

## Subject-Prodrop in Yiddish\*

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### Abstract

An empirical quantitative study is presented that argues that Subject-Prodrop in Yiddish is not a unitary phenomenon. Rather, the data is first partitioned according to whether the referent of the zero subject is a discourse entity vs. propositionally introduced, the two types being subject to different syntactic constraints; then, those whose referent is a discourse entity are partitioned into two groups according to whether the referent is the second person singular or not, the second group but not the first being subject to discourse constraints storable in terms of Centering Theory.

### 0. Introduction.

Much work has been done in recent years on Subject-Prodrop in a number of languages, both from a syntactic perspective (Jaeggli 1980, Huang 1984, 1989, Bouchard 1985, Shlonsky 1987, Jaeggli and Safir 1989, Kayne 1991, among others) and from a discourse perspective (Li and Thompson 1979, Gundel 1980, Kameyama 1985, Di Eugenio 1990, Walker, Iida, and Cote 1990, 1994, Cameron 1992, among others). To my knowledge, however, virtually none of this work has been based on a corpus of naturally-occurring data and, perhaps relatedly, all have found Subject-Prodrop to be a unitary phenomenon in the language studied, although significant differences have been noted crosslinguistically. In this paper, I shall present a corpus-based analysis of Subject-Prodrop in Yiddish, a language in which Subject-Prodrop has not yet been analyzed, and I shall show that, at least in this corpus of this language, the term 'Subject-Prodrop' is a rubric covering phenomena that have diverse syntactic and discourse constraints.

In what follows, I shall first describe the corpus and present the syntactic constraints found. Then I shall present the results of a discourse analysis of Subject-Prodrop in Yiddish with respect to Centering Theory. Finally, I shall discuss the implications of these findings.

### 1. Yiddish Subject-Prodrop: the facts.

In this section, I shall first describe the corpus on which this study was based and then present the syntactic constraints on Subject-Prodrop found in the corpus.

#### 1.1. The corpus.

The corpus for this study is the 1923 Yiddish three-act play *Grine Felder* by Peretz Hirschbein, transcribed in Romanized form into an Emacs file by Beatrice Santorini and me and consisting of 2091 clauses. For this study, each clause was coded for 12 variables: clause type (declarative, imperative, interrogative), V/1 or V/2, position of subject (initial, medial, final, ambiguous between medial and final), overt presence/absence of subject, occupant of initial (preverbal) position, main vs. subordinate clause, subject type (full NP, personal pronoun, demonstrative pronoun, zero, *men* 'one', clause, *wh*-trace, etc.), subject referent (dummy—no referent, discourse entity, discourse deixis (Webber 1991), etc.), provenance (stage direction vs. character's speech), and three Centering-related variables, which will be discussed below.

#### 1.2 Preliminary findings: syntactic constraints.

A preliminary analysis of the corpus by VARBRUL revealed, first, that Yiddish Subject-Prodrop is not 'telegraphic' but is in fact perfectly well-formed in the colloquial language.<sup>1</sup> Examples are presented in 1:<sup>2</sup>

1. a. [0 = Ikh] Bin opgeven a khoydesh, efsher shoyn mer vi a khoydesh tsayt—genug. (GF.II.83)  
'[I] have been [here] a month, maybe already more than a month's time—enough.'
- b. [0 = Du] Veyst, az ikh bin dir mekane. (GF.I.69)  
'[You] know that I envy you.'
- c. [0 = Zi] Horevet iber di koykhes. (GF.III.97)  
'[She] Works too hard.'
- d. [0 = Ir] Badarft bentshn goyml. (GF.III.92)  
'[You] Should say a prayer of thanks.'
- e. Vazhne oysyes; (0 = zey) kukn poshet fun bretl arop. (GF.II.82)  
'Wonderful letters; [they] just look down from the blackboard.'

Note that pronouns of any person and either number may be dropped, contra the claim made by traditional Yiddish grammarians and teachers that only *du*, the second person singular pronoun, is deletable (Kagarov 1929, Zaretski 1929, Katz 1987). Below I shall speculate on why they might think this.

At the same time, the preliminary statistical analysis revealed that Yiddish Subject-Prodrop is subject to an important syntactic constraint, from which follow a number of other syntactic constraints, to which we shall now turn.

#### 1.2.1. Clause-initial Constraint.

The zero pronoun in a Yiddish Subject-Prodrop sentence must be clause-initial in that it must be preverbal and it may not follow a filled Comp. From this one constraint, a great many syntactic facts about its distribution follow.

##### 1.2.1.1. No zero subject in clauses with lexically realized 'Initial Field'.

First, Subject-Prodrop does not occur in topicalized sentences (2a-d), or in sentences with an initial expletive (2e), i.e. they do not occur in any sentence with a lexically realized preverbal, or 'Initial Field', constituent:<sup>3</sup>

2. a. Aza shayle kenst du/\*0 mir oykh paskenen. (GF.III.94)  
'Such a question you can also answer for me.'
- b. Shoyn lang bist du/\*0 aza khakhome? (GF.I.73)  
'For a long time already you've been such a wise woman?'
- c. Ver ken er take zayn, der mentsh? Efsher hot er/\*0 gehert, az ikh hob gelakht? (GF.I.71)  
'Who can he be, that guy? Maybe he/\*0 heard that I was laughing?'
- d. Oyb du vilst im zen, kenst du/\*0 ariberkumen tsu undz. (GF.I.72)  
'If you want to see him, you/\*0 can come over to us.'
- e. Dos, Elkone, tust du/\*0 an avle. (GF.II.83)  
'It's you/\*0, Elkone, who's committing a mistreatment.'

