LIAISON IN FRENCH AS A SECOND LANGUAGE

by

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A thesis submitted in conformity with the requirements for the degree of Doctor of Philosophy
Graduate Department of French
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ABSTRACT

Liaison in French as a Second Language

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This thesis deals with the learning of liaison by adult learners of French as a second language (FSL). Data from three discourses (reading, spontaneous, description) was gathered from two groups of students completing a second year oral FSL University course. The purpose of this study is to a) describe and compare the production of liaison by two groups of FSL speakers, b) provide a theoretical account of their liaison patterns, and c) discuss pedagogical implications of this study.

A transcription as well as a quantitative analysis of the speech samples from both groups was carried out for production of liaison (obligatory, optional, forbidden), false liaisons, resyllabification, temporally anchored consonants, creations and interferences, and voiced hesitations.

Results revealed that first of all, obligatory liaison was almost always produced (94%). Those obligatory liaisons that were not produced were predominantly in a [DET+N] sequence as well as after c’est. Second, forbidden liaisons were rarely produced (less than 4%). Those that were produced occurred between the conjunction et and a following word, between a singular noun with a final nasal consonant, and before h aspiré words. Third, optional liaisons were infrequently produced (14%). Those that were produced occurred after certain verbs (être, devoir), after the negative pas, and the conjunction quand. Overall, both groups behaved similarly with respect to
liaison production. This is significant considering the differences among the two groups (instructor, year of study, content of the three tasks). This suggests that there are some common stages in second language learning with respect to liaison. Fourth, there were very little false liaisons produced, suggesting that they do not seem to be a strategy language learners use. Fifth, more than 93% of the liaisons produced were resyllabified. Those that were not were due to factors such as length of word, word frequency, etc. Sixth, speakers produced temporally anchored consonants in non-liaison contexts, creations and interferences with respect to words in a liaison context, and voiced hesitations after a liaison word. Seventh, the nature of the discourse was found to play a role in liaison production. Forbidden liaisons, false liaisons, non-resyllabification, temporally anchored consonants as well as voiced hesitations occurred more frequently in the spontaneous-type discourses than in the reading.

The interpretation of the results was based on Encrevé’s (1988) model of liaison as well as on the prosodic domains of liaison (Selkirk 1984, 1986, De Jong 1990). Liaison was found to occur most frequently within the Clitic Group. However, liaison was infrequent, if not rare, in both the Small Phonological Phrase as well as the Maximal Phonological Phrase. Non-resyllabified liaisons in L2 speech occurred predominantly in the Clitic Group, contrary to the speech of native speakers, who only produce leftward syllabifications with optional liaisons, and never with obligatory liaisons (Encrevé 1988). Furthermore, it seems that for certain cases, FSL learners reanalysed floating consonants as fixed consonants, anchoring them to a skeletal position, producing, for example, *il a les cheveux courts* [kuRt].

The results have revealed that while liaison has in general been acquired, the main difference between native and FSL speakers is due to the nature of the error: L2 speakers have difficulties with word-final consonants which tend to be pronounced in non-liaison contexts.
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Chapter 1. Introduction to French liaison

1.1. Introduction

In French there are two types of word-final consonants: those that are only pronounced under certain phonological and syntactic conditions (liaison consonants), and those that are always pronounced (fixed consonants). French liaison is a phenomenon particular to the oral production of French which has been of interest to both grammarians and linguists. A liaison consonant is a word-final consonant that is pronounced before a vowel-initial word (ex. *les _hommes* /lezɔm/)\(^1\) but never before a following word beginning with a consonant (ex. *les femmes* /lefam/) or at the end of a phrase (ex. *mange-les* /mazle/). Liaison is traditionally distinguished from *enchaînement*, which refers to a word-final consonant that is always pronounced (i.e. before both consonant- and vowel-initial words, as well as at the end of a phrase). For example, *une grande amie* /yngrädami/, *une grande maison* /yngrädmezɔ/ and *la maison est grande* /lamezɔgʁã/.

Both types of word-final consonants resyllabify before vowel-initial words. Thus, the final liaison consonant *z* in *les enfants* is resyllabified, producing /le-zã-fã/, and the final fixed consonant *d* in *une grande amie* is also resyllabified, producing /yn-grã-da-mi/. Pernot (1937: 334) defines liaison as "le phénomène par lequel la consonne finale MUETTE d'un mot se prononce avec la voyelle initiale du mot suivant", and *enchaînement* as "le phénomène par lequel la dernière consonne PRONONCÉE d'un mot se prononce avec la voyelle initiale du mot suivant". Thus, resyllabification occurs in both cases. One of the differences, however, is that in *enchaînement*, the consonant does not change its phonetic form (as in 1a below), whereas certain liaison consonants do change phonetically (as in 1b):

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\(^1\)Liaison will be indicated by the symbol "_", and the absence of liaison by "/". Non-resyllabification (no *enchaînement*) will be indicated by the symbol "_/". Syllable boundaries will be represented by the symbol "-".
(1)  

a. une grande île /yngrajil/  
   une grosse abeille /yngrosabj/ 

b. un grand éléphant /gRtekm/  
   de gros animaux /dggrozani/ 

The only exception to enchâinement consonants is that the /v/ of neuf becomes /v/ before heures and ans ([nœvœr] and [nœvã]). Native speakers of French are able to make the distinction between both types of word-final consonants and produce them appropriately.

From a historical perspective, French liaison is the result of a previous stage of the language when all consonants were pronounced, even before consonant-initial words. Towards the XIth or XIIth century, final consonants began to no longer be pronounced. It was only when consonants occurred before a following vowel within the same rhythmic group, that they were preserved (Léon 1992: 151-152). The numbers cinq, six, sept, huit, neuf, and dix still reveal a trace of these final consonants (Bourciez 1958).

Phonetic changes in liaison consonants occur in words which used to contain unvoiced consonants. For instance, grand, tard, chaud, and froid were written grant, tart, chaut, fraot. Although the spelling of these words changed (to a final /d/), the /t/ is still produced in liaison contexts (Bourciez 1958). Thus, the /t/, whether it is written t or d is pronounced in liaison contexts such as dort-il, vingt_hommes, mot_à mot, ils sont_heureux, quand_on voudra, grand_esprit, profond_ennui, etc. (Bourciez 1958: 151).

However, liaison is not simply a phonological phenomenon; that is, its occurrence does not depend solely on the presence of a following vowel-initial word. In fact, many sociological and linguistic factors such as dialect, social class, education, age, sex, type of discourse (ex. reading, conversation, interview, etc.), style (familiar, formal, etc.), syntactic context, etc., as well as length of words (monosyllabic vs. polysyllabic), phonetic nature of liaison consonant (/t/ vs /d/, /ʒ/ vs /s/),
and even individual variations are involved in its production (Delattre 1955, Malécot 1975, Ashby 1981, Van Ameringen and Cedergren 1981, Booij and De Jong 1987, De Jong 1991a, 1993). Since liaison production varies according to linguistic and sociological factors, it is difficult, if not impossible, to agree on one theory to account for this phenomenon.

While many theories have been proposed to account for the production of liaison, the challenge involved in describing liaison adequately is that many factors contribute to its realization. First of all, it is indisputable that no theory will predict the occurrence of liaison by all speakers, regardless of the variables that are controlled. Second, even if we provide a theory of liaison, it serves no purpose if no prediction can be made as to what actual speakers are producing. In order to describe and account for liaison production by certain types of speakers, it is essential to take samples of oral productions made by specific groups of speakers in which certain variables are controlled, and describe their liaison patterns. Until recently, this has been accomplished with native French speakers from different geographical areas, by controlling various factors such as age, sex, level of education, etc. However, quantitative studies on the learning of French liaison by non-native speakers have not been, to my knowledge, carried out in order to determine the extent to which liaison is learned, and where the corrections or improvements need to be made. The importance of such a study is that while native speakers of French are able to make the distinction between the two types of word-final consonants, learners of French as a second language (FSL) must learn to make this distinction.

This study examines the production of French liaison by two groups of adult learners of French as a second language. This will provide a detailed account of the speech samples of

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2 I am not going to be discussing acquisition vs. learning, though this has been debated by other researchers. According to Titone and Danesi (1985: 61), "(t)here is a difference between language acquisition and language learning. The former is automatic; the latter is controlled. The language teacher can intervene primarily to facilitate learning. However, the goal should always be acquisition". Danesi and Di Pietro (1991: 65) state that second language learning
speakers whose French language proficiency differs from native French speakers. The purpose of this study is to:

1) describe and compare the production of French liaison by two groups of FSL learners;

2) provide a theoretical account of liaison in the speech performance of FSL learners;

3) determine what the data on FSL learners can contribute to linguistic theories on French liaison;

4) discuss the pedagogical implications of the results obtained.

This study also examines the nature of word-final consonants in FSL, and reveals certain tendencies that are particular to language learners. The nature of learners' errors are also discussed. This in turn provides insight into the strategies these learners are using when faced with a potential liaison. For instance, there are certain errors that appear to be specific to language learners (such as the realization of word-final consonants in a non-liaison context), while other errors also occur in the speech of native French speakers (certain false liaisons, for example).

