GOING THROUGH (L)
IN CANADIAN FRENCH

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1. INTRODUCTION

The deletion of (l) in subject pronouns, object pronouns and determiners but not in other phonologically identical sequences is a process of great interest for the phonological and morphological structure of the French language, and one which has benefited from a long tradition of scholarly interest. While many dialects of French, both Continental and North American, show (l) loss, at least in some contexts, like those in (l), Canadian French appears advanced as concerns both the frequency of truncation, and the extension of this process to contexts and paradigms either unattested or rare in other varieties, as in (2).

(1) Contexts showing (l)-deletion:\(^1\)

Subject Pronouns:

a. Il ((i)) tombait des gros morceaux. 'Big pieces were falling.' (MD/815)\(^2\)

b. Plus de peine qu'ils ((i)) te font, on dirait plus qu'ils ((i)) aiment ça. 'The more they hurt you, it looks like the more they like it.' (MD/587)

c. Ma soeur quand il fait beau elle ((a)) va travailler en bicyclette, ou bien elle ((a)) marche, ou bien elle ((a)) prend la voiture. 'When it's nice my sister either goes to work by bike, or she walks, or else she takes the car.' (PB/1626)

Object Pronouns:

d. Non, mais on va lui ((i)) donner un an, un an et demi pour y penser. 'No, but they'll give him a year, a year and a half to think about it.' (JR/683)

e. Nous, on était obligés de les ((dez)) avoir. 'We had to have them.' (NL/1224)

f. Puis tu la ((ital)) sais pas, la maudite chanson. 'And you don't know it, the damn song.' (LM/1132)
2. HISTORICAL OVERVIEW OF (l)-DELETION

The history of French is replete with examples showing the unstable character of (l), which at various times has been subject to vocalization, cliticization and cluster simplification processes. In this section, we illustrate briefly some of the earlier phenomena involving loss of (l), focusing on those most relevant for an understanding of the current situation.

The deletion of (l) in the masculine subject pronouns il and ils, for example, has been attested before consonants since the latter part of the 12th century (Pope 1934:324). Deletion in il has since been extended to other phonological contexts, and can now be said to have reached completion in contemporary Canadian French (see section 5) and no doubt in other varieties as well. This early process has also spread to the feminine subject pronoun elle, which also shows very high deletion rates. The confusion of the indirect object pronoun lui with the tonic form lui may have foreshadowed the current preferred realization of lui as [i] (Table 2, cf. also de la Chaussée 1977).

Other contexts involving (l)-weakening appear to be independent of the process under investigation here. Vocalization and subsequent loss of (l) in word-internal, preconsonantal position date back to Old French. At that stage we find aurre < alterum, haut < altum, aube < alba, beaux < bellus etc. This process reached completion before the end of the Middle Ages, however, and later borrowings and new (l) + consonant sequences produced by schwa deletion fail to vocalize: compare faux < falsus with later falsifier; haut < altum with later altitude; consider also the retention of (l) in forms like palefroi, je le vois.

An independent, though contemporaneous, process of cliticization engendered (l)-deletion by creating new contexts in which vocalization could apply. The preposition plus plural article sequences a + les, de + les, as well as singular le when preconsonantal (a + le + C, de + le + C) for instance, undergo a process involving loss of the vowel in the article. The resulting forms (ais, dels, al+C, del+C) subsequently clitic vocalization, yielding the lexicalized forms eux, eux, au, deu, of modern French. Pronominal objects participated in cliticization as well, as forms such as jès < je les, quis < qui les attest.

These processes may be observed, on both internal and external grounds, from the current Canadian French phenomena to which we limit ourselves here. First, the phonology of the Old French constructions is fundamentally different. Vocalization involved (l)-loss in preconsonantal position, whereas we will see the contemporary processes as regards object pronouns and articles to be essentially intervocalic. Cliticization involved loss of the vowel in the article or object pronoun, followed by vocalization of (l) when in preconsonantal position. In contemporary Canadian French, on the other hand, the (l) is deleted while the vowel of the form containing it remains.

Chronological considerations must also be taken into account. Vocalization and cliticization were complete by the early part of the 14th century, after which textual and other evidence for them disappear (Schwan and Behrens 1913). Thus, given the difference in phonological conditioning and six intervening centuries of "full" forms in the orthography, it is hardly likely that present-day (l)-deletion in object pronouns and articles is a direct continuation of an Old French process. Deletion is rather a resurgence of a general pan-Romance tendency toward compression in the pronominal and demonstrative clitic systems, and is also consistent with the general tendency to weaken liquid consonants.

Finally, as detailed in Laks (1980), (l)-deletion has been attested in a variety of
3. PREVIOUS STUDIES OF (I)-DELETION

A summary review of the literature on (I)-deletion reveals three recurrent issues: (1) Is deletion in pronouns and articles (specifically la and les, in which the phenomenon is acknowledged by all authors) a single unified process, or must the two grammatical contexts be treated separately? (2) Is deletion constrained by phonological factors, with only a minimum of morphosyntactic or lexical conditioning, or is it inherently morphologically and/or lexically determined? (3) What, if any, is the role of the functional factor of information preservation in influencing the applicability of (I)-deletion?

With respect to the first issue, there are two diametrically opposed viewpoints. Laliberté (1974), Bougaief and Cardinal (1980), and Sankoff and Cedergren (1971) appear to treat deletion as a single phenomenon. The most explicit statement to this effect is that of Pierpont and Légaré, who posit a single rule, following on their claim that deletion occurs under the same conditions in clitics and articles (1973:70). On the other hand, Santerre et al. consider that since pronoun (I) deletes independently of its preceding context, as opposed to what occurs in articles, a separate rule must be posited for each (1977:32). Morin (1979) takes this tack further by suggesting that while articles are subject to treatment by rule, clitic pronouns should be treated as suppletive lexical variants. According to Bougaief and Cardinal, articles need only be distinguished from pronouns insofar as the form I is concerned. Whereas the elided article I may be deleted in intervocalic position if it occurs in a "frequent" expression (e.g. à l'école 'at school'), pronoun I is not only never deleted, but is geminated instead (1979:94).

Lack of consensus is also manifest with respect to the role of non-phonological information in the structural description of the rule(s) of (I)-deletion. Current theory permits identification of a variety of options, ranging from purely phonological rules (containing only phonological features and phonetically realizable boundaries) to suppletion (where two or more separate lexical entries are involved, rather than rule-governed derivation from a single underlying representation). Intermediate between these poles lies a gamut of morphophonemic rules which may vary according to their productivity and naturalness and to the type of conditioning factors contained in the structural description. All treatments consider Canadian French (I)-deletion to be a morphophonemic rule, although attitudes vary widely with respect to the nature and amount of grammatical conditioning required. Papier and Légaré propose a rule which is almost exclusively phonological in shape, with the exception of the use of the morpheme boundary. Other authors prefer to identify the forms undergoing deletion in specifically morphological terms, limiting application of their rule(s) to articles and pronouns in various phonologically defined contexts, and listing exceptions to these. For example, most authors restrict deletion from applying to article or pronominal le and l, although it clearly does apply here both in Ottawa-Hull (Table 1) and Montreal (Table 2) French. Morin (1979) opts for a heterogeneous solution, characterizing deletion as rule-governed in articles but suppletive in pronouns.

