproximara e agarrava {***sua**$_{i/??j}$ **arma**/a arma dele*$_{??i/j}$}. Novamente Alcino acionou o gatilho. O major continuou agarrando o cano do revólver até que Alcino, num repelão, soltou a arma dos dedos que a prendiam, caindo com o esforço que fizera. (p.72)

"Lacerda said goodbye to the major [Vaz] and walked with his son towards the garage. Vaz walked to the car. Alcino crossed the street and shot at Lacerda, who ran into the garage. The sound of the

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[5] The judgments below were marked as follows (according to fn. 1 above): *?* marks the dispreferred form when both forms may convey the intended sense equally; *??* marks a form which suggests or forces an interpretation which is not intended in or appropriate for that context; * marks a form which is unacceptable in the context. See Menuzzi (in progress) for details.

shot surprised *Alcino*$_i$, and for a moment he didn't know what to do. He realized, then, that *the major*$_j$ had come closer and was now holding *his*$_{i/j}$ *gun*. Alcino pulled the trigger again. The major kept holding the gun barrell till Alcino, with a sudden pull, got the gun off the major's hands, and fell down because of his effort."

(10)   *Ramos*$_i$ franzia a testa, como se estivesse preocupado com a áspera discussão entre Mattos e Pádua. Na verdade estava muito feliz; odiava os dois comissários e gostaria que ambos, como num filme de caubói, se matassem simultaneamente. Mas, infelizmente, *Mattos*$_j$, com certeza, não estaria portando {a *sua*$_{??j/i}$ arma/**a arma *dele*$_{j/??i}$**}. Que Pádua matasse Mattos então, devaneou Ramos. (p.184)

     "*Ramos*$_i$ frowned his forehead, as if he worried about the harsh argument between Mattos and Pádua. Actually, he was very glad; he hated the two comissaries and would like them both, as in a western, to kill each other. But, unfortunately, *Mattos*$_j$ was certainly not carrying *his*$_{j/i}$ *gun*. Let Pádua then kill Mattos, wished Ramos."

Constrasts like the one in [2] of (8) demonstrate that in some contexts use of *seu* may actually be obligatory, and the alternative *dele* is simply unavailable: the effect of *dele* in [2] is to trigger a search for a male character who is not Mattos, but there is no other candidate in the context. More common are contrasts like the one in [3] of (8), and also those in (9) and (10), in which choice of the unappropriate form does not lead to unacceptability, but still has a disruptive effect on the interpretation. In [3] of (8) choice of *seu* instead of *dela* has the effect of changing the perspective of the narrative, which is Mattos's, to Alice, and this is inconsistent with the continuation of the narrative. In (9) choice of *dele* instead of *seu* suggests that the gun might be the major's, not Alcino's, and this is again inconsistent with the continuation of the episode. Inversely, in (10) choice of *seu* instead of *dele* suggests that the gun might be Ramos's, not Mattos's, which is obviously not the intended interpretation.[6]

     Discussion of these and similar examples has an interest of its own (see fn. 6), but it suffices for us here to see that native judgments basically match Rubem Fonseca's choices. This is a clear indication that the results obtained by quantitative analysis of *Agosto* cannot be considered a mere reflex of normative pressure on the written register (but see fn. 7). In particular, if vernacular *dele* were functionally equivalent to standard *seu* and *dele* together, *dele* should be able to replace *seu* in narratives without leading to unacceptability or disrupting interpretation. Such effects are expected, however, if the the distribution of BP possessives in narratives is determined in a principled fashion. In other words, the results reported above seem to characterize part of the narrative competence of Brazilian Portuguese speakers: the use of 3p possessive forms as determined by Accessibility principles.

     Thus, *seu* can be used with a referential 3p antecedent in BP under appropriate discourse conditions: when the antecedent is highly accessible in Ariel's sense.[7] And this, in turn, supports the argument of the preceding section: *seu* is still compatible with a 3p use in BP. Therefore, the restrictions on its distribution cannot be the result of a process in which *seu* has been reanalyzed as a 2p form. Rather, the conclusion the facts I presented so far suggest is:

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[6] Close inspection of narrative stretches such as (8) to (10) reveals some interesting generalizations about the interaction of the factors determining accessibility. For instance, when point of view is in conflict with some other factor (distance, ambiguity or topicality) – that is, when they point to different potential antecedents for a marker of high accessibility such as *seu* in BP –, point of view always wins. This suggests that the antecedent having the point of view makes an antecedent is the most accessible one.