The next four sections of this chapter (sections 1.2. to 1.5.) present an overview of the various treatments of liaison. Due to the complex nature of liaison, it is difficult to place certain analyses in one specific section. Nevertheless, for the purpose of clarity, previous research is presented according to the following four areas:

1. descriptive approaches;
2. phonological approaches;
3. syntactic approaches;
4. prosodic phonology.

refers to "the conscious monitoring strategies (for example, attention to form and rules) that are typically utilized by adult learners in structured-tutoring environments", while second language acquisition refers to "the subconscious spontaneous processes that go into the construction of the system of a language, akin to those that characterize the development of language in childhood". On the other hand, Sharwood Smith (1994) uses the terms acquisition, learning and development synonymously. He claims that the "most important thing is to keep learning/acquisition/development separate from 'teaching'" (p. 12). For the present study, acquisition will refer to informal learning.
In section 1.2., descriptive approaches to liaison are presented. This section is included as it provides a detailed account of liaison which will be the basis of the analysis for this corpus. In section 1.3., I discuss various phonological approaches to liaison (generative abstract, generative concrete, and non-linear phonology). Section 1.4. presents various syntactic studies on liaison (traditional grammar, X-bar theory, c-command and government, and functional categories). Section 1.5. presents studies of liaison based on prosodic domains for the realization of liaison. This section follows both the phonological and syntactic approaches since it concerns hierarchical structures based on the phonology-syntax interface. Section 1.6. discusses the learning of French as a second language and liaison. Chapter 2 presents the study itself (methodology, results, etc.). Chapter 3 contains an analysis of hypotheses, results, and the implications of this study. I discuss the kind of errors that the language learner makes with respect to liaison. For instance, are the errors merely phonological, or do they depend on syntactic contexts, the grammatical categories involved, the familiarity of the words, or other variables? That is, which of the factors involved in the production of liaison cause difficulties for the language learner? I examine the implications of this type of research for the development of teaching strategies for language instructors. Finally, the conclusion is presented in chapter 4.
1.2. Descriptive approaches to French liaison

1.2.1. Introduction

French liaison has been researched and discussed by grammarians long before linguists developed theories to account for its production. Grammarians' detailed accounts must be acknowledged, of course, because it is from these descriptions that linguistic theories take form. In fact, it is the aim of linguistics to formulate theories which can predict the patterns of liaison described by the grammarians. This chapter presents an overview of traditional descriptive approaches to this phenomenon.

My intention here is not to provide a detailed account of the production of liaison. The purpose of this chapter is merely to present an account of the categorization of liaison (obligatory, optional and forbidden), as well as the factors affecting its production, as presented by Grevisse (1949), Fouché (1956), and others. Both phonologists and syntacticians attempt to provide models of liaison that incorporate what has been described by traditional grammar.

1.2.2. Characteristics of these descriptions

Traditional grammatical approaches to liaison (Martinon 1913, Grammont 1920, Grevisse 1949, Fouché 1959, Delattre 1951 and 1966, Léon 1966) provide a detailed description of the contexts in which liaison is produced and those in which it is not. Such descriptions usually include all the contexts (including the exceptions) as well as the different levels of style (from familiar to formal). This also allows for a distinction between three different types of liaison: obligatory, optional and forbidden. If a speaker produces only obligatory liaisons, this is generally associated with an informal, or familiar style, whereas the optional liaisons that are produced are associated
with a formal style of speech. Thus, optional liaisons are infrequent in familiar styles of speech. Forbidden liaisons involve those cases in which liaison is not produced, in any style\(^3\).

Because the grammars cited above serve a didactic purpose, descriptions consist of word lists grouped according to the syntactic contexts \((\text{ex. plural noun + adjective, personal pronoun + verb, etc.})\). In other words, lists are created to provide the reader (or the language learner) with all the contexts in which liaison is obligatory, optional or forbidden depending on the style of speech.

In this section, descriptions of liaison will be presented according to the following eleven components which will provide the essence of the various linguistic theories that follow, and will serve to demonstrate the difficulties linguists have encountered in attempting to account for all aspects of liaison.

a) the phonetic realization of the liaison consonant;
b) nasalization;
c) \(h\) aspiré words;
d) glides;
e) resyllabification;
f) word syllabicity;
g) syntactic relationship;
h) false liaisons;
i) lexicalized expressions;
j) interjections;
k) phonostylistics and other factors involved in liaison production.

By presenting liaison in this manner, it will be shown that liaison is obviously not a unidimensional component of French in that it does not affect merely one element of the French language, and as a result cannot be treated as such. Liaison consists of the interaction of linguistic factors (phonology, syntax), as well as other factors combined (style, individual variation, etc.), which allows for a wide variety of realizations among speakers.

\(^3\)Langlard (1928) gives a good historical sketch and a traditional history of liaison occurrences divided into obligatory, optional and forbidden. Morrison (1968) reviews studies on liaison until 1966. Kaye and Morin (1978) also discuss the history of liaison.
a) **Phonetic realization of the liaison consonant**

One of the factors included in such descriptions is the phonetic nature of the liaison consonant. Fouché distinguishes between those that are pronounced "conformément à l'orthographe" (ex. [t], [p] and [n]) and those that "prennent une prononciation différente de celle qu'indique l'orthographe" (ex. /s/-[z], /d/-[t]) (Fouché 1956: 436). These are, of course, distinguished from *enchaînement*, in which final consonants do not alter their phonetic form before a vowel-initial word (see examples 1a and b above).

The phonetic nature of the liaison consonant is relevant to liaison production. Delattre (1951) states that the only possible linking consonants are: s, z, x, t, d, n, r, p, g. For the last two, they are limited to the words *trop, beaucoup* and *long*. He also notes that two pronunciations are encountered for liaison with g: /g/ and /k/ in *long*. It is also shown that "the individual linking consonants differ widely in their frequency of occurrence" (Green and Hintze 1990: 66). That is, studies on liaison production have shown that certain liaison consonants are produced more frequently than others. Malécot's (1975) study on 4,409 possible liaisons mentions only 7 consonants, and 99.5% cases involve only three consonants (/z/, /t/ and /n/). Of the three, the segment most favouring liaison is /n/ (94.4%), compared to /z/ (60.5%) and /t/ (52.4%). Ashby's (1981) findings confirm Malécot's observations that the segment most favouring liaison is /n/. However, unlike Malécot, Ashby notes that the segment /t/ also favours liaison, while /z/ does not. De Jong (1989) also finds that /t/ liaison is more frequent than /z/ liaison. There seems to be a discrepancy in the observed frequency of liaison consonants among the various studies. This difference is related to the selection of liaison contexts. In Ashby's (1981) study, liaison between a determiner and a noun was not included since liaison is categorical in this context. Ashby mentions that if categorical liaison had been included, /z/ liaison would probably be more frequent.
than /t/ liaison. In fact, Léon (1966) also states that the most frequent liaison is with /z/. Thus, one of the main reasons for differences in the interpretation of data is due to the decisions involved in selecting liaison contexts. Decisions of this nature will also account for the differences in the reported frequency of liaison production in native French speakers.

Another factor affecting liaison production is the segment preceding the liaison consonant. Ashby’s study shows that liaison consonants with a preceding vocalic segment favour liaison, while liaison consonants with a preceding consonantal segment disfavour liaison. Thus, liaison will more likely occur in *elles m’ont écrit* ([ɛlmɔtɛkri]) than in *nous sommes arrivés* ([nusɔmnɔzarive]) (Ashby 1981).

b) **Nasalization**

Another phonetic phenomenon considered is nasalization. Final nasal consonants resurface before vowel-initial words (ex. *un certain homme* [ɔsɛʁtɛnom], but *un certain cadeau* [ɔsɛʁtɛkado]). In addition to the resurfacing of nasal consonants, there is the distribution of nasal vowels which remain nasal in some contexts such as *mon ami* /mɔnami/, and denasalize in others such as *un bon ami* /œbɔnamii/ (Fouché 1956: 435-436). However, descriptive approaches offer no explanation for this distinction, merely lists indicating in which words vowels remain nasal (*on, aucun, commun, un*, etc.) and in which ones vowels denasalize (*certain, plein, moyen, bon*, etc.).

c) **H aspiré words**

Words containing an *h-aspiré* begin phonetically with a vowel, but behave phonologically like consonant-initial words, thereby blocking the presence of a liaison. For example, the *h aspiré* words in Delattre's (1966: 46) list are presented under the category of forbidden liaisons (ex. *la*
hache, la haie, en haillons, la haine, etc.). These words also do not undergo elision (thus, *l'homard, *l'Hollande). They are to be distinguished from those words beginning with an h muet in which liaison is permitted (ex. les_hommes, les_hôpitaux, les_hôtels, etc., but les/homards [le°mar], *[lez°mar]). Other cases in which liaison is forbidden as a result of the following segment include the following words: un (in numbers such as cent/un), huit, onze, huitième, onzième.

For example:

(2)    dans/huit jours
       vers les/onze heures
       quatre-vingt/-un  (Delattre: 1951: 34)

The words in (2) should not, according to descriptive approaches, elicit a liaison consonant.

d) Glides

Traditional descriptions of words beginning in a glide make a distinction between those words that allow a liaison (ex. les_oiseaux /lezwaζ/, les yeux /lezjo/, etc.) and those that do not (ex. les whiskies, /lewiζki/, les week-ends /lewiζnd/, les yacht /lejɔ/, etc.). Words which block liaison seem to function like consonant-initial words, also blocking elision (Heap et al. 1992). As was the case for words beginning in h-aspiré, glide-initial words which block liaison are also added to the forbidden cases of liaison (Fouché 1956: 439-440).

e) Resyllabification

The notion of resyllabification is also included in the descriptions of liaison. In French, the most frequent syllable structure is: [consonant + vowel] (Léon 1992: 151). As was mentioned in the previous section, liaison is the result of the survival of the linking of final consonants of Old
French. As Delattre writes,

Ces consonnes se sont conservées dans la liaison entre deux mots étroitement unis, à cause du haut degré de syllabation ouverte qui caractérisait la prononciation de la fin du Moyen Français: dans la chaîne verbale, la consonne finale du premier mot était tellement unie (syllabiquement) à la voyelle initiale du mot suivant, et tellement séparée (syllabiquement) de la voyelle précédente, qu'elle n'a pas été atteinte par l'amouissement de la même consonne finale dans le mot isolé ou suivi de consonne: petit [pətî], petit garçon [pətis garsö], mais petit enfant [pətī tāfā] (Delattre 1955: 42).