The final debate involves the role of functional information in influencing deletion of (I). In abstract terms, it would be difficult to claim that function plays a role here. Yet problems arise when specific solutions are offered. Differences in deletability within and between the various grammatical categories (see section 5 below) have been interpreted as proceeding from differences in grammatical function between the forms in question, and in particular, from differences in the amount of information each must transmit. Thus, Sankoff and Cedergren explain the greater retention of (I) in personal il (11%) than in impersonal il (2.7%) in their data as being due to the greater semantic load of the former (1972:66). Similarly, they attribute the difference in deletion between les pronoun (46.8%) and les article (18.7%) to the information of plurality the article carries, information which in pronouns would be redundant, since it is also signalled by the pronominal coreference. For Bougaief and Cardinal, on the other hand, the pronoun (I) may be distinguished from the homophonous article, since by virtue of its important function as substitute for an NP, the former is not only never deleted, but is obligatorily geminated (1980:98). Thus, co-reference is seen as either favorable to deletion of (I) or crucial in its retention. Finally, neither Papier and Légaré nor Santerre et al. invoke functional factors, viewing the process of deletion as determined on more concrete grounds (phonological or morphological, respectively).

The behavior of (I) has thus been variously interpreted as being due to the operation of different phonological (Papier and Légaré, Laliberté), morphological (Santerre, Noisieux and Osgigüy; Bougaief and Cardinal) functional (Sankoff and Cedergren), and sociolinguistic (Laks, Ashby) conditioning, as well as a combination of some of them (Sankoff and Cedergren). Stylistic effects have also been cited by all, but only studied systematically by Laks (1980) for Parisian French.

We submit that this process, if for no other reason than its virtual limitation to the three grammatical categories of subject clitic, object clitic and article, as well as the fact that phonologically identical pairs of forms evidence differential behavior with regard to deletion, must be the focus for the possible operation of more than one of these (phonological, morphological, functional or social) constraints. Accordingly, in this paper we will study systematically the simultaneous contribution of all of these as well as other factors to the deletion of (I) in subject clitics, object clitics and articles in Ottawa-Hull French. By comparing the differential conditioning of (I)-deletion in each grammatical category, we will specify the nature and number of processes involved. By describing its social conditioning, we investigate whether we are dealing with change in progress or a stable sociolinguistic variable, whether deletion is a marker or not, and whether factors such as educational level or exposure to English play a role in promoting or retard ing this process. And finally, by examining natural speech data in context we will show that the contradictory accounts of (I)-deletion in the literature are largely the result of treating an inherently variable phenomenon as categorical. While many of the previously proposed constraints cannot be shown to account for the data completely, they will be shown to apply in different, but explicitly storable, degrees.

An additional factor appears relevant to (I)-deletion in Canadian French, namely the frequency of the forms and constructions involved. The very nature of articles and pronominal structures and their relevance to the grammatical system of the
language dictates that they will occur with great frequency, and the links between frequency and phonological change are well known. Hooper (1976), for example, takes up Schuchardt's observation that sound changes affect the most frequent lexical items first, especially when these changes may be localized in casual speech styles. Refining this approach, Phillips (1984) has presented evidence to argue for a restriction of the positive effects of frequency to physiologically motivated sound changes (as in the reductive changes with which we are concerned), and has linked frequency arguments to the patterns manifested by lexical diffusion of sound change.

In the Canadian French case, then, one could raise the question, given the restrictions placed on (l)-deletion in articles and pronouns, as to whether we are dealing with a process of lexical diffusion. If we limit discussion to these categories, the answer is not clear, since the eligible items are so few in number. If, on the other hand, we wish to generalize the discussion to all the cases of (l) which may potentially drop (in subject pronouns, in word-final position after obstruents, etc.) we must confront the problem of whether we are in fact dealing with the same rule. Our answer, evidently, is "no," so that we are in a position to say simply that questions regarding the diffusion of this specific change are premature. The phenomenon of (l)-deletion in which we are interested is currently restricted to articles and pronouns - frequent constructions fully in keeping with the constraints on change cited above. If diffusion were to occur, it would then be the diffusion of (l)-deletion from these items to the vocabulary in general - e.g. to forms like alter or alors for which there is anecdotal evidence.

4. DATA AND METHODS

The data we report on here were collected from 60 speakers chosen to represent each sex, age-group and neighborhood in the Ottawa-Hull French corpus. This corpus, described in detail elsewhere (Poplack 1983), was constructed from a random sampling of francophone residents of five urban neighborhoods in Ontario and Quebec, each characterized by a different proportion of French to English mother-tongue claimants. From informal tape-recorded conversations with these speakers we extracted a total of at least 200 occurrences of the variable (l), divided among the contexts listed in Figure 1. This totalled 13,503 tokens, subsequently coded according to a number of factors, chosen partly with a view toward confirming or disproving the analyses proposed in the literature, and partly to take into account our own conjectures regarding (l) variability. We tried to keep these factors as similar as possible from one grammatical category to the next in order to facilitate subsequent comparison between them. They included the phonological structure of the environment of the form containing (l) (following context for the subject clitics where (l) is word-final, and preceding context for the object clitics and articles where (l) is word-initial), and nature of the stress following the form containing (l). Though we take exception with previous suggestions that one grammatical category may be inherently more information-bearing than another and thus less susceptible to having its (l)'s deleted, we did hypothesize that certain specific instances of (l) might be more (or less) prone to deletion by virtue of their function within a particular discourse. Thus, if deletion is indeed affected by information-preserving factors, the greater the distance of the referent from the pronoun, the less likely should phonological (l) (and particularly elided /', where [l] constitutes the entire morpheme) be to delete. Accordingly, we coded subject and object pronouns as to whether they were immediately preceded by a nominal or pronominal referent (as in (3a) and (3b) respectively), followed by one (3c) and (3d), or both preceded and followed by a referent. We also considered the number of intervening clauses (one, two or three) between the pronoun and its referent. If there were a "functional" effect, we would observe most deletion in cases like (3), where the coreferent of the (italicized) pronoun in question is found in its immediate environment.