Note the following sequence of sentences, both of which have *du* 'you' as subject. The first, where the subject can be initial, has undergone Subject-Prodrop; the second, where the subject must be postverbal, has not and cannot:

3. [0 = Du] Host ongeton shikh? Gut host du/\*0 geton, mayn kind. (GF.II.91)  
'You/0 have put on shoes? You/\*0 have done well, my child.'

Note, however, that zero subjects may be preceded by a pre-S constituent, as in 4, but these are the same type of pre-S constituents that could precede an overt preverbal subject, as in 5, and thus do not contradict the generalization that zero subjects must be clause-initial, in the sense of occupying 'Initial Field':

4. a. Hersh-Ber, [0 = du] bist a lekish. (GF.I.71)  
'Hersh-Ber, you are a fool.'
- b. Kind mayns, [0 = du] bist dokh a kale gevorn. (GF.III.106)  
'My child, you've become a bride.'
- c. Take, [0 = du] meynst mit an emes? (GF.I.65)  
'Indeed, you really mean it?'
- d. Azoy gor, [0 = du] kukst zikh shoynt un ter tsu azoyne zakhn, vos men badarf nisht? (GF.I.67)  
'Just like that, you pry into things that you shouldn't?'
5. a. Hersh-Ber, du bist a lekish! (GF.I.72)  
'Hersh-Ber, you are a fool!'
- b. Nar, 's makht nisht oys. (GF.I.68)  
'Fool, it doesn't matter.'
- c. Avade, keyner badarf nisht visn. (GF.II.80)  
'Of course, no one needs to know.'
- d. Ot azoy, me shmuest. (GF.III.97)  
'Just like that, we're chatting.'

Note, by the way, that data like 4 provide evidence against a claim that Subject-Prodrop in Yiddish is some sort of 'phonological deletion' affecting only initial segments of a sentence (cp. Napoli 1982).

#### 1.2.1.2. Main Clause Constraint.

In contrast to Subject-Prodrop in the Romance languages, Turkish, and Japanese, inter alia, Yiddish Subject-Prodrop is confined to main clauses, which follows of course from the Clause-Initial Constraint:<sup>4</sup>

6. a. Ikh ken gantsene nekht mit an oyg nisht tsumakhn, zint du/\*0 host mir dertseylt. (GF.II.86)  
'I can't sleep a wink all night since you/\*0 told me.'
- b. Vorem Gitl iz take gerekht, vos zi/\*0 zogt, az du/\*0 tselozt Steren. (GF.I.67)  
'Because Gitl is indeed right when she/\*0 says that you/\*0 spoil Stere.'
- c. 'Kh veys nisht farvos du/\*0 host do moyre tsu hobn. GF.III.98)  
'I don't know why you/\*0 are afraid.'

#### 1.2.1.3. Declarative Clause Constraint.

If we assume that the deletion of subjects in imperatives is a different phenomenon from the one we are considering here, then Yiddish Subject-Prodrop occurs in declaratives only, again following from the Clause-Initial Constraint.<sup>5</sup> That is, while we find sentences functioning as questions with zero subjects, they are never unambiguously V/I interrogatives but rather may always be paraphrased felicitously in context by declaratives with question intonation:

7. a. [0 = Du] Host zikh geshtayert mit im? (GF.I.68)  
'[You] have wrestled with him?'
- b. [0 = Du] Bist mir moykhl, Sterele? (GF.I.69)  
'[You] forgive me, Sterele?'
- c. [0 = Du] Kenst nisht opesn keyn vetshere un geyn ahin? (GF.II.88)  
'[You] Can't have supper and go over?'

Questions that are unambiguously interrogative (V/I) in form due to Wh-movement may not occur with Subject-Prodrop:<sup>6</sup>

8. a. Tsi veyst ir/\*0 gor, vos far a goldn kind dos iz? GF.I.64)  
'Do you/\*0 really know what a wonderful child this is?'
- b. To vos zhe redst du/\*0? (GF.I.74)  
'Then what on earth are you/\*0 saying?'
- c. Vu bist du/\*0, Rokhl? (GF.I.74)  
'Where are you/\*0, Rachel?'
- d. Fun vanen veyst du/\*0 es alts? (GF.II.89)  
'How do you/\*0 know it all?'

#### 1.2.1.4. V/2 Declarative Clause Constraint.

Not only may Yiddish Subject-Prodrop occur only in declaratives but it is further constrained to occur only in overt V/2 declaratives, again following from the Clause-Initial Constraint. That is, since the zero pronoun must occur preverbally, it may not occur in apparent V/1 declaratives, called 'consecutive sentences' (see Weinreich 1981, Miner 1990; see also Thrainsson 1985), where there is no preverbal position available. This is of course not obvious from the occurring data but can be seen by taking felicitous Subject-Prodrop tokens in their contexts and having native informants supply the missing pronouns; the resultant clauses have the pronouns in preverbal position only, e.g.:

9. a. Nem dir a shtikl broyt mit puter. [0 = Du] Bist [#du] dokh avade hungerik. GF.I.66)  
'Take yourself a piece of bread and butter. You must be hungry.'
- b. Rokhl: Du host gebetn, oder Hersh-Ber?  
'Rachel: You invited [him], or Hersh-Ber?'
- Tsine: [0 = Er] Iz [#er] aleyk gekumen. (GF.I.67)  
'Tsine: He came himself.'
- c. Doved-Noyekh: Vu iz der mentsh?  
'David-Noah: Where is the person?'
- Rokhl: [0 = Er] Iz [#er] in shtub. (GF.I.71)  
'Rachel: He's in the house.'