In other words, the final consonant came to be resyllabified onto the following word (ex. mes élèves [mes-ze-lëv], leurs ennemis [lœr-zen-mi]). Final consonants that are always pronounced also resyllabify to the following word (ex. une grosse abeille /yn-gro-sa-bej/, avec elle /a-ve-kel/).

f) Word syllabicity

According to traditional accounts, the number of syllables of a word is also a factor in determining the production of liaison. As a result, monosyllabic words are distinguished from polysyllabic ones. For instance, monosyllabic prepositions allow liaison (ex. dans un an) whereas polysyllabic ones do not in conversational style (ex. depuis un an) (Delattre 1951). Consequently, prepositions are divided into two categories, those that require an obligatory liaison and others that require an optional one, depending on the number of syllables. Adverbs follow this same pattern. Compare c'est très important ([setrezimportant]) with c'est extrêmement important ([setekstreamporto]). Conjunctions are also divided this way, except that liaison with monosyllabic conjunctions is optional (mais/alsor, mais_alors) while liaison with polysyllabic conjunctions is forbidden (alsor/on rentra).

g) Syntactic relationship

Many grammarians (and linguists) emphasize the importance of the "close syntactic
relationship" between words that allow liaison. That is, liaison seems to be produced more frequently within a rhythmic group than between two rhythmic groups. As Grevisse (1949: 68) notes, liaison only occurs within the *groupes de souffle*. Cohen (1963) distinguishes between liaison after a pronoun preceding a verb and its absence after a noun preceding a verb by referring to this notion of syntactic "closeness" (later referred to as the difference between a lexical item and a clitic in a liaison context). For instance, in *ils ont mangé*, the pronoun is closer to the verb than the noun is in *les gens/ont mangé*. Delattre (1951) also mentions the notion of syntactic closeness by stating that "la liaison se fait dans la mesure où l'usage a consacré l'extrême étroitesse d'union de deux mots ou classes de mots: *ils entrent*, mais: *les gens/entrent*, *un petit habit*, mais: *un habit/étroit*" (Delattre 1951: 26). Léon (1966) offers a general rule for obligatory liaisons based on this notion. In (3), he proposes that unstressed words will be in a liaison context with the following stressed words, since this is what forms a rhythmic group in French:

(3)

<table>
<thead>
<tr>
<th>Un déterminant + un déterminé</th>
</tr>
</thead>
<tbody>
<tr>
<td>Article, Adjectif, Auxiliaires, Pronoms (mots inaccentués)</td>
</tr>
</tbody>
</table>

(Léon 1966: 120)

Léon (1992: 153) once again stresses that "...la liaison n'apparaît qu'à l'intérieur du groupe rythmique. Il n'y a donc *pas de liaison après un mot accentué* ". In (4a) *petit* is an adjective in an unstressed position thereby allowing a liaison, whereas in (4b) *petit* is a noun in a stressed position, thus not permitting a liaison.

(4)  

| a. petit enfant  
| b. un petit/ avec sa mère |

(Léon 1992: 153)

*Optional and forbidden liaisons remain in lists of contexts in Léon (1966).*
This also accounts for the absence of liaison after the following words:

(5) Alors-/il arrive
    Maintenant-/il pleut
    Quand-/est-il venu?
    Comment-/a-t-il fait ça?  

Interrogatives with inversion also create two rhythmic groups:

(6) Vont-ils-/arriver?
    Vont-elles-/écouter?
    A-t-on-/essayé?  

Examples (4b), (5) and (6) indicate that liaison does not occur after a word that is stressed, since that word is not part of the following rhythmic group. This is an important contribution since prosody plays a major role in liaison. And since stress placement in French is on the last syllable of a word and therefore on the last word in a rhythmic group, it is natural that liaison be interpreted as being produced from an unstressed word to a stressed one, or within a rhythmic group. However, while an approach based on rhythmic groups adequately accounts for obligatory liaisons, it fails to incorporate optional liaisons in cases such as des soldats anglais. That is, are rhythmic groups altered in accounting for optional liaisons? For instance, if the optional liaison in des cadeaux énormes were produced, would the rhythmic group enlarge to include the adjective énormes? This would indicate that stress is placed at the end of énormes and not after cadeaux. If this is so, then there must be some rule of French that assumes that stress is shifted to the end of the entire phrase in order to include the adjective.

An important contribution to the study of liaison is presented by Félice (1950), who approaches French morphology from a different perspective than was generally accepted at the time. In fact, he anticipates underlying abstract forms of generative phonology by describing liaison as being produced within a rhythmic group, however, he bases his analysis on morphological and phonological assumptions. Félice (1950) finds that it is more practical to derive the forms of both
genders from one abstract root, which would in turn allow for the reduction of the number of rules to a few simple, general rules. He proposes a hypothetical root or thème from which the phonetic realizations are derived. The root word is generally the feminine form and not the masculine one. Mute E is also part of the thème. Rules of euphony are then applied to this thème, producing the correct phonetic form. The sentences elle ne me donne plus rien and c’est ce qui vous trompe are derived from the structures in (7).

(7)  
a. elø ne mø donø ply rjë > el nø m don ply rjë  
b. sø ø sø ki vu trøp > s ø s ki vu trøp  
(Félîce 1950: 18)

Félîce proposes rules of euphonie interne and euphonie externe that determine how words function internally and with respect to one another. He proposes a rule for elision:

(8)  
-ø final appartenant à une monosyllabe proclitique  
s’élide devant voyelle initiale.

This gives, for example, la poøat but la ørb > l’ørb. In other words, the abstract form contains the final vowel /a/, which is dropped before an initial vowel. This rule does not cause any difficulty for words beginning with an h aspiré because he proposes an abstract h that prevents elision (and consequently, liaison). For example,

(9)  
le héro: lø (h)ero  
jehais: 3ø (h)œ

Félîce proposes the following rule of liaison stating that word-final consonants disappear if they are a -t or a -z (Félîce 1950: 18). For example,

(10) les hommes: lez ømøz > lez øm  
les chats: lez fatz > le fa

Furthermore, he proposes another rule stating that -k disappears after a nasalized vowel, and -r drops after e- in a non-liaison context, an in (11):

(11) il est franc: il ø frøk > il ø frø  
entier: àtjeØ > àtje
This is the phonological component of his analysis which is based on an abstract root word or thème. For instance, the abstract form of *il parle* is *ilparlè* which he derives from the inversion (*parle-t-il? [parløtil]). He then determines when and where the abstract consonant is realized phonetically. Within a single rhythmic group, if a vowel-initial word is preceded by a word ending in a consonant, that consonant is always pronounced. In all other cases, the rules deleting word-final consonants must be applied. Félice notes as an example,

...les mots «un savant anglais» si cette expression vise un Anglais (nom) qui est savant (adjectif), elle exprime une idée et forme un seul groupe rythmique avec accent d'intensité sur :glais, et se prononce: ò savâ ägle. Si elle désigne au contraire un savant (nom) qui est anglais (adjectif), elle forme deux groupes rythmiques avec accents d'intensité sur :vant et sur :glais et se prononce: ò savâ ägle. Cette différence de prononciation permet de distinguer les deux sens de l'expression (Félice 1950: 18).

In other words, liaison in *un savant anglais* occurs because it is within a single rhythmic group, and does not occur when the phrase consists of two rhythmic groups. This is the same conclusion supported by Léon (1966 and 1992).

Hewson (1986) also analyses liaison as depending on the closeness of the syntactic relationship between two words. While he gives no rules that define the difference between a "close syntactic relationship" and one that is not close, he does however point out that both phonology and syntax seem to be involved in liaison production. His rule of liaison may be defined then as the following: "a word that is followed by words or expressions that are syntactically dependent on it may be linked to these following elements by liaison" (Hewson 1986: 155). Hewson views obligatory liaison as a "syntactic marker of the internal coherence of a phrase" (Hewson 1986: 150). Words such as determiners, clitics, some prepositions, etc. are in a close relationship with the following word, and are consequently linked by liaison. Where there is a loose relationship between two words (such as certain prepositions and the following noun), liaison becomes optional. This also
includes the difference between singular and plural nouns in which liaison after singular nouns is forbidden, while it is optional after plural nouns (*un soldat*/*anglais* vs. *des soldats*/*anglais*). Thus, grammatical number is an issue of closeness. This is also the case with adjectives and inflected verbs. The looser the relationship, the less likely it is that liaison will occur. As a result, liaison will not occur where a close syntactic relationship does not exist, even if the phonological conditions are satisfied.

However, while this approach suggests something about the nature of syntactic relationships with respect to liaison, it does not indicate how to define the difference between a close syntactic relationship and a loose one. Do the structures of words in a close syntactic relationship and those in a loose syntactic relationship differ? Is there a way to represent these differences? These are questions that Hewson does not address, although they are addressed (in following sections) by research in prosodic phonology and syntactic studies (on functional categories). Because they are difficult questions to answer, and because it becomes problematic to provide a theory that accounts for all the categories identified by traditional descriptions, Morin and Kaye (1982) conclude at the end of their study that

> although there clearly are syntactic factors that must be included in any analysis of liaison, the traditional approach, according to which the syntactic environment in which a liaison occurs is defined category by category, and sometimes even word by word, appears to be essentially correct (Morin and Kaye 1982: 326).