We also wished to ascertain whether (l)-deletion could be ascribed to the particular sequence of forms preceding and/or following the form containing (l), i.e. might it be describable in terms of local syntactic or suppletive conditioning? Accordingly, we coded the grammatical category of the form immediately preceding and following both the clitic object and the article, including some frequent prepositions. For each occurrence of the variable (l) we coded whether it was pronounced ([l]), deleted ([sl]), or whether the form containing it was suppressed altogether, as in (4), an option accounting for approximately 4% of our pronominal and determiner data.

In addition, each occurrence of (l) was coded according to whether it underwent some other phonetic modification such as vowel lengthening, fusion or change; glide formation, etc. The factor of stress - on the syllable immediately following the (l) in the case of subject pronouns, and following the form containing (l) in the other categories - was also noted in each case. The factors examined are displayed in Figure 1.

The variables are coded as being potentially affected by many types of factors - both linguistic and extra-linguistic - but the problem is to discover which of these factors are in fact significant for the behavior of a particular variable. We thus analyzed each data set by means of the variable rule program, a stepwise multiple-regression procedure which calculates the contribution of each of a series of factors to the implementation of a given rule when all are considered simultaneously, and retains in the analysis only those groups which contribute a statistically significant effect to the operation of the rule (D. Sankoff 1979). In this way we first compare (l) behavior in each of the contexts separately, to see whether or not they are governed by similar sorts of constraints.
Figure 1. Factors examined in each grammatical category

<table>
<thead>
<tr>
<th>Subject Pronoun</th>
<th>Object Pronoun</th>
<th>Article</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phonetic context</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Following stress</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Position &amp; distance of co-referent</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Preceding grammatical category</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Following grammatical category</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>(l) realization</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Other phonological change</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Frequent expression</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

5. RESULTS

Table 1 depicts the distribution of (l)-deletion in subject clitics, object clitics and articles in Ottawa-Hull French.

Table 1. Distribution of (l)-deletion in Ottawa-Hull French

<table>
<thead>
<tr>
<th>Pronouns</th>
<th>Articles</th>
<th>% (%)^</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subject</td>
<td>Object</td>
<td>N</td>
</tr>
<tr>
<td>IL (impersonal) 100</td>
<td>231</td>
<td>LUI</td>
</tr>
<tr>
<td>ILS (elles) 100</td>
<td>143</td>
<td>LES</td>
</tr>
<tr>
<td>ILS 99</td>
<td>526</td>
<td>LA</td>
</tr>
<tr>
<td>IL (personal) 98</td>
<td>447</td>
<td>LE</td>
</tr>
<tr>
<td>ELLE 84</td>
<td>2862</td>
<td>LEUR</td>
</tr>
<tr>
<td>ELLE(S) 33</td>
<td>15</td>
<td>L(m.&amp;f.)</td>
</tr>
<tr>
<td>TOTALS 4224</td>
<td>4003</td>
<td>5276</td>
</tr>
</tbody>
</table>

^ Frequent preposition + article sequences eliminated

It is apparent from the table that the different grammatical categories are subject to very different deletion rates, even in phonologically identical words (compare pronominal la and les with the corresponding determiners). These differences appear to reflect in part the chronology of (l)-deletion throughout the history of French (section 2). It is in the historical context in which (l)-deletion is first attested (the masculine subject pronouns) that it has now reached completion in Ottawa-Hull French: in singular, plural, personal, impersonal and ils < elles, (l) is deleted between 98 and 100% of the time. The feminine subject pronoun, to which the process presumably spread later, shows rates reaching 84%. Similarly, (l)-deletion in lui is also almost categorical, at 91%.13 Note, moreover, that leur, while only subject to low rates of deletion, is also variable, contrary to claims in the literature. Contexts more recently affected by (l)-deletion are correspondingly far less advanced, with the determiner system showing the least inroads of all.14

Perhaps the most striking aspect of this table is that the relative ranking of forms according to the susceptibility of (l)-deletion exactly parallels that found in Montreal French (both by Sankoff and Cedergren in 1971 on the basis of data from 17 speakers, and later by Ostiguy (1979) from a more extensive sample of 110 speakers drawn from the same corpus), even to the reversal in susceptibility to deletion of la and les in articles versus pronouns. Close parallels also obtain in the equivalent forms in the more conservative Continental French dialects, despite differences in overall frequency of application (Table 2).

Table 2. Distribution of (l)-deletion in Canadian and Continental French varieties

<table>
<thead>
<tr>
<th>CANADA</th>
<th>FRANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ottawa-Hull</td>
<td>Montreal (Sankoff-Cedergren)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Subject Pronoun</th>
</tr>
</thead>
<tbody>
<tr>
<td>IL (impersonal) 100</td>
</tr>
<tr>
<td>IL (personal) 100</td>
</tr>
<tr>
<td>ELLE 84</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Object Pronoun</th>
</tr>
</thead>
<tbody>
<tr>
<td>LUI 91</td>
</tr>
<tr>
<td>LES 50</td>
</tr>
<tr>
<td>LA 32</td>
</tr>
<tr>
<td>LE 8</td>
</tr>
<tr>
<td>LEUR 4</td>
</tr>
<tr>
<td>L'.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Article</th>
</tr>
</thead>
<tbody>
<tr>
<td>LA 38</td>
</tr>
<tr>
<td>LES 17</td>
</tr>
<tr>
<td>L'. 8</td>
</tr>
<tr>
<td>LE 7</td>
</tr>
</tbody>
</table>

Although the greater frequency of (l)-deletion in many categories in Ottawa-Hull French as compared to Montreal French could conceivably reflect a stable dialect difference, it is more likely attributable to stylistic differences than to regional
distinctions or ongoing linguistic change. In effect, we will see below the status of (l)-deletion in Canada to be that of a stable sociolinguistic variable, with no indication of age-grading either in Montreal or in Ottawa-Hull, despite the time lapse of 13 years between the establishment of the two corpora. In Tours, on the other hand, Ashby (1983) found evidence of change in progress with younger speakers leading in deletion in pronouns, as well as signs that the process is beginning to expand to the determiner system.

We next examine in detail the conditioning of (l)-deletion in each of its three major contexts of application.

5.1. SUBJECT CLITICS

Given the extremely high deletion rates of (l) in il(s) (Table 2), it is unlikely that those (l)'s remaining are still subject to phonological or other linguistic conditioning. Rather, we conclude that these pronouns have been relexicalized as [i], and that any realizations of [l] in them are cases of reinsertion by an inverted rule of the type well known from recent historical studies (Vennemann 1972, Klausenburger 1979). We thus exclude those forms from the data base and restrict our analysis to elle, which although highly deletable at 84%, is still variable.

A variable rule analysis of (l)-deletion from elle considering the simultaneous contribution of speaker, following phonological context, following syllable stress, and existence and position of the pronominal coreferent gives the results in Table 3.