[7] The fact that *seu* has a low frequency with referential 3p antecedents in spoken language suggests, on the other hand, that this register does not provide the appropriate discourse conditions for the occurrence of that form. This is not surprising, however, since colloquial exchange hardly achieves the level of elaboration required; only in long and elaborate texts, as narratives are, we need to keep track of different topics of discourse, different characters and different points of view simultaneously.

     Though I have been suggesting that the distribution of BP possessive forms is rooted in discourse principles, the power of the norm on the BP standard should not be underestimated: it might explain, for example, the low frequency of *dele* in written language. As we have seen in table 1, we find only 14% of possessive occurrences filled by *dele* in Silva's written corpus. In Rubem Fonseca's *Agosto*, a novel with more than 300 pages, I have found only 30 occurrences of possessive *dele* in narration (an approximate average of one occurrence each 10 pages), while the first 70 occurrences of *seu* can be found in the first 72 pages (an approximate average of one occurrence per page). That is, in *Agosto*'s narration the frequency of *seu* is around 10 times higher than the frequency of *dele*. This contrasts strikingly with the frequency of these forms in spoken language, cf. section 1.

(11)   the BP pronominal system has undergone or is undergoing some change which made *seu* become disfavored as an anaphoric form for 3p referential antecedents.

This is the innovative feature of the BP possessive system when compared to other Romance systems. Setting aside the issue of why *seu* is favored as a 2p form in spoken language (but see fn. 12 below), the questions which should be addressed concerning (11) are:

(12)   a. why has *seu* become strongly disfavored with a 3rd person *referential* antecedent?
        b. why is this restriction lifted when the antecedent is highly accessible?

As far as I know, no previous work on BP possessives recognized (12a) as the core issue to be addressed, and so (12b) was not recognized either. In the next section I will sketch a way of approaching (12a,b) which tries to generalize over a number of less salient properties of the pronominal system of BP.

3   *Seu*, 3p Anaphors in BP and Chains

The possessive *seu* shares many properties of 3p anaphors in BP. Let me list a few. First, they share the same range of antecedents, i.e, in principle they may take any antecedent grammatically specified as 3rd person, independently of gender or number (cf. fn. 2). Second, there are environments in which 3p anaphors, just like *seu*, become disfavored with referential antecedents but not with quantificational ones:

(13)   a. *O João* viu uma cobra atrás de {*(?)?si/ele*}
           João saw a snake behind of {*(?)?SE/him*}?
        b. *Ninguém* viu cobra alguma atrás de {*si/(?)*ele*}
           Nobody saw any snake behind of {*SE/(?)*him*}

Third, *seu* in BP is subject to a restriction typical to anaphors, but not to pronouns: anaphors like *si* require the antecedent to *c-command* them, as exemplified in (14a,b) below.[8] And, as we see in (15), the possessive *seu* appears to be sensitive to the same structural condition in BP:

(14)   a. [$_S$ *O João* só fala de {*si/ele*}]
           [$_S$ *João* only speaks of {*SE/him*}]
        b. [$_S$ [$_{NP}$ A mãe d*o João*] só fala de {*si/ele*}]
           [$_S$ [$_{NP}$ The mother of *João*] only speaks of {*SE/him*}]

(15)   a. [$_S$ *Qualquer rapaz* reconheceria {*sua* namorada/a namorada *dele*} numa foto]
           [$_S$ *Any boy* would-recognize {*SE* girlfriend/the girlfriend *of-him*} in-a picture]
        b. [$_S$ [$_{NP}$ A mãe de *qualquer rapaz*] reconheceria {*(?)*sua* namorada/a namorada *dele*} numa foto]
           [$_S$ [$_{NP}$ The mother of *any boy*] would-recognize {*(?)*SE* girlfriend/the girlfriend *of-him*} in-a picture]

To summarize, the 3p possessive *seu* BP has the following anaphor-like properties:

(16)   Anaphor-like properties of *seu*:
        a. the same morphosyntactic specification with respect to antecedents;
        b. restriction on referential antecedents;
        c. structural requirement on the dependency (c-command).