 Nonetheless, as will be examined in subsequent sections, syntactic factors affecting liaison must be explained in order to provide a complete account of liaison.
h) False liaisons

False liaisons are those liaisons which are inserted in inappropriate positions, that is, in cases where there should be no liaison, or the incorrect liaison consonant is inserted for various reasons. These liaisons come into being as hypercorrections (Clédat 1915: 51). For instance, Frei (1971) notes that the liaison consonant for the plural (/z/) can be inserted in order to indicate the beginning of the following word, so that the /z/ is seen as the prefix of that word. For example,

(12) quat'zyeux
    cinq zhommes
    J'ai chez moi une dizaine de zouvriers
    Beaucoup d'zyeux dans l'boutillon
    Mal de zyeux

(Frei 1971: 98)

He discusses the insertion of cuirs (the insertion of a [t]) and velours (the insertion of a [z]), and states that the velours (as in 13a) are inserted more frequently than the cuirs (as in 13b):

(13) a. Moi-z-et lui
    Menez-moi-z-y
    Donnez-moi-z-en
    Moi-z-aussi
    Va-z-en chercher

(Frei 1971: 103)

b. il va-t-et vient
    il faudra-t-aller

(Frei 1971: 104)

These liaisons are obviously associated with current trends of the language. In fact, Van Ameringen and Cedergren (1981) find that in popular Montreal French, a [t] is inserted after the first and second person singular of the verb être, as in (14):

(14) je suis ici [jtisi]
    je me suis éreinté [m(teRte)]
    tu es un christ de chien [tetE]

(Van Ameringen and Cedergren: 1981: 145)

This seems to be a phenomenon of regularisation in Montreal French, which could result from an

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See Klausenburger (1984: 33) for false liaisons with all consonants.
analogy to the third person singular of the verb être.

Morin (1982) notes that in Montreal, the pronoun ça could be followed by the consonant [l] before a vowel-initial verb, as in (15):

(15) Ça [l] augmente sans arrêt [salogmät]
Ça [l] a pour effet... [sal]
Ça [l] arrive souvent. [salariv]
Ça [l] achoppe sur tous les articles de la convention collective. [salaçp]

These are instances of such cases in which a liaison is inserted in order to avoid an hiatus.

i) **Lexicalized expressions**

Lexicalized expressions are divided into two categories: those in which liaison is obligatory and those in which liaison is forbidden. In the first case, liaison is obligatory because the groups cannot be decomposed. That is, they are analysed as one group, thereby allowing liaison. This type of lexicalized expression is the *groupe figé*, which is “a two-word sequence that has a required liaison not subject to grammatical function” (Malécot 1975: 163). Lists of expressions requiring obligatory liaison such as the following are provided in the descriptions:

(16) de temps_à autre sous_officier États_Unis Nations_Unies Champs_Élysées tout_à coup tout_à fait tout_au moins tout_au plus etc.
c'est_à-dire mot_à mot petit_à petit nuit_et jour accent_aigu avant_hier il était_une fois de haut_en bas pot_au-feu

(Léon 1992: 155)

Other expressions such as those found in (17) form a whole but lack liaison:

(17) corps_à corps les uns/aux autres de part/et d'autre

(Klausenburger 1984: 54)
Once again, it seems that in this case a list of both types of expressions may be the only adequate solution. It may be that the notion of rhythmic group can be incorporated in this case to account for liaison. That is, the placement of stress is at the end of the lexicalized expression. This does not, however, account for the absence of liaison.

j) Interjections

Interjections such as oh, ah, aie!, ouf!, etc. are units that must be isolated. Léon (1992) states that liaison is forbidden in order to allow for intelligibility in the case of monosyllables or quotations. For example,

(18)  il dit/oui 
       mais/oui 
       des/"ah" et des/"oh"  

(Léon 1992: 154)

These are cases that are difficult to account for in an analysis of liaison. Fouché (1956) includes names of vowels such as je dis/a, il écrivait/i et prononçait/e, etc., although he states that liaison occurs when the preceding word is an article, as in un_a, un_é, les_i, des_u, etc. (Fouché 1956: 440).

k) Phonostylistics

French liaison (like E caduc) is subject to linguistic variation, and is as a result one of the factors of speech that allow for the evaluation of phonostylistic aspects of the language. The number of occurrences and the distribution of liaison vary depending on a large number of variables. Phonetic, syntactic, stylistic, social, and even grammatical factors affect liaison production. Not only does liaison realization vary from speaker to speaker, but sometimes also within the speech performance of the same individual. Elements that are part of oral speech such as hesitations (voiced

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6See Léon (1992) for a discussion of the phonostylistic role of liaison.
or unvoiced), corrections, etc., also affect liaison.

Optional liaisons are the most difficult liaisons to account for since many factors are involved in their production. Léon (1971) shows that optional liaisons "semblent généralement fonctionner comme un des traits d'un style soutenu" (Léon 1971: 134). Many studies are based on a specific style of discourse. Léon (1971) presents examples of some cases of optional liaisons produced by President Charles De Gaulle:

(19) Je dis encore
soit en secret
les actes hostiles
mais en y ajoutant
il fut un homme
mais rien au fond
et pourrait à un moment donné
qui pourraient en résulter
librement exprimé

(Léon 1971: 134)

These liaisons, which do not occur in conversational speech, are one of the phonostylistic characteristics of a more formal style of French. Martinet (1988) states the factors involved in the production of liaison:

Jouent en faveur des liaisons, la fluidité du débit, les figements, la pression du texte écrit, lu à haute voix ou plus ou moins présent à l'esprit, également les consignes qui peuvent être données dans certains corps professionnels et qui entraînent des hypercorrections. À la télévision, il y a profusion de liaisons chez les annonceurs (les chiffres /z/ et les lettres), beaucoup moins dans les spots publicitaires.

Jouent contre les liaisons les hésitations, les mises en valeur des mots à initiale vocalique, les accidents d'énonciation qui se produisent normalement dans la vie quotidienne (Martinet 1988: 297).

Thus, liaison cannot be described accurately by referring only to phonological and syntactic processes.

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*See Agren (1973) for the study of optional liaisons in radio conversations, and Morin and Kaye (1982) for the study of news programmes and interviews.*
The situational environment may also influence liaison production. For instance, Ashby (1981) studied liaison as a sociolinguistic phenomenon by interviewing speakers in and around Tours, and found that optional liaisons were more likely to occur in the first half of the interview than in the second half. This suggests that as the interview progresses, speakers grow more relaxed and as a result produce fewer liaisons.

In descriptive approaches, optional liaisons pose no real difficulty since there are no rules to follow, merely lists of contexts indicating when liaison becomes optional. These liaisons become problematic when one attempts to propose a generalization for their occurrence. Grammarians merely list the cases of optional liaisons as belonging to a certain style of discourse. That is, the more formal the style, the more liaisons are produced. However, in liaison production there is not a clear distinction between obligatory, optional and forbidden liaisons. That is, the term *optional* is not an adequate term, since it does not necessarily indicate that every individual has the option of using a certain liaison at all times. For instance, certain optional liaisons are not optional in conversational speech since they are never produced in that context. As Ashby (1981) notes for his speakers, optional liaisons are not used randomly. Even within optional cases, some liaisons are produced more frequently than others.

Delattre (1955) cites five causes of variation of optional liaison: "le style, l'union syntaxique, l'union prosodique, la phonétique descriptive et la phonétique historique" (Delattre 1955: 49). His analysis results in a hierarchy of frequency of optional liaisons (Delattre 1956) in which some optional liaisons are more frequent than others. In other words, not all optional liaisons have the same possibility of occurrence. For example, liaison in *ils ont aimé* may occur more frequently than in *des parents insupportables*, although both are optional liaisons.

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*See Delattre (1955 and 1956) for a detailed description of optional liaison in French.*
In the case of language learners, optional liaisons are more difficult to acquire because there is the lack of available evidence from which to build optional liaison constructions. L2 speakers are generally not exposed to the difference between obligatory liaison cases and optional ones. Furthermore, this type of liaison requires the speaker to make a choice. That is, the learner must decide in which circumstances to pronounce or omit the liaison. As Delattre states:

La difficulté est augmentée, pour l'étranger, par le fait que dans les innombrables liaisons facultatives, certaines se font plus fréquemment que d'autres. Dans Vous avez entendu, on lie environ la moitié du temps; mais dans C'est un vieux bouquin, la liaison se fait presque toujours, sans pour cela être absolument obligatoire; et dans Un repos indispensable, elle ne se fait presque jamais, sans pour cela être absolument interdite. Il existe donc toute une hiérarchie dans la fréquence des liaisons facultatives (Delattre 1955: 43).

Delattre thus establishes a hierarchy in order to account for the frequency of optional liaisons. He does not, however, provide this hierarchy, nor does he inform the reader how to determine which of the optional liaisons are more frequent than others. Delattre’s hierarchy is a descriptive model since there is still no method of determining where different liaisons are placed in his hierarchy of frequencies.

Malécot (1975: 173, 176) makes a more precise classification of liaison. Instead of dividing liaisons into three categories (obligatory, optional and forbidden), he divides them into four categories:

(20) 1. universally required;
2. optional in conversation but obligatory in elocution;
3. rare in conversation but optional in elocution;
4. universally forbidden.

He maintains the notion of hierarchy, but specifies two different kinds of optional liaisons. It seems that grouping all optional liaisons together is not explicit enough, while a hierarchy of frequencies is more efficient. Although Durand (1986a: 167) notes that "(l)t is also doubtful that the notion of three (or four) scales of formality makes very much sense", attempts have been made to provide an
account of French liaison according to a broader hierarchy than the traditional three-way distinction.