Table 3. Contribution of factors to the deletion of (l) from pronoun elle

Corrected mean: 0.86

<table>
<thead>
<tr>
<th>FOLLOWING PHONOLOGICAL CONTEXT</th>
<th>CONSONANT</th>
<th>VOWEL [e l]</th>
<th>OTHER VOWEL</th>
<th>VOWEL [a o u]</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>.89</td>
<td>.55</td>
<td>.29</td>
<td>.19</td>
</tr>
</tbody>
</table>

Factors not selected: position and distance of the co-referent, stress on following syllable.

Table 3 shows that the only factors contributing a significant effect to the deletion of (l) are those pertaining to the segmental phonological context following elle. In particular, a following voiced, voiceless, nasal or liquid consonant favors deletion highly at .89. The effect of a following vowel depends on the nature of that vowel: a following [e] or [e] favors (l)-deletion only slightly, while all other following vowels disfavor it, the lower back vowels [a, o, u] exercising the strongest retentive effect. This seems to be combined with a tendency toward vowel harmony. We know that elle is frequently pronounced [a (l)] (71% of the time or 2033/2862 occurrences in this corpus); in fact it is almost always (96% of the time) pronounced [a] before consonants. Before vowels, however, there is a correlation between the distribution of [e(l)] vs. [a(l)] and the following vowel such that [a] (18%) or suppressed pronoun (35%) are generally used before the vowels [o, a, e], while [e(l)] (76%) is preferred before the front vowels [e, e]. The alternative realizations of elle thus tend to result in like (l + a) or [e + e] vocalic sequences.

The existence and position of the co-referent, whether preceding, following, both preceding and following, or unknown, was not selected as significant by the stepwise multiple regression procedure, indicating that this "functional" factor plays no role in the retention of (l) in elle. Rather, (l)-deletion is here a purely phonological process, uniquely constrained by phonological factors, in what can in fact be interpreted as a counter-functional manner, since the pattern described above tends to result in a zero surface realization of the pronoun.

5.2 OBJECT PRONOUNS

Table 4 depicts the contribution of factors to the deletion of (l) in object pronouns.

A large effect on deletion is contributed by the nature of the phonological context: preceding vowels favor this process while preceding consonants disfavor it.

Table 4. Contribution of factors to the deletion of (l) in object pronouns

<table>
<thead>
<tr>
<th>TYPE OF PRONOUN</th>
<th>PRECEDING PHONOLOGICAL CONTEXT</th>
<th>SYNTACTIC CONTEXT</th>
</tr>
</thead>
<tbody>
<tr>
<td>LUI .99 ORAL VOWEL .86 SUBJ PRO ___ VERB AUX .63</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LES .92 SCHWA .78 OBJ PRO ___ AUX VERB .61</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LA .80 NASAL VOWEL .49 COMP ____ AUX VERB .57</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LE .40 PAUSE (INITIAL) .47 FULL NP ___ AUX .57</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LEUR .16 [R] .47 OBJ PRO ___ INF .48</td>
<td></td>
<td></td>
</tr>
<tr>
<td>L(l) .04 VOICELESS CONSONANT .36 MODAL ___ INF .46</td>
<td></td>
<td></td>
</tr>
<tr>
<td>L(m). .02 NASAL CONSONANT ___ .33 COMP ____ INF .40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VOICED CONSONANT .20 OTHER ____ INF .29</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Factors not selected: position and distance of the co-referent, stress on the following syllable.

A syntactic effect is also found: (l)-deletion in object pronouns is affected by the immediate syntactic environment. In our original analysis we coded preceding an
following grammatical category separately, first to discover any eventual grammatical effect and second, to examine the hypothesis that specific combinations of clitics (e.g. je + la, je + les, tu + la, tu + les) would promote (l)-deletion in the object pronoun.

We found a complex interaction between the effect of preceding phonological segment and preceding and following grammatical category, such that their values changed erratically each time a new factor group was added. This was because the data was poorly distributed among the syntactic factor groups; almost all the noun phrases - including pronouns - preceded a tensed verb or an auxiliary, while the infinitives were of course preceded by a largely different set of factors (e.g. modals). We were thus obliged to treat the different sequences as a single factor group, as in Table 4, rather than as crosscutting factor groups. This treatment makes it obvious that the syntactic environment does indeed exercise a regular effect on (l)-deletion in pronouns, but not in the direction previously hypothesized. In particular, the sequence of preceding subject or object pronoun + object pronoun (as in je les ai vus, il me les a donné) does not seem to favor (l)-deletion substantially more than other sequences like NP + pro or comp + pro, when the cross-cutting phonological effect is removed. This can be seen by comparing the very similar effects contributed by subject and object pronouns on the one hand, and complementizers and full NPs on the other, when also preceding a tensed verb. The real effect on deletion is due to the following syntactic category, and in particular to whether the following verb is tensed or infinitival. Following tensed verbs promote deletion in pronouns, a type of reduction which is well attested in cliticization processes.

The position and distance of a pronominal co-referent, whether preceding the pronoun, following, both preceding and following or unknown, appeared to exercise a moderate but regular effect on (l)-deletion when viewed in isolation. Specifically, although there was no distance effect, any preceding or 'understood' co-referent promoted deletion of (l) in the pronoun, while if this referent followed the pronoun, deletion was inhibited. When considered simultaneously with the other factors, however, the factor of pronominal co-referent was not selected as significant to (l)-deletion (Table 4), exactly as had been previously found in the case of the subject pronoun elle. Thus, though there may well be a functional effect inhibiting (l)-deletion, it does not reside in the ability of (l) to fulfill its referential function, i.e. to preserve information. This may well be due to the fact that even when the (l) is deleted, enough other surface clues remain, at least in the non-eroded pronouns, to convey the relevant information. Functional effects, on the other hand, tend to manifest themselves when other surface disambiguating information has disappeared (Poplack 1979). Stress on the following syllable does not contribute a significant effect to (l)-deletion.

The deletion of (l) in object pronouns, then, may be characterized as being constrained by the nature of the phonological context immediately preceding the form containing (l): vowels favor this process, while consonants inhibit it. The object pronouns are themselves differentially susceptible to deletion, with after the preferred [l] realization of lui, les then la showing the greatest probability of deletion, independent of phonological or syntactic context. Finally, (l)-deletion is also constrained in a lesser way by syntactic factors, where the position preceding a tensed verb or auxiliary promotes deletion in pronouns.

### 5.3 Articles

Table 5 depicts the contribution of factors to the deletion of (l) in articles.