(16) suggest that, to understand the distribution of *seu*, it might be instructive to look at the distribution of anaphors in BP. In Menuzzi (1995, in progress), I argue at length that one of the main conditions

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[8] Roughly, an antecedent c-commands an anaphoric form if all constituents containing the antecedent also contain the anaphoric form: in (14a) *o João* is contained only by S, which also contains the anaphoric form; in (14b), however, *o João* is contained by a NP that does not contain the anaphoric form; hence, *o João* c-commands the anaphoric form in (14a) but not in (14b).

determining the distribution of anaphors in BP is the so-called *Chain Condition*, a syntactic condition which applies both to A-chains and to anaphoric dependencies as well (cf. Reinhart & Reuland 1992, 1993; for chain terminology, see fn. 9). The Chain Condition can be stated informally as in:

(17)   *The Chain Condition*: If C = (X, ...) is an A-chain, then X has to be 'rich in grammatical features', and no other position in C can.[9]

We may take an NP to be 'rich in grammatical features' if it is specified for person, number and gender. The effects of the Chain Condition on anaphoric dependencies can be exemplified by a contrast like:

(18)   *O João* já [$_{VP}$ {*se*} barbeou {**ele*}] hoje
        João already [{*SE*} shaved {**him*}] today

Both the alternative anaphoric dependencies (*o João, se*) and (*o João, ele*) in (18) count as an A-chain for the purposes of (17), *o João* being the X of (17), and *se* or *ele* filling the '...' blanket. The dependency (*o João, se*) is fine because *o João* is rich in grammatical features (it is 3psm), while *se* is not (it is 3p, but unspecified for number and gender), as required by (17). (*o João, ele*) is excluded, however, because *ele* is rich (it is 3psm, just like *o João*) and, hence, excluded by (17). Thus, the Chain Condition in (17) plays against anaphors and in favor of pronouns whenever a dependency can be recognized as a chain. But it also excludes anaphors if no dependency is established, as in (19):

(19)   *Eu*$_i$ já [$_{VP}$ {**se*}$_j$ barbeou {*ele*}$_j$] hoje   (*j* = João, *i* = speaker)
        I$_i$ already [{**SE*}$_j$ shaved {*him*}$_j$] today

In (19) the only antecedent available for *se* or *ele* is the subject *eu* 'I', which is incompatible with those forms. In such cases, the anaphoric form has to search its referent in the discourse (say, by referring to João either deictically or as somebody already referred to in the previous discourse). Under such circumstances, however, the anaphor is excluded and the pronoun is fine. This is so because, since there is no antecedent for the anaphoric form in (19), it has to stand alone as a single chain, that is, a chain with only one position:

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[9] The notion of *chain* was introduced by Chomsky (1981) to capture common properties of argument NPs, as in (i), and instances of *movement*, that is, non-contiguous dependencies linking NPs and the place where they get their interpretation, as in (ii) and (iii):

(i)   Argument NPs: *John* said that *Mary* loves *Bill*
(ii)   *wh*-movement: *Who* [did John say [*t* that Mary kissed *t*]] ?
(iii)   NP-raising: *John* seems [*t* to have been advised [*t* to leave the country]]

The *t*'s (for *traces*) in (ii) and (iii) represent the places the NP in italics is supposed to be related to by movement. A chain is, then, a set of syntactic positions (X, ...) in which 'X' is an NP, and '...' a set of traces, possibly empty if the NP did not move. In the latter case, (X, ...) = (X), which is then called a *single* chain: this is the case of the argument NPs in (i).

Chains may be distinguished with respect to the position occupied by X. If this position is assigned a grammatical function such as subject or object, then the chain is called an *A-chain*: e.g, the chain (*John, t, t*) in (iii) is an A-chain because *John* occupies a subject position (the single chains in (i) are also A-chains, of course). If X occupies a position to which no such grammatical function is assigned, then the chain is called an *A'(A-bar)-chain*: e.g., the chain in (ii) is an A'-bar because *who* does not occupy a position to which a grammatical function is assigned.