The descriptions examined so far are very beneficial for a French grammar. They are complete and offer many examples. Descriptions of French liaison are aimed at learners of FSL who are provided with all the contexts available to a French adult. However, there are no general rules summarizing these contexts. Léon's (1966) rule (example 3) is an attempt at proposing such a generalization, yet there are still many exceptions to his rule. It does not deal, for example, with the difference between mono- and polysyllabic prepositions and adverbs and auxiliaries in which liaison is not obligatory with all prepositions and adverbs (but is optional in instances of polysyllabicilty). In fact, a French language learner would still have to learn phrase by phrase. From a linguistic point of view, these descriptions lack explanatory adequacy (Chomsky 1957). That is, there is no phonological or syntactic rule that predicts which contexts allow liaison, and which ones do not.

Much research has been carried out on the production and analysis of liaison, with very different results, and for many reasons (Green and Hintze 1990). First of all, not all descriptions of liaison are identical, and so studies are based on different definitions of liaison. This will obviously influence their outcome. Second, the collection of data differs with respect to the type of discourse of speakers which varies from readings to spontaneous speech. Then, even if the discourse is spontaneous, it may be a formal interview, a conversation between friends, a reading, or anything else. Third, researchers may have different reasons for collecting the data: for theoretical purposes, descriptive purposes, didactic purposes, etc. Fourth, a large number of variables must be taken into account (such as linguistic factors, sociological factors, etc.). As for Fouché and Delattre, "(n)either carried out a controlled investigation, so presumably both were relying on extensive but unsystematic observation supplemented by intuition" (Green and Hintze 1990: 81). There was, therefore, a need to analyse actual speech productions and to provide a theoretical account of occurrences of liaison.
by real speakers, and not just abstract accounts based on “intuition”.

1.2.3. Summary

To summarize, traditional approaches provide detailed lists of contexts in which liaison is obligatory, optional, and forbidden. While these lists are adequate and highly detailed descriptions, they offer neither generalizations nor rules to summarize or predict the production of liaison. It has also been mentioned that the three-way distinction (obligatory, optional, forbidden) is no longer an adequate account of liaison, and there is a need for a more efficient account of liaison which will be discussed in subsequent sections. Researchers (such as Léon 1966) have attempted to provide rules, yet these rules only account for certain properties of liaison. There is also no rule for optional liaisons. A theoretical rule-based approach to liaison is necessary for various reasons. First of all, analyses of data by actual speakers reveal that liaison patterns are not appropriately accounted for by the three-way distinction (Malécot 1975, Ashby 1981). That is, some obligatory liaisons are not produced, while some forbidden liaisons are. Optional liaisons pose more difficulties since not all optional liaisons have the same status of optionality. In fact, certain optional liaisons occur more frequently than other optional liaisons which are quite rare. Secondly, while individual variation exists, there still are generalizations that may be formulated in order to account for certain contexts that have a higher frequency of liaisons than other. For instance, certain contexts will almost always produce a liaison (i.e. between a determiner and a noun), while others will rarely produce one (i.e. after infinitives). Thus, liaison is not a random phenomenon that cannot be accounted for by means of a rule-based model, nor is it merely lists of individual cases. There are certain characteristics of liaison that can be generalized, such as the phonological context, the nature of the liaison word, etc.. Thirdly, analyses of liaison provide insight into phonological and syntactic processes of language.
Liaison concerns a certain type of word-final consonants in French. A representation of word-final consonants reveals their unique status. As for the syntactic nature of liaison, the "close syntactic relationship" between words is revealed by liaison, a fact which will play a major role in developing theories in prosodic phonology. Fourthly, a theoretical account of liaison production is essential for the study and interpretation of analyses on second language data, and for pedagogical purposes of identification and correction of learners' errors. Thus, it is necessary to provide a theoretical account of French liaison in both native and non-native speakers of French.

This necessity for theoretical rule-based models brought about the research carried out by abstract phonologists. The following section presents research on the phonological properties of French liaison.
1.3. Phonological approaches to liaison

1.3.1. Introduction

Research in French phonology has provided generalizations and rules to account for the appearance of liaison in French. This section presents an overview of the principal phonological theories of liaison (in linear abstract and concrete phonology, and non-linear phonology) in order to demonstrate how phonologists account for French liaison.

1.3.2. Generative abstract phonology

While structural linguistics provides a list of allomorphs and their distribution for each morpheme, generative transformational linguistics proposes an underlying form from which different allomorphs are derived by means of a series of formal rules. Thus, phonologists provide formal representations to the traditional descriptions in order to predict the contexts described (obligatory, optional and forbidden contexts). In generative abstract phonology, the underlying representation consists of final consonants (Schane 1968, Dell 1970, Selkirk 1972). Thus, the underlying form of on, nous, and petit is the following:

(21) on: /ɔn/
nous: /nuz/
petit: /ptit/

(Valdman 1976: 99)

The underlying consonant is present before both vowel- and consonant-initial words in the underlying representation, but is deleted before a consonant by means of a deletion rule. This type of analysis is fundamental in stating the similarities between liaison, inflection and derivation.
This concept of underlying representations consisting of the long form (or the feminine form instead of the masculine one) is not new. As previously mentioned, Félice (1950) describes the morphology of French words as being derived from an abstract root that he calls the thème, to which rules of euphony are applied. Thus, les hommes is represented as: lez œmœz > lezœm (Félice 1950: 18). In abstract phonology, hypothetical roots become underlying representations for the application of phonological rules. For example, a rule of final schwa deletion would delete the final schwa in camarade, whose underlying representation is /kamaRAD@/.

a) **Phonological rule**

Major contributors to liaison in abstract phonology include Dell (1970, 1973a), Schane (1968, 1974), and Selkirk (1972). Schane (1968) proposes a truncation rule that deletes word-final consonants before consonant-initial words and before a word boundary (#). Thus, “where there is a liaison context (i.e. a single word boundary) the syllabification principles are similar to those internal to the word” (Schane 1978b: 305). Schane refers to four classes of segments that can be differentiated according to two features: consonantal and vocalic, each feature having the value + or -:

<table>
<thead>
<tr>
<th>(22)</th>
<th>Consonant</th>
<th>Liquid</th>
<th>Vowel</th>
<th>Glide</th>
</tr>
</thead>
<tbody>
<tr>
<td>+cons</td>
<td>+cons</td>
<td>-cons</td>
<td>-cons</td>
<td></td>
</tr>
<tr>
<td>-voc</td>
<td>+voc</td>
<td>+voc</td>
<td>-voc</td>
<td></td>
</tr>
</tbody>
</table>

(Schane 1968: 3)

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Bastock (1978, 1981) discusses the function of syllables in phonological rules, and the function of boundaries in phonology. He considers grammatical boundaries in phonological rules with reference to French. The main function of boundaries, both syllabic and grammatical is the ranking of rules. The syllable is the unit of rank $S$, and the boundaries $+$, $\#$, $\##$ and $\###$ define four different units: the morpheme, the minor phonological word, the major phonological word and the phonological sentence.
Thus, consonants and liquids have the feature [+cons] in common, whereas vowels and glides share the feature [-cons]. Liaison then will take place when the following rule for truncation does not apply:

(23) \[
\begin{array}{l}
\alpha_{\text{cons}} \rightarrow \varnothing / \_ [-\text{segment}] [\alpha_{\text{cons}}] \\
-\alpha_{\text{voc}}
\end{array} \] (Schane 1974: 90)

Liquids and glides are excluded by this rule since they have the same alpha values: liquids are +++ and glides are -- for the features "consonantal" and "vocalic".

Although Félice (1950) proposes an abstract root which allows for a reduction of rules, Schane is the first to introduce a phonological rule of this type whereby the word-final consonant in the underlying representation is deleted before consonant-initial words and in final position in order to allow for cases of non-liaison\(^\text{10}\). For instance, a rule of consonant deletion applies in petit camarade, where the underlying representation is /petit# kamaRade#/; yet fails to apply in petit ami, where the underlying representation is /petit# ami#/.

Schane proposes a deletion rule for final consonants, as well as an underlying schwa in order to prevent deletion of final consonants (as in camarade, whose underlying representation is /kamaRade/). In (24), the rules of deletion and of final consonant deletion are applied to ils sont petits.

\(^{10}\) Dell also has a Truncation rule:

(OBL.) [-son] \rightarrow \varnothing / \_ [-son], # (Dell 1970: 68-69)

His liaison rule is:

(OBL.) [-syll] # [+syll]

1 2 3 \rightarrow 2 1 3 (Dell 1970: 68-69)

However, unlike for Schane, liaison is not in this case the non-application of a deletion rule.
The deletion rule deletes the /t/ in *sont* and the final one in *petits*, as well as the /s/ in *ils*. The final /s/ of *petits* is deleted by the rule for final consonant deletion. Thus, final consonants are deleted in the following contexts:

(25)  
- +C: petit + S # ami + S [ptizami] / *[ptitzami]    
- #C: petit # clou [ptiklu] / *[ptitklu]    
- ##: c'est trop petit## [pti] / *[ptit]    

(26) Rule for final consonant deletion:
Delete a word final consonant
1. obligatorily,
   a. in phrase final position
   b. in a singular noun;
2. optionally, in a plural noun.    

Schane also stipulates the following syntactic contraints on the application of his rule:

Thus, in *des camarades anglais*, the rule for final consonant deletion of the plural noun need not apply, but it is obligatory in phrase final position.