<table>
<thead>
<tr>
<th>TYPE OF ARTICLE</th>
<th>PRECEDING PHONOLICAL CONTEXT</th>
<th>PRECEDING GRAMMATICAL CATEGORY</th>
</tr>
</thead>
<tbody>
<tr>
<td>L.A.</td>
<td>.88</td>
<td>NASAL VOWEL</td>
</tr>
<tr>
<td>LES</td>
<td>.80</td>
<td>ORAL VOWEL</td>
</tr>
<tr>
<td>L'(f.)</td>
<td>.41</td>
<td>VOICED CONSONANT</td>
</tr>
<tr>
<td>LE</td>
<td>.34</td>
<td>PAUSE (± INITIAL)</td>
</tr>
<tr>
<td>L'(m.)</td>
<td>.09</td>
<td>NASAL CONSONANT</td>
</tr>
<tr>
<td>[l]</td>
<td>.32</td>
<td>GLIDE</td>
</tr>
<tr>
<td>VOICELESS CONSONANT</td>
<td>.09</td>
<td></td>
</tr>
<tr>
<td>OTHER</td>
<td>.12</td>
<td></td>
</tr>
</tbody>
</table>

Factors not selected: grammatical category following the article, stress on the following syllable.

We note again the large difference in susceptibility to (l)-deletion depending on the particular article in question, such that (l) is most likely to be deleted from the articles la and les; significantly, these are the only two cited in the majority of the previous literature as undergoing deletion at all. Note also that the ranking of articles according to their probability of (l)-deletion, despite the reduction in overall frequency, closely parallels that of pronouns, with the exception of la and les, which show a reversal from article to pronominal categories, a pattern which is also apparent in Montreal French (Table 2).

The table shows a strong phonological effect on deletion, with vowels heavily favoring this process, mirroring in most particulars the effect found for object pronouns. The strength of the segmental effect explains why some authors (Papier and Légare 1973, Santerre et al. 1977, Ostiguy 1979, Picard 1981) have claimed a preceding vowel to be the only environment for deletion, although as can be seen, it also takes place following consonants.

The greatest effect on (l)-deletion, however, is contributed by the nature of the grammatical category preceding the article. In particular, three prepositions: sur on, a 'at' and dans 'in' appear to strongly promote deletion of (l) from a following article. It is well known that precisely these three prepositions combine with articles in a number of frequent expressions in which the (l) is often deleted, sometimes in conjunction with vowel fusion or lengthening. The resulting sequences cited most repeatedly in the literature include those in (5):
Shana Poplack and Douglas Walker

(5) à la messe \([a(:) mēs]\) 'at mass'
sur la rue \([sa(:) ry]\) 'on the street'
at l'hôpital \([a(:) pital]\) 'in the hospital'
dans les maisons \([dē(:) mezō]\) 'in the houses'

The lexicalization of highly frequent constructions with zero realization of (l) has been invoked to explain away uneven distribution, and in particular, cases where (l) deletes in supposedly prohibited environments (Ostiguy 1979:29, Bougaeff and Cardinal 1980:98). In fact, as Table 6 shows, the realization of (l) is affected not by the lexical item which follows it, but by the particular preposition + article sequence in which it appears.

Table 6. Realization of (l) in articles following the prepositions à, sur and dans

<table>
<thead>
<tr>
<th></th>
<th>[l]</th>
<th>[s]</th>
<th>[l]</th>
<th>[o]</th>
<th>[l]</th>
<th>[o]</th>
</tr>
</thead>
<tbody>
<tr>
<td>LE</td>
<td>3</td>
<td>0</td>
<td>68</td>
<td>23</td>
<td>146</td>
<td>17</td>
</tr>
<tr>
<td>LA</td>
<td>39</td>
<td>163</td>
<td>18</td>
<td>138</td>
<td>20</td>
<td>136</td>
</tr>
<tr>
<td>LES</td>
<td>1</td>
<td>0</td>
<td>9</td>
<td>40</td>
<td>22</td>
<td>82</td>
</tr>
<tr>
<td>L'(m.)</td>
<td>58</td>
<td>1</td>
<td>7</td>
<td>0</td>
<td>22</td>
<td>2</td>
</tr>
<tr>
<td>L'(l.)</td>
<td>75</td>
<td>61</td>
<td>5</td>
<td>0</td>
<td>12</td>
<td>0</td>
</tr>
</tbody>
</table>

The preferred realization of à + la is actually \([a(:)\)]\), sur + la is realized \([sa(:)\]) and dans + la, \([dē(:)\]) regardless of the lexical item which follows. Similarly, sur + les and dans + les are generally realized \([se\]) and \([dē\]) respectively. (The sequences à + le and d + les contracted to [o] during the Old French period, and are now standard forms.)\(^{21}\) Sequences with le and elided l', on the other hand, retain [l], with the exception of à + l' (feminine), which at this point in time is about as likely to be rendered [a] as [al]. This distribution reflects the fact that the (l)'s in la and les undergo more deletion in all contexts than in other members of the determiner paradigm, although the process is extending to them as well.\(^{22}\)

This evidence in favor of the reinterpretation of these preposition + article sequences as relexicalized portmanteau forms parallel to Standard French au, aux forces us to reassess whether there is some interaction between the highly favoring effects on deletion of nasal and oral vowel (Table 5) and the correspondingly high effects of the preposition à and dans which contain them.\(^{23}\)

Table 7 shows the result of removing all articles preceded by sur, à and dans from the data base.

We note first that the differences in deletability of (l) in the various articles is strongly reduced though it does not disappear completely. The more striking result is that the phonological effect remains undisturbed even when the preposition + article sequences are removed. This effect is thus a true one and is expressible in terms of a consonant - vowel dichotomy, with vowels favoring deletion highly, confirming previous claims in the literature.\(^{24}\)

Table 7. Contribution of factors to the deletion of (l) in articles when à, sur, dans + article sequences are omitted

<table>
<thead>
<tr>
<th>TYPE OF ARTICLE</th>
<th>PRECEDING PHONOLOGICAL CONTEXT</th>
<th>PRECEDING GRAMMATICAL CATEGORY</th>
</tr>
</thead>
<tbody>
<tr>
<td>LA</td>
<td>.83</td>
<td>NASAL VOWEL</td>
</tr>
<tr>
<td>LES</td>
<td>.72</td>
<td>ORAL VOWEL</td>
</tr>
<tr>
<td>LE</td>
<td>.47</td>
<td>PAUSE</td>
</tr>
<tr>
<td>L'(l.)</td>
<td>.24</td>
<td>VOICED CONSONANT</td>
</tr>
<tr>
<td>L'(m.)</td>
<td>.22</td>
<td>NASAL CONSONANT</td>
</tr>
<tr>
<td>GLIDE</td>
<td>.49</td>
<td></td>
</tr>
<tr>
<td>SCHWA</td>
<td>.38</td>
<td></td>
</tr>
<tr>
<td>[l]</td>
<td>.28</td>
<td></td>
</tr>
<tr>
<td>VOICELESS CONSONANT</td>
<td>.12</td>
<td></td>
</tr>
</tbody>
</table>

Factors not selected: grammatical category following article, following syllable stress.