Chains are subject to a number of structural conditions. For example, NPs have to c-command their traces. There are also the so-called *locality* conditions, which require the chain to be established within a specific structural domain. For example, there are some constituent boundaries, called *barriers*, that cannot be crossed by chains (see Chomsky 1986). E.g., the fact that an A-chain can be formed across the VP boundary in (iv) below shows that it is not a barrier for A-chains; inversely, impossibility of an A-chain in (v) shows some barrier has been crossed:

(iv)   *John* [$_{VP}$ was shaved *t*] by Paul
(v)   **John* [$_{VP}$ [$_{VP}$ was seen a snake] [$_{PP}$ behind *t*]]

For concreteness, I will say that, whenever some constituent boundary introduces a barrier-like or locality effect in a structure, this constituent itself is a barrier: e.g., the PP in (v) is a barrier. Another locality condition on chains, called *minimality* of movement, is that they cannot cross a domain in which there is another potential antecedent for the trace (see Rizzi 1990): e.g., the A-chain (*John, t*) in (vi) is excluded because it crosses a potential antecedent, namely, *it*:

(vi)   **John* seems [that *it* is likely [*t* to win]]

We say that the more a chain complies with the locality conditions, the more *local* it is. Full compliance results in a local, hence, well-formed chain. For an introduction to Chain Theory, as well as review of its development in GB syntax, see Lasnik & Uriagereka (1988). For the extension of Chain Theory to anaphoric dependencies, see Reinhart & Reuland (1992, 1993).

the anaphoric form has to be the X in (17), and '...' is empty (see fn. 9). Being the X of (17), the anaphoric form needs to be rich in features, according to the Chain Condition: since the pronoun is (actually, this is why it is out in (18)), it is fine in (19); but the anaphor is not rich (for which reason it is fine in (18)), so it cannot stand alone as a single chain and is excluded. Thus:

(20) a. the Chain Condition plays against pronouns and in favor of anaphors if they form a chain with an antecedent (cf. (18));
  b. it plays against the anaphor and in favor of the pronoun if there is no antecedent (cf. (19)).

It can be shown, on the other hand, that Chain Condition effects on anaphoric dependencies are not absolute, but rather relative to the locality of the dependency, counted in terms of barriers to movement chains (see fn. 9 again). Let me briefly sketch the argument here. Comparing the possibilities of NP movement out of phrasal constituents in Romance and English, what we find is the following scale of 'barrierhood' of constituent boundaries, where '>' means 'is more local than':[10]

(21) *Locality Hierarchy*:

  Transitive > Compl PP > Compl NP > Non-Compl PP

Consider the pattern of contrasts anaphor versus pronoun which arises in dependencies crossing the structures in (21) in BP (leaving aside complement NPs for a moment):

(22) a. *O João* [$_{VP}$ {*se*} barbeou {**ele*}] hoje   (Transitive)
    João [$_{VP}$ {*SE*} shaved {**him*}] today
  b. *O João* [$_{VP}$ falou [$_{PP}$ de {*si/(?)?ele*}] pr'a Maria]   (Compl PP)
    João [$_{VP}$ spoke [$_{PP}$ of {*SE/(?)?him*}] to Maria]
  c. *O João* [$_{VP}$ [$_{VP}$ viu uma cobra] [$_{PP}$ atrás de {*(?)?si/ele*}]]   (Non-Compl PP)
    João [$_{VP}$ [$_{VP}$ saw a snake] [$_{PP}$ behind of {*(?)?SE/him*}]]

(23)   *Transitive* > *Compl PP* > *Non-Compl PP*

  se/si   ok   ok   (?)?
  ele   *   (?)?   ok

The generalization which emerges from (23) is the following: the less local the anaphoric dependency is with respect to the hierarchy in (21), the *less* available the anaphor, and, inversely, the *more* available the pronoun. This suggests the effects of the Chain Condition (i) increase on the anaphor and (ii) decrease proportionally on the pronoun as the dependency becomes less local.

    In Menuzzi (in progress) I argue that patterns like (23) lead us to conclude that Chain Theory does not apply literally to anaphoric dependencies — if it did, we would expect it to have absolute effects in (23), as it has on movement chains (cf. fn. 10). Rather, Chain Theory applies to anaphoric dependencies in an analogical way: the more the anaphoric dependency resembles a chain (in structural terms), the stronger the action of conditions on chains on the anaphoric dependency. This explains patterns like (23) in a natural way: (iii) The more local the dependency, the stronger the action of the Chain Condition on the dependency itself; (iv) the stronger the action of the Chain Condition on the dependency, the more the anaphor is favored and the pronoun disfavored (as in (20a)). Inversely, (v) the less local the dependency, the weaker the action of the Chain Condition on it, and the stronger its action on the anaphoric form as a single chain; (vi) the stronger its action on the anaphoric form as a single chain, the more the anaphor is disfavored and the pronoun favored (as in (20b)).