Conversely, given naturally-occurring V/1 declaratives in context, native informants reject Subject-Prodrop versions of them:

10. a. Der tate hot im gefregt, vi azoy men ruft im, hot er/#0 gezogt. (GF.I.74)  
'Dad asked him what he was called, so he/#0 told [him].'
- b. 'Kh hob gehert vi ir lernt, bin ikh/#0 gegangen aykh onraysn epl. (GF.III.92)  
'I heard how you were studying, so I/#0 went to pick apples for you.'
- c. Kum, yidene, 0 vest nokh lenger blaybn, vest du/#0 nokh mer narishkaytn redn. (GF.I.65)  
'Come, woman, [you] stay any longer, you/#0 will say more foolish things.'

#### 1.2.2. Exceptions.

There are several classes of exceptions to the constraint(s) listed above that must be mentioned here, discourse deictic and 'ambient' subjects and frozen parenthetical expressions.

##### 1.2.2.1. Discourse deictic and 'ambient' subjects.

All of what has been said involves cases where the zero subject refers to an already evoked discourse entity and does not apply to discourse deixis, where the zero subject refers either to something introduced as a clause or a non-nominal part thereof (Webber 1991) or else to what Bolinger (1977) has referred to for English as 'ambient' *it*, the subject of time/place/weather expressions, and which I shall refer to for Yiddish as 'ambient' *es*. Of course, whether these 'ambient' cases are instances of some kind of Subject-Prodrop or are simply subjectless sentences is not obvious, but, in any event, we find sentences where a discourse deictic subject pronoun, if one were present, would occur non-initially in V/1

interrogatives (11a) and hortatives (11b), and in apparent V/1 'consecutive' declaratives (11c), and we find sentences where an 'ambient' *es* subject, if one were present, would occur both postverbally and in subordinate clauses (11d,e):

11. a. Un az zi iz gekumen helfn Hersh-Bern, to vos zhe iz [0 = es]? (GF.I.67)  
'And if she's come to help Hersh-Ber, so what is [it]?'  
b. Zol [0 = es] shoyn zayn vi 's iz. (GF.III.104)  
'May [it] be already as it is.'  
c. Ir vilt nisht. Iz [0 = es] nisht. Iz [0 = es] vi ir vilt zikh. (GF.III.100)  
'You don't want [that]. So [it] won't be. So [it] is the way you want.'  
d. O, ven ikh volt es gekent makhn azoy, az aykh zol (0 = es?) zayn gut bay undz! (GF.II.81)  
'Oh, if I could have made it so that [it] was pleasant for you here!'  
e. 'Kh hob gevolt, az dir zol (0 = es?) ton hano. (GF.II.88)  
'I wanted [it] to give you pleasure.'

I suspect that discourse deixis and 'ambient' *es* are different, not only from the usual case of Subject-Prodrop but also from each other, with discourse deictic subjects being 'real' in some sense but deletable postverbally as well as preverbally (although perhaps only in main clauses) but with 'ambient' subjects being in fact nonexistent, the ambient sentences in question actually being subjectless. However, evidence for such an analysis awaits further investigation. For the present study, I have simply considered both phenomena as not involving ordinary Subject-Prodrop and have excluded them from the final statistical analysis.

#### 1.2.2.2. Exclusion of *men* 'one'.

In a different vein, it turns out that Subject-Prodrop applies only to true personal pronouns and not to *men* 'one'. Thus, we find *men* 'one' present even when it has recently occurred coreferentially, as in 12:<sup>7</sup>

12. a. Me fort in shtot arayn, me/\*0 fregt zikh nokh. (GF.III.96)  
'One goes into town, one [\*0] asks around.'  
b. Me nemt nisht un me/\*0 farsheyt a dorfishn mentshn. (GF.II.83)  
'One refuses and one [\*0] embarrasses a village person.'  
c. Khe-khe, me vert a bisl fargrebt oyfn yishev; ober, az es kumt tsu an avle ton — khapt men zikh. Men/\*0 veyst, geloybt iz der Eybershter, fun danen ahin. (GF.III.104)  
'Ha ha, one gets a bit boorish on the farm; however, when it comes to mistreatment — one notices. One [\*0] knows, praised be the Eternal One, one's way around.'

Note that this prohibition against zero occurrences of *men* 'one' is not a constraint against subjects whose referent is nonspecific, as such subjects may in principle be dropped, so long as the pronoun that would be present is a personal pronoun in what Donnellan 1978 has called an 'anaphoric chain':

13. a. A shtot-yid iz take a yid. [0 = Er] Redt oys a vort mit a rov; [0 = er] hert a kdushe in der tsayt un [0 = er] ken gebn a nedove, az der vos in himl helft. (GF.III.104)  
'A city Jew is indeed a Jew. [He] discusses things with a big rabbi; [he] hears a holiness from time to time and [he] can give alms, with God's help.'  
b. Modne mentshn do oyf der velt. [0 = Zey] Zeen gor oys andersh vi mir. (GF.I.71)  
'Strange people there [are] in the world. [0 = They] look totally different from us.'

That is, whether the antecedent refers to some particular discourse entity (as in specific

reference) or to some arbitrary one (as in a subclass of nonspecific reference), subsequent references may be made by zero subjects, assuming all other conditions are met, just in case the zero subject, if overt, would be a personal pronoun referring to that particular or arbitrary entity.

The constraint against deleting *men* 'one' may be related to the different behavior shown above of discourse deictic subjects in that Subject-Prodrop may involve only pronouns which refer directly to discourse entities already evoked in the discourse-model by nominal means. We shall return to this below.