Preceding grammatical category was again selected as significant even when the favorable prepositions are omitted. We believe this is again due to a lexical effect, although a much weaker one, giving forms like [twé] from the quantifier tour + les sequence and [da] from partitive de + la sequence. The fact that these effects are not higher reflects the frequency of the alternative forms: [Tui le] (for both feminine and masculine) and [diA], with (l) retention.

We also note in Table 7 that the category "other" has a rather conservative effect on (l)-deletion. In reviewing our data we note that this residual category consisted largely of all the possible clause-final components, i.e. cases where the (l) appears in clause-initial position. There is apparently a constraint against deleting (l) in this initial position (see also Papier and Légaré 1972). As has been shown in the case of syllable-final consonant deletion in Spanish, when a word containing a functionally important item is in clause-initial position, that segment is less likely to delete (Poplack 1979).

The deletion of (l) in articles, then, may be characterized as being constrained first and foremost by the nature of the immediately preceding phonological context: basically, vowels favor this process, while consonants restrict it, precisely as in the case of the object pronoun. This is a result which we do not find particularly surprising, given their phonologically identical shape, although it has not been observed in the previous literature. On the contrary, those who have posited two rules to account for (l) deletion have done so specifically on the basis of purported differential phonological conditioning for articles and pronouns (Santerre et al. 1977; Morin 1979, Ostiguy 1979).
Another constraint is exercised by the form of the article in which (l) appears. 
l absence then allows deletion in this process, as has already been amply attested for other varieties 
of French. Deletion is also attested in le and l', the 'prohibited' contexts, though it 
remains as yet far less advanced here. We have also observed a strong lexical effect 
whereby la, les and l' in conjunction with a limited number of prepositions are 
being relexicalized, though at widely different rates, into portmanteau forms without 
[l]. This again, regardless of the particular form following the article. Finally, the 
behavior of the factor of preceding grammatical category suggests a lesser constraint 
against deleting (l) in clause-initial position. As in the case of the pronouns, the 
nature of the following syllable stress is not a significant factor in (l)-deletion from 
articles.

5.4 THE SOCIAL CONDITIONING OF (L)-DELETION

What of the social effects on (l)-deletion? The combined contribution of speaker to 
each of the variable rule analyses described above is presented in Figures 2-7. 
These show that the behavior of (l) in Ottawa-Hull French corresponds to that of the 
classic stable sociolinguistic variable.

Figure 2 shows that in each of the three contexts, subject pronoun, object pronoun and article, rates of (l)-deletion are a function of social class membership. 
For reasons described elsewhere (Poplack 1983), the random sampling of the 
francophone areas in the Ottawa-Hull region was not designed to ensure a range of 
socio-economic classes. Rather, the quotas were based on age, sex and proportion of 
anglophones in the district of residence, these being the socially relevant aspects of 
the structure of the community under study. Although we only divided the 
speakers into three very rough socio-economic groups for the purposes of the 
analysis reported here (welfare recipients and the chronically unemployed, blue 
collar workers, and white collar workers and small businessmen), there is a regular 
effect on (l)-deletion in the expected direction: speakers in the lower socio-economic 
groups delete (l) systematically more in all categories than those in the higher ones. 
This effect is solidly corroborated by that of schooling (Figure 3): the greater the number of years completed, the lesser the probability of deleting (l) in any 
grammatical category. As in the case of many other sociolinguistic variables, men 
delete (l) (slightly but systematically) more than women (Figure 4). These results 
are nearly identical to those found in other empirical studies of (l)-deletion in the 
speech community (Sankoff and Cedergren 1971, Santerre et al. 1977, Ogus 
1979, Ashby 1983).

The effect of neighborhood of residence is somewhat more complex. As 
detailed in the full report of this project, five francophone neighborhoods were 
selected according to their location on the Ontario or Quebec side of the Ottawa 
river, and according to the proportion of English mother tongue claimants in each, 
under the assumption that neighborhoods where French is both officially and locally 
the minority language would show most influence from English. Figure 5 shows 
that the status of French as official language is not a factor in (l)-deletion, the Quebec 
(Q) neighborhoods showing no systematic differentiation from the Ontario (O) 
nighborhoods. What difference there is between the neighborhoods represents 
more a social class effect than anything else, the two neighborhoods to the right of 
the graph enjoying a somewhat more elevated socio-economic status than the others.

Figure 2. Percent (l)-deletion by socioeconomic class

Figure 3. Percent (l)-deletion by years of schooling

Figure 4. Percent (l)-deletion by sex
This finding is corroborated by the effect on (l)-deletion of receiving formal instruction in English (Fig. 6): there is absolutely no difference. The information presented by the graphs on the age distribution of (l) variation (Fig. 7) round out the picture of a stable sociolinguistic variable. We see no systematic age grading for any of the grammatical categories among the six age groups under study. (The small drop in the oldest age group is a similar effect to what is found among speakers in the 35-44 year old category.) This lack of systematic age distinction was also found in the three empirical studies of the Montreal French corpus, indicating that (l) variation is stable in Canada. Ashby’s recent (1983) study of Tourangeau French, however, shows evidence of change in progress in that much more conservative variety, with younger speakers deleting more than older ones. Ashby suggests that, due to an apparent lag in implementing deletion (which can also be seen from the article contexts where the process does not yet operate in Tours), the change is still in progress in France. This is corroborated by the fact that social class appears to be a significant variable only among the older Tourangeaux.

6. ONE RULE, TWO OR THREE?

The parallel phonological and grammatical conditioning of (l) in object pronouns and articles is to our mind conclusive evidence that deletion in these two grammatical categories should be treated as a single variable rule with different overall rates of application. That they should also behave in a roughly parallel way across different groups of speakers, as we saw in Figures 2-7, is not particularly informative on this question, since any sociolinguistic variable could be expected to show the same behavior (e.g. subject pronouns here behave in a parallel way across speaker groups, yet on the internal grounds presented earlier, we would not wish to consider them on a par with object pronouns). However, in a recent paper on do-support, Kroch (1983) used a much more stringent test based on extra-linguistic criteria to determine whether similar variability occurring in different contexts should be considered in terms of a single variable or as a set of distinct variables. The underlying hypothesis is similar to that of a variable: that the probability p that a certain variant is used depends on the extralinguistic context in a specific way. Namely the logistic transform of p (written log p/1-p) is the sum of one or more factors representing the extralinguistic context and factors representing the linguistic features. If two sites of syntactic or phonological variation are manifestations of the same rule, we can expect them to share the same values for many of the factors, especially all the extralinguistic ones. Thus, as we move from one age group to another, or from one social group to another, the logistic transform of the probabilities associated with the two alternations should parallel each other exactly (abstraction made from statistical fluctuation) if they are really members of the same variable. This is because the social parameters must be identical, the only differences being the fixed quantities having to do with the linguistic differences of the two ‘sub-variables’.