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[10] The hierarchy is motivated by the following facts: transitive structures are never barriers (since A- and A'- movement out of an object position in transitive structures is possible both in Romance and in English); complement PPs may or may not be barriers (A- and A'-movement out of the object of complement PP is possible only in English, not in Romance); complement NPs may not be barriers, but possibilities are more limited than with complement PPs (only A'-movement out of a complement NP); finally, non-complement PPs are always a barrier (NP movement out of the object of a non-complement PP is impossible in Romance and English). See Menuzzi (1995, in progress) for details. For the A/A' distinction, see fn. 9 above.

Notice that, under the approach sketched above, the restriction anaphors show with referential antecedents in (13a)=(22c) is actually a consequence of the Chain Condition: the restriction surfaces when the anaphor is within a non-complement PP, in which case the dependency is not local enough to count as a 'good' chain, and the anaphor becomes disfavored (since it has to stand alone as a single chain, as in (19)). The fact that the same restriction does not surface with quantificational antecedents like 'nobody' in (13b) above has an independent source: *pronouns* are strongly disfavored with antecedents like 'nobody' (see fn. 11), and in contexts like (13) the cost imposed by this restriction on pronouns appears to be higher than the cost imposed by the Chain Condition on the anaphor. For this reason, the anaphor appears to tolerate Chain Condition effects in (13b).[11]

Let us return to the distribution of the 3p possessive *seu* in BP, which, as we have seen before, has many of the properties of 3p anaphors (cf. (16) above). Suppose, instead of assuming that *seu* has become or is becoming a 2p person form in BP, as suggested in the literature (see section 1), we say that actually it has become or is becoming a 3p *anaphor*:

(24)   *Hypothesis 1*: the 3p possessive form *seu* is (becoming) a 3p anaphor in BP

This would, of course, explain the properties in (16). More importantly, it allows us to extend to *seu* the approach I suggested above for the restriction anaphors show with referential antecedents in certain contexts. That is, the contrast in (25a) would be seen as analogous to (25b):

(25)   a. *O João* viu {[NP uma foto *(?)?sua*]/[NP uma foto *dele*]} no jornal   (Compl NP)
            João saw {[NP a picture *(?)?SE*]/[NP a picture *of-him*]} on-the newspaper
        b. *O João* viu uma cobra [PP atrás de {*(?)?si/ele*}]   (Non-Compl PP)
            João saw a snake [PP behind of {*(?)?SE/him*}]

As we have seen in the discussion of (22)-(23), the anaphor in (25b) is disfavored because of the Chain Condition: according to the hierarchy in (21) the anaphor is too far from its antecedent for the dependency to count as a 'good' chain; the anaphor starts to be taken as a single chain, which it cannot. Precisely for the same reason, the pronoun is fine in (25b). Note now that complement NPs rank relatively low in the Locality Hierarchy in (21); they are closer to non-complement PPs, the less local constituent boundary in (21), than to transitive structures, the most local one. This suggests that a dependency crossing a complement NP boundary, as in (25a), might not be local enough for anaphors in BP, triggering Chain Condition effects. This analysis is confirmed by the fact that the anaphor *si* is also disfavored within complement NPs when the antecedent is referential, but not with antecedents like 'nobody':

(26)   a. *O João* viu {[NP uma foto de *??si*]/[NP uma foto *dele*]} no jornal
            João saw {[NP a picture of *??SE*]/[NP a picture *of-him*]} on-the newspaper
        b. *Ninguém* jamais viu {[NP uma foto de *si*]/[NP uma foto *(?)*dele*]} neste jornal
            Nobody ever saw {[NP a picture of *SE*]/[NP a picture *of-him*]} on-this newspaper

In sum, the apparent restriction *seu* imposes on 3p referential antecedents appears to be essentially analogous to the one 3p anaphors do: it is actually an effect of the Chain Condition, which disfavors anaphors when they are 'too far' from their antecedent. 'Too far', for BP anaphoric forms, means: from complement NPs on in the Locality Hierarchy in (21).