#### 1.2.2.3. Frozen expressions.

Finally, there is another small class of exceptions involving certain hortative, i.e. V/1, frozen expressions that therefore do not obey the Clause-Initial Constraint, even though the referent of the zero subject may be a bona fide discourse entity. Although these occur quite frequently in the language in general, there is only one example in the corpus involving a discourse entity subject, by chance in a sentence without a main-clause finite verb, given in 14a; an example involving such a construction with a discourse deictic subject is given in 14b:<sup>8</sup>

14. a. Mayn tate, zol [0 = er] zayn in Gan-Edn, oykh a dorf-mentsh geven. (GF.III.104)  
'My father, may [he] be in paradise, [was] also a village person.'  
b. Elkhone vil zikh krign mit undz — zol [0 = es] zayn azoy. (GF.II.83)  
'Elkhone wants to fight with us — so be [it].'

#### 2. Yiddish Subject-Prodrop in discourse.

I have now described briefly the syntactic constraints on the occurrence of zero subjects in Yiddish. However, it is clear that, even when the syntactic conditions are met, a great number of subject pronouns are not dropped, the phenomenon being far rarer than in Japanese or Korean, rarer even than in Spanish or Italian. One thing is clear: the occurrence of a zero pronoun, given the right syntactic conditions, is not random and is not governed exclusively (if at all) by social or superficial stylistic factors. That is, a single sentence with a pronominal subject in a single social situation may occur felicitously with a zero pronoun in one discourse context but requires an overt pronoun in another discourse context:

15. a. Doved hot geredt fun di kale;? Oy, vest du zi; lib hobn! [0<sub>i</sub> = Zi<sub>i</sub>] Iz efsher nokh a mol azoy shtark vi er. (Adapted from GF.II.88)  
'David talked about the bride<sub>i</sub>? Oh, are you going to love her<sub>i</sub>! [She<sub>i</sub>] is maybe twice as strong as he.'  
b. Ir veyst, az Dovid vet khasene hobn. Er hot geredt fun di kale;? Zi<sub>i</sub> [#0<sub>i</sub>] iz efsher nokh a mol azoy shtark vi er.  
'You know that David is getting married. He talked about the bride<sub>i</sub>? She<sub>i</sub> [#0<sub>i</sub>] is maybe twice as strong as he.'

This suggests that Subject-Prodrop has some substantive discourse function, the appropriateness of which constrains the felicitous occurrence of zero subjects in discourse, even when the syntactic constraints are met. To see what this function might be, we shall now turn to a study of the behavior of Subject-Prodrop in discourse.

#### 2.1. Centering Theory: an overview.

The study reported here is based on Centering Theory, which turns out to be very useful in that it partitions the data in an intuitively reasonable way and permits a straightforward account of the facts. Before turning to the results, however, a brief overview of Centering Theory is in order.

Centering Theory is a way of modeling attentional state in discourse, a component of a theory of local discourse coherence (Joshi and Weinstein 1981, Grosz, Joshi, and Weinstein 1986). Within Centering Theory, each utterance  $U_i$  in a coherent local sequence of utterances (a discourse segment)  $U_1...U_m$  affects the structure of the discourse model as follows:

First, each utterance evokes, explicitly and implicitly, a set of discourse entities ('filecards', following Heim 1983) called Forward-looking centers, or {Cf}.

Second, this set is ranked according to various formal (e.g. syntactic, morphological, theta role, prosodic) features, the rankings being determined language-specifically.

Third, the highest-ranked Cf in the {Cf} of some utterance  $U_i$  is called the Preferred Center, or Cp, of  $U_i$ . The Cp is a prediction about what the next utterance,  $U_{i+1}$ , will be 'about', although this prediction may of course prove wrong much of the time, with certain predicted results.

Fourth, the highest-ranked Cf in the {Cf} of utterance  $U_{i-1}$  that appears as well in the {Cf} of the subsequent utterance  $U_i$  is the Backward-looking Center, or Cb, of  $U_i$ . Note that, if there is no  $U_{i-1}$ , as in the case with a discourse-initial  $U_i$ , or, if there is a  $U_{i-1}$  but no Cf in  $U_{i-1}$  occurs in  $U_i$ , then  $U_i$  lacks a Cb. Thus an utterance has no or exactly one Cb. The Cb is predicted to correlate with what at least some have meant by 'topic' or 'theme', that is, what the utterance is 'about' (e.g. Reinhart 1981). This distinction between looking back to the previous discourse-part with the Cb and projecting preferences for interpretation in the subsequent discourse-part with the Cp is a key aspect of the Centering framework.

In addition, Centering Theory contains one rule, the Pronoun Rule, which gives the model empirical testability:

16. **Pronoun Rule:** If any Cf in an utterance is represented by a pronoun, then the Cb must be represented by a pronoun.

It is relevant to note that the Pronoun Rule was formulated on the basis of English and that subsequent analyses of prodrop languages like Japanese (Kameyama 1985, 1988, Walker, Iida, and Cote 1990, 1994) and Turkish (Turan 1993, In prep.) show that a distinction must be made between lexically-realized pronouns and zero pronouns and that, for Japanese and Turkish at least, the Pronoun Rule must be reformulated as follows:

17. **Zero Pronoun Rule (based on Japanese and Turkish):** If any Cf in an utterance is represented by a zero pronoun, then the Cb must be represented by a zero pronoun.

We shall see below that this rule is not adequate as it stands to capture the facts of Yiddish Subject-Prodop.