Then, under the hypothesis that (l)-deletion in pronouns and articles is one and the same process, any change in the logistic transform for deletion in pronouns from person to person, group to group or time to time should be accompanied by an exactly equal change in the logistic transform for (l)-deletion in articles. In Figures 8 and 9 we see that this is the case: changes in phonological (l)-deletion percentages (transformed by log p/1-p) first in groups having different amounts of schooling (Fig. 8), then in groups belonging to different socio-economic classes (Fig. 9), are paralleled by changes in the article figures. Subject pronoun elle, on the other hand,
does not behave in an exactly parallel way, being far more sensitive to changes in extra-linguistic factors. Thus we cannot consider it part of the same variable rule.

7. DISCUSSION

In sum, the results we have presented here lead us to conclude that (l)-deletion in object clitics and determiners is distinct from deletion in subject pronouns and that deletion in the former categories is governed by a single variable rule. The unification of object pronouns and articles is demonstrated by their parallel behavior with respect to phonological, lexical, grammatical and social conditioning factors.

Both object pronoun and article classes show a split between *lelles* and *lel’s*; vowels favor deletion while consonants disfavor it; both are sensitive to grammatical category and to closely matching social factors of age, sex and socio-economic category. Moreover, the ranking of factors is virtually identical in all relevant cases, with one exception: (l) deletes more in la than in les in the articles, a ranking which is reversed in the pronouns, where les shows more deletion. This “flip-flop” is a stable result in the Ottawa-Hull French analysis and is also consistent with the results found in studies of Montreal French (Sankoff and Cedergren 1971, 1972; Ostiguy 1979). Why it should occur remains enigmatic given the information at hand: explanation of the difference must await future research.

We have controlled for stress placement throughout the study of (l)-deletion, yet stress nowhere emerged as a significant factor in the analysis. The key factors involve segmental phonology and grammatical or lexical category. Consequently, no immediate solution in terms of a metrical analysis suggests itself, although whether some of the grammatical factors can in turn be reinterpreted as manifesting some underlying differences in stress distribution is the subject of ongoing research.

It appears from the conditioning to which (l)-deletion is subject that we are dealing with a morphonemic rule of a somewhat complex type, and not with a phonological rule. Incorporation of variability into the description of the rule has at the very least the advantage of eliminating the lists of exceptions encumbering those previous rules treating this inherently variable process as categorical; at best, that of accounting completely for the facts.27

The “sociolinguistic method” we have adopted here has allowed us to examine systematically the possible roles of all the factors suggested in the previous literature within a coherent framework. Rather than attempting to impose a strictly morphological or phonological or lexical or sociological analysis on these variables, we have tried to attribute to each of these levels the actual weight they exercised in the 13,500 cases we studied. In so doing we exploit both internal and external data as evidence for rule type and rule unification. The parallel behavior of speakers with regard to (l)-deletion in articles and pronouns can be interpreted as evidence of the psychological reality of our claim for rule unification. Arguments regarding the question “one rule or two?” based solely on formal or internal grounds have thus far remained inconclusive. We believe the analysis presented here has provided a way out of the impasse. It has shown a single rule to be involved in (l)-deletion in the separate categories of articles and object pronouns, contrary to a variety of preceding claims. We thus hope to have demonstrated that a blend of approaches is capable of providing independent confirmation or infirmation of proposed solutions to formal problems which have remained elusive when examined on purely internal grounds.28
The data on which this study is based was extracted from the Ottawa-Hull French corpus, part of a project on Sociolinguistic Aspects of Language Contact funded by the Social Science and Humanities Research Council of Canada to Poplack. Support from the Council to Walker is also gratefully acknowledged. We have benefited throughout this work from the collaboration of a number of colleagues and students. We are particularly indebted to David Sankoff for advice and aid in all phases of the analysis. Marie-Josée Goulet, Marie Labelle and Sali Tagliamonte participated in the collection, coding and manipulation of the data. Henrietta Cederagen, Jack Chambers, Noel Corbett, Elan Dresher, William Kemp and Bernard Laks provided helpful comments on earlier versions of this paper.

As will become evident in the ensuing discussion, use of the term deletion does not necessarily imply that we consider an underlying (l) to be present in all of the forms under consideration.

Material between parentheses refers to speaker code and line number on the transcript of his/her utterance in the Ottawa-Hull French corpus.

A few remaining traces may be seen in the forms *du, au, des, aux* as well as in a few frozen expressions like *bachelor és arts, docteur és lettres*, etc.

We are indebted to Yves-Charles Morin for discussion of this point.

Non-phonological factors may include, at the least, exception features, arbitrary lexical classes, conjugation or declension markers, syntactic or subcategorization features, boundaries such as / or +, etc., and so on.

They formulate the rule as *l → / V + [accent]*+ and recognize a limited number of exceptions to it (application of the rule in a context where it "should not" apply: *à l'école, à l'église*, etc.). They also attempt to exploit the mirror image convention to extend the rule to *elle*.

As Pupper and Légare point out, plurality is actually signalled by the vowel in question *[la]* vs. *[l]* rather than the *(l)*.

According to Picard (1981), gemination only applies to pronominal *(l)*.

Interestingly enough, contrary to popular wisdom, Laks' data show little statistically significant stylistic effect on *(l)*-deletion.

Discrepancies in totals form speaker to speaker are due to the fact that some forms simply did not occur in some interviews. The extreme case of this involves the plural feminine pronoun *elles* which only occurred 15 times in the entire data base, half of which were due to a single speaker. The relatively small numbers of the subject pronoun *(l)s* entering into our calculations are due to the early realization that *(l)s* is subject to categorical (or nearly categorical) deletion; the number of tokens of this pronoun examined per speaker was therefore limited at the outset.

Though it is not entirely clear that these cases are "true" instances of *(l)*-deletion (to qualify as such, at least the vowel of deleted *la* in *4a* should have left a trace, but didn't), we include them anyway, because we have found no other cases of article deletion not also involving *(l)*-deletion. (Of course, with *le* and *(l)*, once *(l)* is deleted, it is no longer possible to distinguish deletion of *(l)* from suppression of the entire form.) Although there is evidence of subject pronoun deletion independent of the process of *(l)*-deletion (e.g. of *te, tu*), we also counted deleted pronouns involving *(l)* as instances of *(l)*-deletion for the purposes of the present study. However, such cases represented only 2% of the realizations of articles and pronouns combined.

In coding for stress, we considered main word stress only. Various additional types of prominence (secondary stress, emphatic stress, vowel lengthening) also occur in the data but were not included in the analysis. (Since, as we will see, main stress does not affect any of the deletion processes, it is unlikely that subsidiary phenomena play a role.) Nor have we attempted to formulate a "metrical" (in any of several senses) analysis of *(l)*-deletion: given the absence of local effects of stress, no obvious metrical conditioning emerged from the data. Though we do not rule out the possibility of some type of prosodic conditioning, the segmental and grammatical constraints on deletion which we have found are sufficient to elucidate the basic nature of the phenomena in question.