The analysis I sketched above for the properties of 3p *seu* in BP ties up a number of undergoing changes in the behavior of pronominal forms in BP. Not only *seu* has a more restricted distribution than it used to have in standard Portuguese, but so do the 3p anaphors; moreover, *seu* and 3p anaphors share a number of properties; in particular, they show a similar restriction on referential antecedents. Such facts

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[11] In Menuzzi (1996, in progress) I show that the condition playing against pronouns in cases like (13b) above is a restriction on dependencies between quantificational NPs like 'nobody' and gender-marked forms. This is what emerges when we check all the anaphoric possibilities: only overt 3p pronouns are disfavored, but not null subjects, anaphors, the possessive *seu* or the dative clitic *lhe* 'to-him/her'. The latter forms, however, are precisely the 3p ones not marked for gender. Notice that we cannot appeal to this restriction on gender-marked forms to explain the acceptability of *seu* with NPs like *qualquer linguista* 'any linguist' (as in (5c,d)), since these are compatible with pronouns. See Menuzzi (in progress) for discussion of this latter case.

cannot be understood if we say that that *seu* is becoming a form for 2p only. However, if *seu* is (becoming) an anaphor (Hypothesis 1) and, hence, subject to the Chain Condition, the pattern starts to make sense. And we have an answer to question (12a) above (why has *seu* become strongly disfavored with a 3rd person *referential* antecedent?). But we still have to answer (12b), repeated as (27):[12]

(27)   Why is the restriction lifted when the antecedent is highly accessible in the discourse?

I would like to close this paper discussing a possible answer for (27).

4   Conclusion: Chains & Accessibility

I argued in the previous section that the restriction on 3p referential antecedents should be seen as a Chain Condition effect: *seu* is (becoming) an anaphor and, given the position of complement NPs in the Locality Hierarchy, *seu* is disfavored by the Chain Condition (*seu* is too far from its antecedent for the dependency to count as a 'good chain', and as an anaphor it cannot stand alone in a single chain). Thus, (27) could be rephrased as: why can the effects of the Chain Condition, a syntactic condition, be overcome by appropriate discourse conditions? The answer I would like to suggest is: because Chain Theory acts on anaphoric dependencies on behalf of Accessibility Theory, which rules discourse.

We had already occasion to witness the fact that Chain Theory cannot be taken to apply to anaphoric dependencies literally: Chain Condition effects on anaphors and pronouns are proportional to the Locality Hierarchy, and not a pure mirror of locality effects on movement chains, which are absolute (cf. discussion of (22) and (23) and fn. 10 above). In other words, when acting on anaphoric dependencies, Chain Theory seems to look for the right balance between the locality of the dependency and the morphosyntactic content of the anaphoric form. In this, however, Chain Theory appears to have essentially the same role as the Accessibility Theory principles, which also try to strike a balance between the accessibility of a discourse referent, and the 'markedness' of the anaphoric device used to retrieve it.

The Accessibility Marking Scale has the effect that the more accessible the antecedent, the less marked the anaphoric device should be. The Chain Condition, on the other hand, has as a consequence that the closer a dependency is to a chain, the more available the anaphor and the less available the pronoun. This is so because pronouns are 'rich in grammatical features', while anaphors are 'poor' (cf. discussion of (18) and (19) above). But, in Ariel's terms, this also means that pronouns are 'more marked' than anaphors. Thus, the Chain Condition has, actually, an effect of the same nature as the Accessibility Marking Scale: it amounts to a requirement of *economy* whenever possible:

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[12] The analysis I propose raises at least two other questions for which I can offer no more than a few remarks:

(i)   a.   Why is *seu* becoming an anaphor in BP, and not in other Romance languages?
      b.   Why does it strongly favor the 2p interpretation in spoken language?

The answer to (ia) might have to do with the fact that, as far as I know, BP is the only standard Romance in which motivation for grammatical 2p is quickly vanishing (see fn. 3). This is true even of dialects in which forms of the 'old' 2p person paradigm have been preserved, in particular those which still have *tu* as the subject form for 2p 9 (as in my own): such dialects have long lost the corresponding 2p form of the verb, and collapsed 2p and 3p as far as the verbal paradigm is concerned. This indicates that the distinction between 2p and 3p disappeared from the inflectional system. Once this distinction is lost, however, the lexical information carried by *seu* becomes even weaker than it was in standard Portuguese, in which it is grammatically distinct from 1p and 2p forms. If the grammatical distinction between 2p and 3p is lost, than *seu* becomes grammatically distinct only from 1p forms. And, the weaker the information load of a NP, the higher its position in the Accessibility Marking Scale, that is, the closer the form comes to anaphors, which occupy to top of the scale (cf. (7) of section 2; see also Menuzzi 1996).