Final schwas also account for feminine forms in which the presence of the final schwa allows for the final consonant to not be deleted. In the case of *elles sont petites* (in 27), the /t/ is followed by a schwa in the underlying form, which prevents the deletion rule from applying. As a result, the /t/ is not deleted:

(27) Underlying representation:  el + S# sōt# patīt+ S#    
Deletion:  el # sō # patī+ S#    
Final consonant deletion:  el # sō # patīa #
The final surface form results from further rules of schwa deletion.

b) **Nasalization**

Schane's (1968) analysis does not include underlying nasal vowels for French. Instead, there is an underlying sequence of [oral vowel + nasal consonant] from which surface representations of nasal vowels are derived. A process of phonological nasalization results in nasalization of the vowel and deletion of the nasal consonant. In liaison contexts, words such as *bon* have this representation, whereas words such as *mon, ton, son, on*, are marked to undergo vowel nasalization. Dell (1973b), on the other hand, treats words such as *on* as regular and *bon* as marked not to undergo vowel denasalization. Dell's rules for *on arrive* and *bon ami* are illustrated in (28 a and b):

(28) a. *on arrive*  
   /ɔn#ariv/  
   Nasalization:  
   ōn#ariv  
   Liaison:  
   õ#nariv  
   [ōnariv]  

b. *bon ami*  
   /bɔn#ami/  
   Liaison:  
   bɔ#nami  
   Nasalization:  
   —  
   [bɔnami]  

It is the difference in rule ordering that determines the output of (28a) or (28b). In the first example, nasalization precedes liaison, which allows for a nasal vowel in the output [ōnariv]. In the second example, liaison occurs and the consonant is resyllabified to the following word, so that no nasalization can occur, thereby producing the output [bɔnami]. Thus, the nasalization rule states that "a nasal consonant nasalizes a vowel that immediately precedes it, provided that both segments belong to the same syllable at the time the rule is applicable" (Dell 1973b: 148).
However, the difficulty with this approach is that it fails to account for the surface representations of nasal vowels. For instance, *mon ami* [mɔnəmi] contains a co-existing nasal vowel and nasal consonant. However, if the nasal consonant does not undergo deletion and the vowel undergoes denasalization (as in *bon*), then there should be no cases of nasal vowels in a liaison context (as in *mon*).

c) *H* aspiré words

Generativists consider *h*-aspiré words as functioning like consonant-initial words. The first generativist to propose this solution was Schane (1968), who accounts for the absence of liaison before *h* aspiré words by proposing an underlying *h* that has no phonetic representation (Félice (1950) also proposes an abstract *h* to block liaison and elision). Schane bases his preference for an underlying *h* on a French dialect and on a theatrical pronunciation where the *h* was pronounced. He also proposes a deletion rule that will block its phonetic realization:

(29) \( h \to \emptyset \)

This rule applies after final consonant deletion, in order to obtain the correct surface structure (thus *les/haricots*, and not *les Haricots*).

The difficulty with an abstract approach is that since Schane’s rules are based on abstract forms, he postulates underlying consonants that are never realized, as in the case of *h*-aspiré words (Selkirk and Vergnaud 1973). Schane introduces an abstract consonant in the underlying representation that is later deleted, although it is never present in the surface representation. Thus,

--

12Note that Dell (1973b) has chosen the glottal stop as the underlying segment.

13Selkirk and Vergnaud (1973) also postulate an abstract segment */H*[ with the features [-syll], [+ cons].
according to this model, words such as onze, huit, etc., should be represented in the same manner in order to prevent liaison. Love (1980) states that "(i)n general it is unjustifiable to seek to base an analysis of one dialect on arbitrarily selected facts from another, for there seems no reason why some, rather than any other, such facts should be selected" (Love 1980: 62).

Another difficulty for this approach is that the nasalization rule applies before words beginning with an h-aspiré, as in un homard [õɔmar]. Yet, as Klausenburger (1977: 154) argues, this rule should not apply in this case since, if h-aspiré words are vowel-initial (in the rule feature analysis) the structural description for the rule is not met.

Benoît de Cornulier (1981) also mentions the abstract phoneme. He writes the following comments:

les mots comme “hasard” commencent par un phonème abstrait. Ce phonème, l’orthographe ne le suggère que dans une partie des cas (cf. la non-élision de “je ulule”, “le uhlân”, “le onzième”, “le yaourt”, et il est loin d’être toujours historiquement dérivable d’une véritable aspiration (cf. “onzième” du latin “undecimum”). Il aurait bien d’autres particularités curieuses que celles de ne pas s’entendre. Car il faudrait expliquer...pourquoi il n’apparaît que devant voyelle, jamais devant consonne, jamais en final de morphème; pourquoi, si l’e muet aussi est un phonème, la suite h aspirée plus e muet n’existe pas, paraît même une idée ridicule; pourquoi on ne peut même pas imaginer une h aspirée géminée, etc. (Cornulier 1981: 183).

It is worthwhile noting that Félice also proposes an underlying h before these words. One of his rules is: “∅ caduc ne disparaît toutefois jamais devant h caduque” (Félice 1950: 19). Thus, le héros would be represented as : l∅ (h)eRo. Félice mentions in a footnote that he refers to h caduque, by analogy to ∅ caduc, what is normally referred to as h aspirée (pg. 19, fn. 21). His representation of the h caduque is (h).
d) **Glides**

Words beginning with both types of glides such as those in (30a and b) must be accounted for by any formal system of rules.

(30)  

<table>
<thead>
<tr>
<th>Case</th>
<th>Examples</th>
</tr>
</thead>
</table>
| a.   | l’oiseau /lwazo/  
      | l’oie /lwa/  
      | les oiseaux /lezwazo/  
      | les oies /lezwa/  |
| b.   | le whisky /lewiski/  
      | le yacht /lejɔ̃/  
      | les whiskies /lewiski/  
      | les yachts /lejɔ̃/  |

In (30a), both elision and liaison occurs. In (30b), both are blocked. One solution would be to mark one of these two cases as being exceptions to elision rules. Milner (1967) attempts to explain this irregularity by stating that "(words) that do not entail truncation of the preceding vowel begin with an underlying glide, others with an underlying vowel" (p. 273). The rule in (31) for glides follows the Truncation rule:

(31)  /i ü u - → [y û w] / ___ V  

(Milner 1967: 273)

Schane’s (1968) rule for truncation in word-final position is the following:

(32)  

| αcons  | segments are truncated before [αcons] segments.  
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>- αvoc</td>
<td></td>
</tr>
</tbody>
</table>

(Shane 1968: 4)

This rule maintains that in French “vowels and consonants form a class of segments which can be truncated whenever the following segment agrees in consonantality, and that this class is opposed to the class of liquids and glides, which does not undergo truncation” (Schane 1968: 4). Thus, final consonants in the following words are not deleted:

(33)  

<table>
<thead>
<tr>
<th>Case</th>
<th>Examples</th>
</tr>
</thead>
</table>
| a.   | pareil /pɛʁil/  
      | travail /tʁavaj/  
      | oeil /œj/  |
| b.   | bal /bal/  
      | bol /bol/  
      | nul /nyl/  |
In the case of words having vowel-like glides such as *les oiseaux*, the rule in (32) does not apply since glides are [-cons], [-voc], and the consonant is not deleted. In order to account for the absence of elision in *le yod, le watt*, etc., Schane (1974) proposes underlying glides *j* and *w*. However, this does not differentiate between glide-initial words before which elision and liaison are blocked (as in *le watt, les watts*), and those glide-initial words before which elision and liaison occur (as in *l’oiseau, les oiseaux*). It is possible that glides possessing consonant-like features (such as *watt, whisky*, etc.) are represented with an abstract underlying glide, while glides with vowel-like features are not. This solution is similar to proposing an abstract *h* before words beginning with *h-aspiré* in order to block liaison and elision. However, the two types of glide-initial words must be represented differently in order to demonstrate the different functions of both consonant- and vowel-like glides.

e) **Fixed final consonants**

Fixed final consonants are word-final consonants that are always pronounced (*chef, sel, sec, lac, avec, rêve*, etc.). These consonants are problematic in the deletion model since they never undergo consonant deletion. That is, they are pronounced both before vowel- and consonant-initial words, as well as in phrase-final position. For example,

(34)  
  a. *avec elle /avɛkɛl/*
  b. *avec lui /avɛklɥi/*
  c. *c’est le chef /sɛļəʃɛf/*

(Schane 1968: 11)
The deletion rule does not apply to these cases, and as a result words containing fixed final consonants become exceptions. Furthermore, no distinction is made to differentiate fixed final consonants (as in *avec, chef*, etc.) from final consonants that delete (as in *petit, gros*, etc.).

Dell (1970) proposes underlying schwas for words such as *avec, sens, chef*, etc., which produces /avekə/, /sãsə/, /efə/. The schwa in these cases is an abstract schwa that does not surface. The sole purpose of these schwas is to prevent the deletion of the final consonant. Thus, abstract segments must be added in the underlying representation of words in order to account for the surface representation of certain segments (absence of elision and liaison with *h inspiré* words, fixed final consonants). However, since abstract segments never surface, they have no phonetic value. They are proposed in order to account for elements of the language that do not follow the rules for consonant deletion. There is no other evidence in support of these abstract segments (except as Schane (1968) mentions, certain types of “theater pronunciation” in which a phonetic *h* is actually heard). This is one of the problems that the concrete analysis of liaison addresses (in section 1.3.3.).

f) **Resyllabification**

Resyllabification in abstract phonology is presented in terms of the word boundary, in which the rule for liaison places the word-final consonant after the word boundary. The following is Dell's rule of liaison:

(35) [-syll] # [+syll]

1 2 3 → 2 1 3

(Dell 1970: 68-69)

Resyllabification is included as part of the rule, so that *on arrive* /õ#n#riv/ becomes [õ#n#riv]. In non-resyllabification, the representation would still remain: [-syll] # [+syll]. However, no mention
is made of stylistic variations in which non-resyllabification occurs in certain cases (such as Encrevé’s (1988) documented cases of non-resyllabification in the speech of French politicians, presented in section 1.3.4.). This is a weakness for linear phonology since it fails to incorporate actual speaker realizations of the rules of liaison.

g) False liaisons

Since liaisons are the result of the non-application of deletion rules, it is not possible to account for false liaisons such as quatre-z-enfants [katzafâ], ce n’est pas-t-à moi [patamwa], etc. These consonants are not present underlyingly. In the case of quatre-z-enfants, the consonant /z/ is not present in the underlying representation, yet surfaces before a vowel-initial word. In ce n’est pas-t-à moi, there is an underlying consonant (the /z/ in pas), but liaison does not occur with the /z/ (as in ce n’est pas-à moi /sønepøzamwa/). Rather, it occurs with another liaison consonant, /t/. Whether a consonant is inserted where none is present, or a consonant is inserted where another consonant is present, these two cases cannot be described by a deletion model that requires a consonant to be present underlyingly in order to surface.