Since Centering is meant to model attentional state, it must model changes or shifts in attentional state, which it does by defining four possible Transitions between adjacent utterances, corresponding to the four logical possibilities of two variables: whether the Cb of the current utterance is the same as the Cp of the current utterance and whether the Cb of the current utterance is the same as the Cb of the previous utterance. This is shown in the chart in 18:

18.	<b>Centering Transitions</b>	
	$Cb(U_i) = Cb(U_{i-1})$	$Cb(U_i) \neq Cb(U_{i-1})$
$Cb(U_i) = Cp(U_i)$ :	Continue	Smooth-shift
$Cb(U_i) \neq Cp(U_i)$ :	Retain	Rough-shift

It is assumed that, all things being equal, Continues are easier to process and hence more

'coherent' than the other three and that Rough-shifts are harder to process and hence less 'coherent' than the other three. (The ordering, if any, of the ease of processing of Retains and Smooth-shifts is not obvious.)

## 2.2. Coding.

As mentioned above, three variables for which the clauses in the corpus were coded are directly related to Centering Theory: whether or not the subject is the Cp, whether or not the subject is the Cb, and which of the four Transitions occurred between the previous utterance and the current one. A few words are in order here about how these codings were done.

### 2.2.1. Segmentation.

One coding concern relates to the problem of segmentation. That is, Centering Theory is a way of modeling local coherence, i.e. coherence within a discourse segment, and thus a prior segmentation of the discourse is required for a Centering analysis. However, I did not segment the play, or, rather, simply assumed a flat segmentation, although it is clear that there is internal structure in the play, as in any discourse. My reason was that I had no independent way of doing a fine-grained segmentation of the discourse and also because I suspect that hearers are similarly handicapped and no doubt often assume a flat structure until they get evidence to the contrary. Furthermore, I suspect that some of this evidence for segmentation comes in fact from the hearer's Centering analysis (or reasonable facsimile thereof), with segmentation and Centering being in a bootstrapping relation, rather than the former prerequisite to the latter. In any event, I divided the play into three sister-adjoined segments, corresponding to the three acts of the play.

### 2.2.2. Clauses omitted from statistical analysis.

In a different vein, a large number of clauses were eliminated from the statistical analysis, for a number of different reasons.

First, although Subject-Prodop was very frequent in the stage directions, exemplified in 19, only tokens taken from the character's lines were counted, since it was suspected that other principles might be at issue in the stage directions.

19. a. Stere: 'Kh bin a bayln a kuk ton in fentster. {[0 = Zi] Farganvet zikh tsum fentster.} GF.I.70  
'S.: I'm curious to take a look in the window. {[She] sneaks over to the window.}'  
b. Hersh-Berj: To hert nisht, oyb irj vilt nisht. Kum in shtub arayn, Tsinek. {[0<sub>i</sub> = Er<sub>j</sub>] geyt arayn in shtub.} (GF.III.100)  
'H-Bj: So don't hear [it], if you<sub>j</sub> don't want to. Come into the house, Tsinek. {[He<sub>j</sub>] goes into the house.}]'

The reasons for this were that Subject-Prodop is otherwise found only in registers more informal than stage directions and, in addition, plays written in English, a language which lacks an analog of colloquial Yiddish Subject-Prodop, may also contain Subject-Prodop, exemplified in 20, supporting the conclusion that another phenomenon entirely may be at issue in stage directions.<sup>9</sup>

20. a. Mary<sub>i</sub>: {Suddenly [she<sub>i</sub>] is overcome by guilty confusion—[0<sub>i</sub> = she<sub>i</sub>] stammers.} I— Forgive me, dear. You're right. It's useless to be angry now. (O'Neill 1956.II.II.75)  
b. Ben<sub>j</sub>: Good boy! {[0<sub>i</sub> = He<sub>j</sub>] Suddenly comes in, trips Biff, and stands over him, the point of his umbrella poised over Biff's eye.} (Miller 1949.I.49)

Second, as mentioned above, a preliminary VARBRUL analysis of the corpus revealed that Yiddish Subject-Prodop appears to follow different syntactic constraints when the subject is

an instance of discourse deixis or of 'ambient' *es*. Thus it was felt that a different phenomenon might be at issue and such cases were eliminated, leaving only those zero subjects and lexically-realized subject pronouns whose referents were discourse entities.

Third, since the variation is presumably between a zero and a personal pronoun, all clauses having neither a zero nor a personal pronoun as subject were likewise eliminated. Included among those eliminated were of course all clauses with full NP subjects and with clausal subjects but also all clauses with *men* 'one' as subject.

Finally, since all the remaining tokens of Subject-Prodop in the corpus were in V/2 declarative main clauses, with the zero pronoun being preverbal, all clauses with overt pronouns not fitting this description were eliminated as irrelevant.

### 2.3. Findings.

After the exclusions mentioned above, the corpus consisted of a total of 601 subject-initial declarative main clauses, of which 468 had overt pronominal subjects and 133 zero subjects. These were then analyzed by VARBRUL, a multivariate analysis program, with the presence or absence of a lexically-realized subject pronoun being the dependent variable.

VARBRUL analyses of the coded data revealed an interesting finding: in virtually all instances of zero pronoun clauses where the zero pronoun would be lexically realized by a first- or third-person pronoun or by a second-person plural pronoun, the zero pronoun was the Cb and the Transition-type was Continue. However, when the zero pronoun would be realized by the second-person singular pronoun, this was very often not the case, the zero pronoun often not being the Cb and, even when it was, the Transition-type often not being Continue.