As for (ib), it should be noticed that use of *seu* as a pronominal form for (notional) 2p also finds a parallel in realm of Portuguese anaphors, though not in BP: in spoken European Portuguese the 3p anaphor *si* is used instead of *você* 'you' in preposition-governed positions (see Teyssier 1976:100-1 and Cuesta & da Luz 1971:154-5):

(ii) O João viu uma cobra atrás de {*si/??você*}
      João saw a snake behind {*SE(=you)/??you*}

And, though *si* can be used as a pronominal form for (notional) 2p in European Portuguese, it is still a 3p anaphor: for example, if its antecedent is 3p properly, it has to be within the same sentence. That is, European Portuguese *si* has essentially the same distribution as BP *seu*. This suggests that these two forms are undergoing a similar process, which we may describe as: 3p anaphors may acquire a pronominal 2p person use in a system in which the corresponding 2p form is grammatically 3p. I have no particular insight on why this happens (though the pattern seems to be recurrent: see Head 1978:179-8).

(28)   *Accessibility Marking:*   *Chain Condition:*

    Effect: functional economy   morphosyntactic economy
          (informativity, attenuation, rigidity)   (grammatical features)

Recall that these economy effects are scalar in nature, being proportional to the accessibility of the antecedent and to the level of well-formedness of the chain configuration, respectively. But these notions themselves appear to be determined by factors absolutely analogous in nature:

(29)   *Accessibility:*   *Chain:*

          Distance (sentences)   Distance (barriers)
    Factors: Competition (ambiguity)   Minimality (potential antecedent)
          Saliency (discourse prominence)   C-Command (structural prominence)
          Unity (no discourse unit crossed)   Locality (no barrier crossed)

It is unlikely that two sets of principles governing the same domain of phenomena – anaphoric dependencies – happen to have the same general effects and set up just by accident. Rather, the strong parallel between Chain Theory and Accessibility Theory suggests that there is some principled connection between the two. What might such a connection be?

    One possibility is that one of the theories is reducible to the other. It does not appear feasible to reduce Accessibility Theory to Chain Theory. This is so because Chain Theory is formulated on the basis of notions which are structural, configurational in nature – that is, defined on the basis of phrase markers –, and hence circumscribed to the domain of the sentence. That is, to have any explanatory power at all, notions like barrier, c-command and locality need to be defined in terms too strict to cover their Accessibility correlates: sentence, discourse prominence (topic, point of view), discourse unit (frame, episode, paragraph). Similarly, the typology of NPs required by Accessibility principles cannot be reduced to the typology found to be relevant to sentential anaphora. As we have seen in section 2, crosslinguistic evidence provides the following typology with respect to Accessibility Marking (repeated from (7)):

(30)   *The Accessibility Marking Scale*:
    zeros < reflexives < agreement markers < cliticized pronouns < unstressed pronouns < stressed pronouns < proximal demonstratives < distal demonstratives < first names < last names < short definite descriptions < long definite descriptions < full names

(30) is far too fine-grained, however, to be matched by whatever typology has ever been motivated in syntactic terms. Classical Binding Theory distinguishes essentially three types of NPs with respect to restrictions on sentential anaphora, which could be charaterized in the following terms according to their morphological properties (cf. Burzio 1989, 1991; if we distinguish, as Reinhart & Reuland 1993 do, anaphors from reflexive markers, then the typology would come to four types of NPs):

(31)   *Binding Scale*:   anaphors < pronouns < full NPs

    anaphors: defective in grammatical features, no lexical features;
    pronouns: non-defective in grammatical features, no lexical features;
    full NPs: non-defective in grammatical features, with lexical features.

It is obvious that, rather than subsume (30), the scale in (31) is a subcase of it: the subcase in which only the presence of grammatical and lexical features is taken into account (but not further distinctions into these classes of features, or any other property of NPs, such as attenuation or rigidity: see fn. 4 above). Likewise, the factors determining the relative well-formedness of anaphoric chains can also be understood as subcases of the more general factors determining accessibility: they are their structural, syntactic correlates. For example, barriers can be taken to be a unit for counting distance in syntactic terms, as locality can be taken to be the syntactic instantiation of a general concept of unity or domain, and so on. That is, the action of Chain Theory on anaphoric dependencies can be understood as a particular case of the broader domain of Accessibility Theory.