False liaisons are part of the speech performance of native French speakers, and thus must be represented phonologically. However, the term “false liaison” refers to their phonological structure, and does not refer to the source of these errors. That is, these epenthetic liaisons are not necessarily liaison errors. They may occur, for instance, as a result of analogy to other liaison contexts (i.e. an epenthetic /t/ after verbs such as il va-t-et vient, il faudra-t-aller, or an epenthetic /z/ in plural words such as quatre-z-yeux, mal de zyeux, etc.).
h) Summary

Generative abstract phonology allows for traditional descriptions of liaison to be accounted for by positing an underlying consonant that is deleted by a rule (Truncation) in cases of non-liaison, and kept in all other cases. It allows for a generalization of the many descriptive lists by applying phonological rules. An underlying consonant predicts feminine forms (of adjectives, for example), as well as words beginning with an aspirate \( h \). Schane provides a phonological rule for the cases of non-liaison (as before \( h \) aspiré words) by referring to an abstract underlying form. This allows for many properties of French to be generalized by the application of these rules.

However, this approach encounters certain difficulties. First of all, abstract phonology is unable to account for the surface representation of nasal vowels in liaison contexts. For example, the surface representation of un bon ami /bûnami/ contains the sequence oral vowel followed by nasal consonant, while mon ami /mûnami/ contains both a nasal vowel and a nasal consonant. If the nasal consonant is not deleted and the vowel undergoes denasalization (as in bon), then there should be no cases of nasal vowels in a liaison context (as in mon). In order to account for nasalization in liaison contexts, nasal vowels and nasal consonants must co-exist.

Second, being based on abstract forms, an abstract model of liaison postulates underlying consonants that are never realized, as in the case of \( h \)-aspiré words, where an abstract consonant is introduced in the underlying representation that is later deleted, although it is not pronounced. The same is true of words such as onze, onzième, etc., which do not undergo elision or liaison. What abstract consonant is required in order to prevent elision and liaison with onze (*l’once septembre, *les onze livres)? The same is true for fixed final consonants (in avec, chef, etc.) which are exceptions to deletion rules, since fixed final consonants never undergo deletion. Dell’s (1970)
proposal of final underlying schwas requires an abstract segment that is added to a word only to explain the final consonant that surfaces.

Third, Schane places words whose final consonants are always pronounced both before a consonant and in final position (avec, sept, sens, chef, sec, etc.) in the lexicon as exceptions to the deletion rules. In fact, he does not distinguish between a liaison consonant and a fixed final consonant (a consonant that is always phonetically realized). This difference is significant for an adequate representation of French consonants. Other words in which the final consonant is deleted before a following consonant-initial word but not before a pause (such as six, huit, dix, etc.), are also exceptions.

Fourth, it is not always the case that the liaison consonant and the feminine marker are the same (ex. grande [d] versus grand [t], grosse [s] versus gros [z]). There would have to be further phonological rules that determine the phonetic output according to whether the consonant is a liaison consonant or a feminine marker.

Fifth, as Klausenburger (1974, 1977, 1978a) notes, this approach may account for the phenomena of "standard" French, but it cannot explain the absence of liaison from child language and "false" liaisons from current, colloquial trends. The following examples are various cases of liaisons (or the absence of a liaison) that cannot be described by Schane's rules:

(36) a) false liaison, ex. donnez-moi-en! [donemwazã]
b) missing liaison consonant in child language, ex. deux ours [dœurs]
c) liaison before h aspiré words, ex. les haricots [lezariko]
(Klausenburger 1978a: 26)

Durand (1986a: 169) also considers current trends:
The problem is not solely of statistical implausibility but rather the fact that this goes against trends in French expanding this 'exceptional' class while the 'normal' class is being reduced: compare the creation of abbreviations (faculté [fakylte] – fac [fak]), acronyms (FNAC [fnak]), borrowings (e.g. basket [basket]), or the restoration of final consonants (août [ut]), with the well-known erosion of liaison consonants.

Durand’s examples also cannot be accounted for by Schane’s rules.

Sixth, the abstract approach fails to include many elements of language such as interjections, the distinction between glide-initial words (les oiseaux versus les whiskies), words such as huit, onze, etc., unless the absence of liaison is accounted for by postulating two ## before these words, or perhaps an abstract underlying segment which does not surface.

Seventh, it fails to account for optional liaison. In other words, in which contexts are the deletion rules obligatory, and in which contexts are they optional? Structures such as dans une heure cannot be distinguished, for instance, from pendant/une heure in which liaison is optional. That is, in which cases does the final consonant undergo deletion and in which cases do the deletion rules not apply?

Eighth, other factors such as resyllabification are not accounted for in these rules, yet they are involved in the production of liaison. As Klausenburger (1984: 9) notes, "(l)iaison...cannot be studied in isolation. At least five other sandhi phenomena of French have a bearing on it". They are:

1. enchainement;
2. elision;
3. e-caduc;
4. h-aspiré;
5. nasalization.

These sandhi phenomena are factors that are involved in liaison. Enchaînement, for instance, is actually predicted by Dell’s (1970) rule of liaison (example 35) in which the liaison consonant is placed after the word boundary (thus in les enfants, /lez#əfə/ becomes /le#zəfə/). However, non-
resyllabification, which is possible in some cases, and occurs in native French speech (Encrevé 1983, 1988) is not described. It is possible that the rule presented in (35) does not apply, and the liaison consonant remains in word-final position.

Ninth, since this is a phonological approach, it fails to include many of the factors included in the descriptions, such as the syntactic component of liaison. That is, liaison is not an isolated phonological phenomenon. There are also syntactic processes involved that explain the difference between *les_amis* /lezami/ and *les amis/américains* /lezamiamerikɛ/. A complete account of liaison must include syntactic processes as well.

In summary, while a phonological rule of liaison is essential for French, an abstract model of liaison in which liaison is the non-application of a deletion rule encounters many difficulties. The notion of an abstract consonant in the underlying representation that is deleted before consonant-initial words is an inadequate account of French liaison. Data on liaison production has provided evidence that liaison production is subject to many variables, which may result in false liaisons, non-resyllabifications, the absence of obligatory liaisons, and even the realization of forbidden liaisons as in *les_haricots* (Malécot 1975, Van Ameringen and Cedergren 1981, Morin and Kaye 1982, De Jong 1991a, 1993). An adequate account of liaison must be able to describe and explain actual speaker variations.
1.3.3. Concrete generative phonology

The view maintained by concrete phonologists is that abstract underlying representations are inadequate. In order to avoid the difficulties caused by underlying consonants, concrete phonologists propose to replace underlying word-final consonants with the opposite notion: there is no underlying word-final consonant that must be deleted. Instead, liaison consonants will be inserted by rules of epenthesis in liaison contexts.¹⁴

a) Phonological rule

Much of the research on French liaison in concrete generative phonology is carried out by Klausenburger (1974, 1977, 1978a and b, 1984) and Tranel (1981, 1986, 1990). In concrete phonology, the underlying representation lacks liaison consonants. According to Tranel (1981), liaison results when a consonant that is specified in the lexicon is inserted before a vowel-initial word. There are rules for each case, such as the insertion of the liaison consonant after plural verbs, singular verbs, adjectives, etc. The epenthetic consonant is not a suffix, but rather a linking segment. In the case of adjectives, consonants in parenthesis in (37) are not part of the phonological representation of the adjective; rather, they are idiosyncratic phonological markers that are part of the lexical entry.

(37) joli /ʒɔli/  
    petit /pəti/  (/t/)  
    grand /ɡʁɑ̃/  (/d/)  
    gros /ɡʁo/  (/s/)  
    long /lɔ̃/  (/g/)  
    léger /leʒɛr/  (/ʁ/)  
    certain /sɛʁtɛr/  (/n/)  

¹⁴See Klausenburger (1984) for a chronology of attestations of liaison, concentrating on “the period of intense theorizing concerning liaison within the generative and post-generative approaches” (p. 47).
Liaison consonants are therefore included in the lexicon with the short allomorph. These consonants are those of liaison and also those of feminine forms. There are also rules that transform /d/ into /t/, /s/ into /z/, etc.

Plural liaison, according to Tranel (1981), is only inserted when it is present in the surface representation, "when the plural noun or adjective is followed by a vowel-initial word and the syntactic and stylistic conditions for liaison are met" (Tranel 1981: 210). Van Ameringen and Cedergren (1981) show there is a preference for a morphological analysis which favours epenthetic rules specifying consonants for each element that makes a liaison. The authors study the distribution of liaisons in Montreal French, and find that the production of certain "obligatory cases" of liaison vary according to groups of speakers. That is, prepositions dans, sans and chez, the pronoun on and adverbs plus and moins do not systematically produce obligatory liaisons among their speakers. Polysyllabic forms of être and avoir, which are optional cases, do not produce a liaison in Montreal French. In other cases, Van Ameringen and Cedergren find the presence of a [t] in the first and second person singular. Their examples are:

(38)  a. chez/un docteur
      dans/un popshop
      sans/y toucher
(Van Ameringen and Cedergren: 1981: 143)

      b. je suis ici [ʃtisi]
         je me suis éreinté [mʃteɾẽte]
         tu es un christ de chien [tʃtẽ]
(Van Ameringen and Cedergren: 1981: 145)

The false liaisons in (38b) suggest a need for epenthetic rules.