The figures for all pronouns and Transition-types are presented in 21:

21. Distribution of main clause-initial subject zero/pronoun in corpus:

		Continue		Retain		Smooth-shift		Rough-shift		Total	
1sg	0	1	1%	0	0%	0	0%	0	0%	1	0%
	pro	127	99%	58	100%	40	100%	67	100%	292	100%
	T	128		58		40		67		293	
1pl	0	0	0%	0	0%	0	0%	0	0%	0	0%
	pro	5	100%	1	100%	2	100%	0	0%	8	100%
	T	5		1		2		0		8	
2sg	0	37	74%	13	71%	20	90%	27	70%	97	76%
	pro	13	26%	5	29%	2	10%	10	30%	30	24%
	T	50		18		22		37		127	
2pl	0	2	10%	0	0%	1	0%	0	0%	3	8%
	pro	19	90%	3	100%	4	100%	10	100%	36	92%
	T	21		3		5		10		39	
3sg	0	18	28%	0	0%	1	5%	1	6%	20	18%
	pro	47	72%	9	100%	21	95%	17	94%	94	82%
	T	65		9		22		18		114	
3pl	0	12	63%	0	0%	0	0%	0	0%	12	60%
	pro	7	37%	0	0%	1	100%	0	0%	8	40%
	T	19		0		1		0		20	
T:	0	70	24%	13	15%	22	24%	28	21%	133	22%
	pro	218	76%	76	85%	70	76%	104	79%	468	78%
	T	288		89		92		132		601	

The figures for all pronouns other than the second-person singular collapsed and all

Transition-types other than Continue collapsed are presented in 22. Note that Transition-type is not significant when the subject pronoun is or would be the second-person singular, whereas Transition-type is highly significant when the subject pronoun is or would be non-second-person singular:

22. Distribution of main clause-initial subject zero/pronoun in corpus collapsing all pronouns other than 2sg and all Transition-types other than Continue:

		Continue		Other Trans.		Total		Signif.
2sg:	0	37	74%	60	78%	97	76%	$\chi^2 = 0.258$
	pro	13	26%	17	22%	30	24%	$p < 0.70$
	T	50		77		127		[n.s.]
Other pronouns:	0	33	14%	3	1%	36	7%	$\chi^2 = 26.782$
	pro	205	86%	233	99%	438	92%	$p < .001$
	T	238		236		474		
Total:	0	70	24%	63	20%	133	22%	$\chi^2 = 1.519$
	pro	218	76%	250	80%	468	78%	$p < .30$
	T	288		313		601		[n.s.]
Significance		$\chi^2 = 81.214$ $p < .001$		$\chi^2 = 212.178$ $p < .001$		$\chi^2 = 274.993$ $p < .001$		

The multivariate analysis (Varbrul) probabilities are presented in 23:

23. Varbrul probabilities for main clause-initial subject zero pronoun in corpus, collapsing all pronouns other than 2sg and all Transition-types other than Continue:

Input 0.14		
Pronouns	2sg = 0.96	Other pronouns = 0.30
Transitions	Continue = 0.65	Other Transitions = 0.37
Both variables found to be significant after step-up, step-down analysis.		

Thus we find two different partitions of the data, one made by syntax and one by discourse.

Syntactic constraints partition the distribution of zero subjects into those whose referents are nominally-introduced discourse entities and those whose referents are not nominally introduced discourse entities, with the possibility remaining that at least some of the clauses assumed here to have zero subjects which do not refer to nominally introduced discourse entities are in fact subjectless. In any event, zero subjects whose referents are nominally-introduced discourse entities may occur only preverbally and only in main clauses; the others, if they in fact exist, may occur postverbally and in subordinate clauses as well. I shall reserve the term 'Subject-Prodop' for the first kind, those instances involving zero subjects whose referents are nominally-introduced discourse entities.

Discourse constraints, captured here by Centering Theory, then partition the distribution of (this delimited sense of) Subject-Prodop zero subjects into cases involving *du* 'you', i.e. the pronoun referring to the singular familiar addressee, and all others, which I shall refer to as Du-Drop and Discourse-constrained Subject-Prodop, or Subject-Prodop<sub>DC</sub>, respectively, since Du-Drop seems not to be sensitive to discourse constraints and may occur wherever the syntactic constraints are met, while all other instances of Subject-Prodop are tightly constrained to represent the already-established topic, which is what I take the Cb after a Continue Transition to be.<sup>10</sup>

### 3. Discussion.

The dual partitioning of the data shown here suggests that there are at least three levels of salience that must be recognized for Yiddish: one for entities created on the fly from

propositional material, one for a distinguished participant in the speech situation, the addressee, and one for all other non-propositional entities. How these levels should be handled in a theory of discourse is of course not immediately apparent. One possibility, that the entity representing the distinguished participant, the referent of *du*, be simply added to each {Cf} as a 'phantom' Cp, making it the Cb of any subsequent utterance in which it occurs, is not satisfactory, since it turns out that, even when Du-Drop has occurred, *du* does not 'bump' out the previous Cp or current Cb, as illustrated in 24:

24. *i* = Stere, *i'* = Stere's hands, *j* = Hersh-Ber, *k* = Tsine, *k'* = Tsine's hands  
 (a) ...Az *zi*<sub>i</sub> vet zayn dayn<sub>j</sub> vayb, (b) vet *zi*<sub>i</sub> dir<sub>j</sub> krikhn unter di negl. (c) [0<sub>i</sub>] Iz efsher nokh a mol azoy shtark vi ikh<sub>k</sub>. (d) [0<sub>i</sub>] Host gezen ire<sub>i</sub> hent<sub>i</sub>? (e) [0<sub>i</sub>] zaynen efsher nokh a mol azoy grob vi mayne<sub>k'</sub>. (GF.II.88)  
 (a) '...If she<sub>i</sub>'s your wife,' (b) 'she<sub>i</sub>'ll drive you<sub>j</sub> crazy.' (c) '[0<sub>i</sub>] is perhaps twice as strong as I<sub>k</sub>.' (d) '[0<sub>i</sub>] have seen her<sub>i</sub> hands<sub>i</sub>? (e) '[0<sub>i</sub>] are perhaps twice as thick as mine<sub>k'</sub>'.