The fact that Chain Theory effects can be subsumed under the more general directives of Accessibility Theory does not imply, however, that Chain Theory can be reduced to Accessibility Theory. In particular, Chain Theory does not seem to be the result of a process of grammaticalization of Accessibility principles (as Ariel suggests grammatical conditions on anaphoric dependencies might be, cf. Ariel 1994, fn. 26, p.34). This is so because Chain Theory is motivated by syntactic phenomena which, as far as I know, were never successfully reduced to discourse principles: the structural aspects of movement processes (for instance, the fact that movement is always to c-commanding positions). Moreover, Chain Theory effects do appear to have the hallmark of Accessibility effects only on anaphoric dependencies, not on movement: locality effects on anaphoric dependencies appear to be scalar, while they are absolute on movement.

How can we subsume Chain Theory effects on anaphoric dependencies under Accessibility Theory without reducing Chain Theory to Accessibility Theory? The suggestion I would like to make is this: Chain Theory is primitively concerned with syntactic objects, movement chains, but it applies analogically to anaphoric dependencies, and this is so because it acts on behalf of Accessibility Theory, the theory primitively concerned with anaphoric dependencies:

(32)   *Hypothesis 2*: Syntax interprets Accessibility requirements on anaphoric dependencies (at the sentence level) as Chain Theory requirements.[13]

The idea is that Accessibility Theory governs the choice of anaphoric devices, but, when the anaphoric dependency is sentence-internal, accessibility effects are determined by Chain Theory (among other things). More specifically: (i) intra-sentential accessibility is determined (in part) by how much the dependency conforms to the chain format: the closer the dependency gets to a chain, the more accessible the antecedent is; and (ii) accessibility marking effects are determined by the Chain Condition: the closer the anaphoric dependency is to a chain (i.e., the more accessible the antecedent), the better the anaphor (i.e., the less marked anaphoric form); the farther the anaphoric dependency is from a chain (i.e., the less accessible the antecedent), the better the pronoun (i.e., the most marked anaphoric device). Under this view, there is nothing surprising in the fact that Chain Theory effects on anaphoric dependencies are not absolute: this is just the way Accessibility requirements operate in discourse anaphora.

Let us reconsider again (27): why can the restriction on 3p referential antecedents be lifted under appropriate discourse conditions? Recall now that (i) the restriction on 3p referential antecedents is due to the anaphor-like nature of the possessive *seu* in BP, and to the fact that anaphors within a complement NP incur Chain Condition effects because of the position of complement NP boundaries in the Locality Hierarchy (cf. section 4). Recall, furthermore, that (ii) the appropriate discourse conditions for that restriction to be lifted arise when the antecedent is highly accessible in the discourse (in particular, when it has the point of view of the narrative, cf. section 3). Finally, recall (iii) the syntactic conditions under which anaphors can overcome Chain Condition effects: when the dependency gets closer to a chain configuration. Notice that high accessibility in (ii) has, for the possessive, the same effect as conformity to a chain configuration has for anaphors in (iii): in both cases, an anaphor-like element is allowed to overcome the effects of the Chain Condition. But, given Hypothesis 2, this is does not come as a surprise: according to Hypothesis 2, Chain Condition effects on anaphoric dependencies *are* the result of accessibility marking requirements, and conformity of an anaphoric dependency to the chain configuration *is* a manifestation of high accessibility, which can also be determined by discourse factors (such as point of view). Then, the fact that *seu* can eventually overcome Chain Condition effects because of the high accessibility of its antecedent in the discourse is absolute analogous to the case in which an anaphor overcomes Chain Condition effects because it forms a chain with its antecedent: in either case Accessibility requirements are fully satisfied. In particular, the Chain Condition, a syntactic condition, can be overcome by appropriate discourse circumstances because it applies to anaphoric dependencies on behalf of discourse principles, namely, of Accessibility Theory.

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[13] This idea is latent in Reinhart & Reuland (R&R)'s joint work, though they have never formulated it this way. In R&R (1991:308-9 and, in particular, fn. 17), they suggest that contrasts between SE anaphors and pronouns should be accounted for by means of Accessibility Theory. In R&R (1992, 1993), however, they extend Chain Theory to anaphoric dependencies to account for this contrast in strictly local dependencies. Still, as they noticed in their (1991) paper and as we have seen here, contrasts between SE and pronouns are not limited to this domain, and basically depend on the distance the anaphor requires the antecedent to be, which varies across languages. See also Burzio (1994) and Menuzzi (1996) for discussion.

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