Although the status of *[l]* as a reduced form of *lui* (or as an extended usage of the pronoun y is not fully agreed upon (see Thibault 1983 for discussion), we consider such forms to be reductions for the present purposes in view of the remaining 9% of full *lui* forms.

The actual infrequency with which determiners are affected can be best appreciated by referring to the middle column under this heading in Table 1, which depicts the rates at which *(l)* is deleted after relexicalized preposition + determiner portmanteau forms have been removed from the data base. (See also section 5.3.)

Proportions are averaged from those provided in Tables 9A and 9B in Laks 1980.

These figures are highly inflated because Ostiguy only included articles occurring after a vowel, considering that context to be the only one in which deletion was permissible. *(l)* is also deleted after consonants, of course, and when these figures are added in, the effect is one of lowering the rates of deletion in the articles *la* and *les*. Compare the rates found by Sankoff and Cederagen, which include post-consonantal articles, as well as those for 
Ohana-Hull French.

The Ottawa-Hull corpus can be generally characterized as far more informal in style than the Montreal corpus (see Poplack 1983), which may account for the higher deletion rates.

In fact, in this corpus only 15 *(l)* out of 1347 instances of *lls* were pronounced, and these *(l)* were followed by vowels and consonants in the same proportions as the segments are distributed throughout the corpus. Moreover, fully half of these realizations are due to a single speaker.

These are treated together here, as no difference was found between them in earlier calculations.

The suppressed pronoun is interpretable here as *[a + a]* followed by vowel fusion but no lengthening, giving the phonetic sequence *[a]* for *elle a*. Note that this is a different system from the one described by Morin (1979) for his Continental French variety, where *[l]* is retained before vowels. Laks (1980) describes a system similar to Morin's for Parisian French.

The tokens represented in Table 6 as *[a la]* and *[a le]* were uttered by a speaker with little formal schooling in French.

The behavior of these preposition + article sequences indicates that the system of contracted or portmanteau forms is expanding in Canadian French, beyond standard *du, des, au, aux*. The realizations of *[ac]* for *la*

* [sa:]* and *[se:]* for *sur la, sur les*; *[da:]* and *[da:*]* for *dans la* and *dans les* respectively, result in a set of prepositions that are "inflected" for
following feminine or plural definite nouns. Whether analogous contractions (parallel to the Old French cases) develop in the pronominal system remains to be seen.

23 The phonological context involving preceding /l/ does not enter into this discussion because only half the tokens ending in /l/ are sur. However, two thirds of the tokens ending in a nasal vowel are dans, while most of those ending in an oral vowel are d. These interactions could conceivably explain the phonological effect we have observed.

24 The low position of schwa on the scale is an artifact of our coding system: this symbol actually refers to phonological schwa which would normally be deleted, merging thereby the group in question with that of a preceding consonant.

Santerre et al.'s analysis of (l)-deletion among 100 speakers from the Montreal French corpus found no clear sex effect, though Ostiguy's 1979 study of the same data base indicated that men deleted (l) more than women. The latter mirrors the result found in Sankoff and Cedergren's earlier study.

26 The direction in which "influence from English" might manifest itself in the particular phenomenon reported here is an empirical question, regarding which we had no specific hypotheses.

27 In general terms, we point out that variable rules, by their very nature, help obviate the need for exceptions in phonology.

28 Throughout this study we have used the term "rule" in a way which perhaps requires some discussion. Fundamentally, the key question we have investigated has been whether the behavior of the object pronouns is independent of that of the articles. We have demonstrated that it is not; that they are governed by the same constraints. Our analysis thus sets out the conditions that any rule-oriented approach must incorporate: the hierarchy of phonological contexts that variably influence deletion and the clear role of syntactic structure, as delineated in Tables 1-7 above. We could, of course, construct a standard variable rule on the basis of this information, but it is not clear to us what would be gained in doing so, since the basic questions regarding the nature of the phenomena have been answered. In the same vein, others may wish to formulate different rules within different frameworks. Again, the starting point would of necessity be the information we have presented.

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/S/ DELETION AND PRONOUN USAGE IN PUERTO RICAN SPANISH

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1. INTRODUCTION
Aspiration and deletion of syllable-final /s/ is widespread in modern Spanish, both geographically and socially. Dialects with /s/ deletion include Andalusian and many New World dialects such as Puerto Rican. The importance of /s/ deletion in Spanish lies in the essential morphological role that /s/ plays. /s/ marks the plural on articles, adjectives, and nouns in the noun phrase (NP). In the verb phrase, final /s/ distinguishes the second person singular from the third person singular in most tenses, c.f. comest/coome 'you (familiar) eat/you (polite) + he + she eats.' In other tenses, /s/ differentiates first and second person as well as second and third: comia/comias/comia 'I was eating/you (familiar) were eating/you (polite) + he + she was eating.'

In Andalusian Spanish, aspiration of /s/ opens and/or lengthens a preceding vowel, and lengthens or devoices a following consonant (Alonso, Zamora Vicente, and Canellada de Zamora 1950; Alvar 1956; Alvar, Badía, de Balbín, and Lindley 1970; Lapesa 1980; Navarro-Tomás 1939; Zamora Vicente 1970). When an /s/ is deleted in this dialect, the meaning it conveyed is retained by the phonetic effect. Thus instead of the contrast comest/coome 'you (familiar/polite) eat,' one would have the contrast comia/coome.

Navarro-Tomás (1948) and Matluck (1961) found the same kind of phonetic compensation in Puerto Rican Spanish (henceforth PRS). However, more recent research has found no trace of preceding-vowel or following-consonant alternation in this dialect. To test for any such changes, Poplack (1979:258) taped Puerto Rican speakers, and isolated the tapes nine plural NP's with /s/ deleted. When she played these excerpts for native speakers, they could not distinguish them from singular NP's with no underlying /s/. Uber did similar research for her dissertation (1981), with similar results. Speakers of PRS must, then, either compensate grammatically for /s/ deletion or make do without the information that /s/ carries in standard Spanish.

Grammatical compensation at the phrase level - within the NP - has already been investigated by Ma and Herasimchuk (1971), Poplack (1979), and Terrell (1978). They have found that Puerto Ricans tend to retain /s/ on the article - the first element in the NP - more often than on the noun or adjective, thus shifting the balance of information within the NP onto the article.

This paper will focus on compensation at the clause level. In standard Spanish, where /s/ is always present to mark the second person singular, pronouns are optional; they are used only for emphasis. When /s/ is dropped, however, a two-way or three-way ambiguity results in the verb paradigm, as shown below 1 (0 = dropped /s/):