The Centering analysis of 24 is given in 25:

25.	Clause	Cp	Cb	Transition
	(a)	<i>i</i>	<i>i</i>	Continue
	(b)	<i>i</i>	<i>i</i>	Continue
	(c)	<i>i</i>	<i>i</i>	Continue
	(d)	<i>j</i>	<i>i'</i>	Retain
	(e)	<i>i'</i>	<i>i'</i>	Continue

Thus it appears that the salience of the distinguished participant does not affect or interact with the salience of the other discourse entities, the distinguished participant always retaining a very high level of salience, the other discourse entities varying in salience along the lines laid out by Centering Theory.

In a different vein, it is interesting that zero subjects with a propositional antecedent distinguish themselves even on the syntactic level in Yiddish, since their treatment in Centering Theory has long been a puzzle, in that indefinitely many propositional antecedents are available for subsequent reference, making their prior addition to the {Cf} unfeasible, and the discourse constraints on their occurrence in English at least seems to be fairly clearly storable without reference to Centering issues. (See Webber 1991 and Embick and Meyerhoff 1994 for discussion.)

#### 4. Future research.

The work reported here is part of larger ongoing study on zero anaphora in Yiddish. Questions to be dealt with are: (1)What evidence can be brought to bear for deciding whether a sentence has a zero subject or is subjectless, especially insofar as it relates to the 'ambient' cases discussed above? (2)What are the constraints, if any, on discourse deictic zero subjects and how do they correlate with constraints on the form and distribution of discourse deictic subjects reported for English (Webber 1991) and Italian (Di Eugenio 1990)? (3)What are the constraints, if any, on Yiddish Object-Drop and how does it interact, if it does, with Subject-Prodrop? Questions that remain for future work include crosslinguistic analyses, the most interesting ones, to my mind, comparing Yiddish with German and with the Slavic languages, as well as with Biblical, Medieval, and Modern Hebrew.

#### 5. Afterword on meta-intuitions.

I should like here to return briefly to the point made earlier that it is thought by many native speakers, Yiddish teachers, and traditional Yiddishists that only *du* 'you' may occur as a zero subject. The reasons they give are the usual traditional functional ones invoking redundancy: Yiddish verb morphology is such that only the second-person singular ending is unique, as exemplified in 26; since the morphology uniquely identifies the subject for the second-person singular, the second-person singular subject pronoun is redundant and hence

deletable. (Cf. more recent arguments presented for Romance, e.g. Rizzi, 1986, Kayne 1991.)

26. **kukn 'look'; stem: kuk-**

	Singular	Plural
<b>1</b>	kuk-0	kuk-n
<b>2</b>	kuk-st	kuk-t
<b>3</b>	kuk-t	kuk-n

Of course, redundancy cannot be the whole answer, since *du* 'you' is just as redundant in noninitial position as in initial and in subordinate clauses as in main yet it is not deletable in those positions. Furthermore, if the stem of the verb ends in a sibilant, the form of the 2nd person singular is identical to the third person singular and the second person plural, as is exemplified in 27 with a high frequency verb that often occurs with a zero subject:

27. **visn 'know'; stem: veys-**

	Singular	Plural
<b>1</b>	veys-0	veys-n
<b>2</b>	veys-st = veyst	veys-t
<b>3</b>	veys-t	veys-n

In fact, we have seen that it is not true that only *du* 'you' may occur as zero, but I believe there is an interesting story for why people might think so. The reason, I believe, lies in certain limitations on our metalinguistic competence, more specifically in our (meta-)intuitions about our (primary) intuitions. When faced with a linguistic form out of context, speakers can logically do one of two things: they can judge that sentence in the null context or they can create an appropriate context in which to judge it. I believe the first is impossible and the second is what speakers do, though of course they do it automatically and unconsciously. Furthermore, I believe we can be fairly specific about certain properties of the created context.

Consider the fact that, when faced with the question of whether zero subjects are possible in Yiddish, speakers call to mind Du-Drop. This suggests immediately that they are creating a discourse context in which to judge the sentences they are judging, since Du-Drop and Subject-Prodrop<sub>DC</sub> are syntactically identical and differ only in the constraints on their prior discourse context. As for what kind of prior context they are creating, the facts strongly suggest that they create an *unmarked* discourse context. That is, they create a context where there are no constraints on the presence and salience of the referent of the zero subject in the immediately preceding utterance (i.e. it did not have to be the Cp of the previous {Cf} and hence need not be the Cb of the current {Cf}), much less constraints on its presence and salience in the more remote prior context (i.e. it did not have to be the Cb of the previous {Cf} and hence there need not have just been a Continue Transition).

If this were just an isolated instance, one would not conclude that it reflects limitations on metalinguistic competence. However, it is not. Schmerling 1978 reports a very different but entirely parallel phenomenon with respect to the English *do*-imperative. In particular, she reports that speakers judge *do*-imperatives to be markedly 'female'. At the same time, she shows that *do*-imperatives are not in fact limited to 'female' speech. However, it turns out that there are two different functions associated with the form: one, which she calls *polite*, is exemplified in 28a; the other, which she labels a *reprise*, is exemplified in 28b:

28. a. [To visitor at door] Oh, hello! **Do come in!**  
 b. ...I'm sending over some papers for you to look at. They show some interesting trends that no one's predicted, so far as I know. [Discussion re trends.] Ok, gotta run. Take care. And **do have a look at those papers.**

The *do*-imperative in 28a has a *social* function: it conveys politeness and, therefore, femaleness. Note that it is, for all intents and purposes, discourse-initial and in fact could

occur felicitously in any discourse context, given that the social function is appropriately served. We could say therefore that it has no *discourse* function, in the strict sense. Note furthermore that this is the *do*-imperative that Schmerling's informants presumably had in mind when they reported that it is said only by women.

In contrast, *do*-imperatives like the one in 28b have a *discourse* function: they mark that they are reiterating a command/suggestion made earlier in the discourse, prior to intervening material. Therefore, their felicitous occurrence is constrained by the prior discourse context. They do not share the social function of the first type and hence are not stereotypically female, occurring equally, so far as Schmerling could tell, in the speech of both sexes. Therefore, they are presumably not the ones that the informants were thinking of when they reported that only women use this form.

Thus we see that, in two otherwise very dissimilar cases, speakers' judgments can be predicted if we assume that they invent contexts for the forms they are judging and if the contexts they invent are unmarked, that is, if there are no substantive *discourse* constraints on the felicitous occurrence of the form. In contrast, syntactic constraints, e.g. those on Du-Drop, and social constraints, e.g. those on the 'polite' *do*-imperatives, do in fact seem to be accessible to metalinguistic reasoning.

## Notes

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<sup>1</sup>Subject-Prodrop in Yiddish appears to be restricted to the colloquial register, in contrast to Object-Prodrop, which occurs in all registers.

<sup>2</sup>In 1 and all following examples, Subject-Prodrop is indicated by [0 = X] in the position in which an overt pronoun would be felicitous in the context provided, where X is the pronoun that would occur, were there one. Each naturally-occurring example is followed by its address: G[rine] F[elder], act, page in edition used.

<sup>3</sup>The starred examples in this paper were checked with two to seven native Yiddish speakers and were unanimously judged to be impossible. However, I suspect that there are different dialects with different constraints, since non-initial Subject-Prodrop sites have been collected outside of the corpus analyzed here, e.g.

- i. a. A por ritmen volst [0 = du] antlign, bay dayn tsarter shvester-fleyt... (*Katerinke* (song))  
'A few rhythms would [you] set here, by your sweet sister-flute...'
- b. Un az du vest zikh svabodyen fun fovenen, oy zogn vest [0 = du] ikh bin an alte moyd. (*Zog mir tsu* (song))  
'And when you free yourself from regiment, oh say will [you] I am an old maid.'
- c. Dem tsveytn mol hob [0 = ikh] zikh mitn yeger azoy getrofn. (Der Nister, cited in Zaretski 1929)  
'The second time did [I] meet this way with the hunter.'

<sup>4</sup>However, outside the corpus isolated instances of Subject-Prodrop in subordinate clauses

have been found:

- i. Berele, shpring nit, vorem [0 = du] vest araynfaln un [0 = du] vest zikh tsebrekh'n ruk un hent. (RP:4)  
'Little Barry, don't jump, because [you] will fall in and [you] will break your neck.'
- ii. Gelt iz dokh kaylekh'dik, un vibald az aroys kayklt 0 zikh yo, un arayn kayklt 0 zikh nit, iz dokh shlekht. (RP:145)  
'Money is after all round, and as soon as [it] rolls out and [it] doesn't roll in, it's bad.'

I suspect these two examples reflect two different phenomena. The zero subject in i is in a syntactically subordinate clause but one that is asserted, that is, the sort of subordinate clause that manifests main clause properties in many languages. The zero subject in ii is construed here as referring to the discourse entity evoked by *gelt* 'money' in the previous clause; however, it may possibly have a more 'ambient' reference, discussed below, in which case it obeys different syntactic constraints from the 'entity' reference Subject-Prodrop at issue here. Note that the zero subjects in ii are also not clause-initial, another indication that different constraints may be operating.

<sup>5</sup>Whether the deletion of subjects in imperatives can be subsumed under Yiddish Subject-Prodrop is not obvious. One reason for not subsuming it thus is the register difference: zero-subject imperatives occur in all registers, while (non-imperative) Subject-Prodrop is confined to the colloquial register, as noted above.

<sup>6</sup>Note that this falsifies traditional accounts like that of Katz 1987, where not only is it thought that only *du* 'you' is deletable but also that this occurs only in questions, via a sort of truncation of the pronoun encliticized onto the finite verb and where it is not noticed that the pronoun is never absent when the clause is unambiguously V/I, i.e. where the pronoun *must* be so encliticized.

<sup>7</sup>Note that a series of occurrences of *men* 'one' may in fact be noncoreferential, as in:

- i. Az me vet mir zogn vi azoy me badarf zayn frum — vel ikh. (GF.II.86)  
'If one [= you] tells me how one [= I] should be pious — I will.'

<sup>8</sup>Outside the corpus, examples of such hortative expressions with zero subjects abound, e.g.:

- i. Mit mayn tatn, zol [0 = er] gezunt zayn, hot zikh amol getrofn punkt aza mayse. (RP:208)  
'With my father, may [he] be well, just such a story once occurred.'
- ii. A nar fil't nit, ober ayer vayb, zol [0 = zi] gezunt zayn, fil't gut. (RP:24)  
'A fool doesn't feel(/fill), but your wife, may [she] be well, fills(/feels) well.'

<sup>9</sup>In fact, the treatment of pronominal subjects in stage directions is quite interesting, in both Yiddish and English, and varies somewhat from author to author, although a detailed discussion is beyond the scope of this paper.

<sup>10</sup>Whether or not there are discourse constraints on discourse deictic or 'ambient' zero subjects is not obvious from the present study and awaits further research. Similarly, it is possible that Du-Drop is in fact constrained by some discourse factors to which a Centering analysis is not sensitive.

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