Dumas (1978) also analyses spoken French and proposes a phonological rule of insertion at the surface structure level. His rule of insertion for the plural marker is the following:
Liaison, according to Dumas, "est un signe phonologique de cohésion syntagmatique, plus précisément une marque phonologique de cliticisation" (Dumas: 1978: 98). Note that even in this case, Dumas also mentions what Léon (1992), Hewson (1986) and others state concerning syntagmatic cohesion.

Thus, epenthetic consonants seem to be able to account for the data on current, spoken French that was not explicable by abstract theories. However, while this approach describes inserted consonants, no generalizations may be proposed since every single case has to be postulated. There is no way of predicting the nature of the epenthetic consonant.

b) Nasalization

In this approach, nasal vowels are not composed of a [V+N] sequence, as in the abstractionist model. There are underlying nasal vowels that are denasalized in a prevocalic position (ex. /bɔ/ → [bɔn]). Vowel denasalization that occurs in a liaison context is an exception. Before vowel-initial words, the n is inserted via an insertion rule. For Tranel (1981: 117-21), vowels in both words such as mon and bon are nasals. Tranel also maintains that bon-type words should be the irregular ones rather than mon-type words, since their is a tendency to produce a liaison with nasal vowels.

c) H aspiré words

Unlike the abstract model, the concrete approach to h aspiré words is not to consider them as having an underlying h that prevents liaison and elision, but rather to mark these words as [-context consonant insertion] and [-context elision]. This allows h-aspiré words to be exceptions to
the rules which prevent liaison (as in *les_homards, *les_héros, *les_hornardr, *les_héros), as well as elision, thereby maintaining a schwa (as in le_homard, le_héros, *l'homard, l'héros) (Tranel 1981, Iverson 1983).

Klausenburger (1978a ) accounts for *h aspiré* words by positing a feature [-linking] that blocks insertion of a liaison consonant. This feature replaces the abstract segment of the abstract model that is never realized. It also allows for the explanation of the current tendency to pronounce les_haricots ([lezariko]) with a liaison consonant and quelle_honte or le_hors-d'oeuvre ([kɛlɔt], [ɔʁdœvr]) without schwa due to the loss of the feature [-linking] and the integration of these words into the category of vowel-initial words. Although this approach eliminates the problem of postulating an abstract consonant that does not appear phonetically, it requires a the feature [-linking] to block liaison, just as the abstract *h* blocks liaison. Furthermore, this same stipulation is also possible within the abstract approach, instead of the abstract consonant.

d) **Glides**

In the epenthesis model, there is still the distinction between both types of glide-initial words (*l'oiseau* versus *le whisky*), whereby words such as *oiseau* will require an epenthetic consonant and will undergo elision as do vowel-initial words, while words such as *whisky* will not (and will not undergo elision), as is the case for consonant-initial words (Klausenburger 1978b). Klausenburger (1984: 30) states that there is an additional marking concerning G1 and G2 glide-initial words that require the pre-c and pre-v allomorphs, respectively. Words such as *whisky* are marked [+G1], while words such as *oiseau* are marked [+G2]. Klausenburger (1978b: 11) considers the data presented in table I on French linking.
The conventional analysis for the data is found in table II, which shows the patterns of columns C and D as resembling columns A and B respectively.

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
</table>

Table I
Klausenburger’s (1978b) data on French linking

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Elision</td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>2a and b. Liaison</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>3</td>
<td>Suppletion</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>4</td>
<td>Nasalization</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>+</td>
</tr>
</tbody>
</table>

Table II
Klausenburger’s (1978b) conventional analysis of the data on French linking

e) Fixed final consonants

Word-final consonants that are always pronounced (i.e. before both vowel- and consonant-initial words as well as in phrase-final position) do not pose a problem for consonant epenthesis since the final consonant is already present in the representation of the word.

However, this model, as is the case for the deletion model, does not present a distinction
between consonants that are always pronounced (fixed final consonants) and those that only surface under certain phonological and syntactic conditions (liaison consonants). It is essential to make a distinction between the two types of word-final consonants in French since liaison consonants and fixed consonants behave differently, although both resyllabify before vowel-initial words.

f) **Resyllabification**

In concrete phonology, resyllabification is not a separate rule from epenthesis. That is, final consonants are inserted before vowel-initial words and certain glides. The rule is represented as in (40), where the consonant is inserted before a vowel or a glide.

(40) $\emptyset \rightarrow C/ \_ \_ V, \text{Glide}$

Syllabic representations are not included in this rule, so it is unclear how the consonant becomes part of the following word. There is also no distinction between resyllabification and non-resyllabification.

g) **False liaisons**

A concrete analysis allows for an account of false liaisons that cause difficulties for the abstract analysis. Occurrences of false liaisons are merely treated as insertions of a liaison consonant before a vowel-initial word, since false liaison consonants cannot be predicted from an underlying representation, as in (41):

(41) a) peu [z] à peu
    j'ai [z] été aimé

b) il va [t] et vient
    il y a [t] une maison
c) ça va [n] en faire du bruit\(^{15}\) (Klausenburger 1974: 172)

In this manner, false liaisons no longer seem to be problematic for a phonological theory of liaison, and are thus included as a phenomenon of colloquial trends in the French language.

Other types of liaisons that are produced are also accounted for by the presence of an epenthetic consonants. For instance, liaison that occurs in lexicalized expressions such as \textit{plus\_ou moins, les Champs\_-Elysées}, etc. is also a consonant insertion. However, there is no way of determining which lexicalized expressions require an epenthetic consonant and which do not (as in \textit{nez/à nez, du nord/au sud, bon/à rien}).

Another aspect of language to consider when developing a theory is language acquisition. Child language lacks cases of obligatory liaison and includes false liaisons (Klausenburger 1974: 173). Klausenburger presents examples of the language of a three-year old in which obligatory liaison is omitted (in 42a) and in which false liaisons are produced (in 42b):

(42)a. [dø urs] (deux ours)
    [Irwa urs] (trois ours)
    [ũ wazo] (un oiseau)
    [dø wazo] (deux oiseaux)
    [de wazo] (des oiseaux)
    [trwa otorut] (trois autoroutes)

    b. [padzø] (pas d'oeufs)
    [nœj] (oeil)
    [zjø] (yeux)
    [nelefã] (éléphant)  \textit{(Klausenburger 1974: 173)}

These examples indicate that the allomorphs without the liaison consonant are learned first, and are used until the rules of liaison are acquired. Thus, child language seems to favour a concrete approach of consonant insertion.

\(^{15}\)There aren't many cases of false liaisons with [n]. Morin (1982: 32) states that "(l)a liaison n semble toujours avoir été historiquement la plus faible de toutes".
A somewhat different analysis of liaison is that of Herslund (1986) who proposes lexical units having two underlying representations: one with a final consonant and the other without. The choice between the two forms depends on position, syntactic structure and style. There are neither deletion nor insertion rules. However, this model does not account for the selection between the two forms, and it increases the lexicon, as in (43):

\[(43)\]
\[
\begin{array}{ll}
a. & \text{petit} /\text{pəti(t)}/ \\
    & \text{petite} /\text{pətit(ə)}/ \\
    & \text{les} /\text{le(z)}/ \\
\end{array}
\]
\[
\begin{array}{ll}
b. & \text{beau - bel} /\text{bo/ - bel}/ \\
    & \text{ce - cet} /\text{sə/ - set}/ \\
\end{array}
\]

(Herslund 1986: 91)

The lexicon includes not only liaison consonants but suppletive forms as well. This model suggests that entries in the lexicon will have two forms.

A similar approach is that of Gaatone (1978a) who attempts to eliminate the difficulties encountered with both deletion rules and epenthesis rules by representing a morpheme as a list of its allomorphs and their distribution. Thus, the morpheme petit is represented in the lexicon by both its long and short allomorphs: [pəti] and [pətit]. The long allomorph represents the feminine adjective (from which other forms are derived: petitesse, petitement), as well as the masculine adjective in a liaison context. The short allomorph is that of the masculine adjective in a non-liaison context. Words whose final consonants are always pronounced (sept, avec, sens, etc.) would no longer be exceptions, and would be represented in the lexicon by a single allomorph. The same is found for words such as joli which are exceptions to the epenthesis rule. Gaatone (1978a: 48) no longer requires readjustment rules to account for the difference between feminine and liaison consonants. For example, grand is represented by three allomorphs: [gr̩a] for the masculine form outside of a liaison context, [gr̩at] in a liaison context, and [gr̩ad] for the feminine form.
Furthermore, words such as *six* and *dix* each have three allomorphs ([si], [sis] and [siz]; [di], [dis] and [diz]). Suppletive forms are also represented by an allomorph, so that, for instance, *beau* consists of two allomorphs: [bo] in the masculine form in a non-liaison context, and [bel] for the masculine in a liaison context and for the feminine.

In other words, Gaatone (1978a) maintains that the best method of resolving the difficulties posed by both truncation and epenthesis rules is to enrich the lexicon. He finds that it is more economical to represent without exception all the verbs in the lexicon with all their allomorphs. As Gaatone states, "(l)a place la plus naturelle où inscrire cet arbitraire est le lexique" (Gaatone 1978a: 49). In fact, this method appears to be a creation of paradigmes. As a result, there are no longer exceptions that are encountered with Schane's truncation rule or Klausenburger's epenthesis rule.

However, Gaatone's model no longer provides any generalizations, nor rules, merely a list of allomorphs. Actually, generalizations could be stated according to the paradigms he establishes. Without generalizations, this model enlarges the lexicon tremendously, which disregards the notion of proposing rules that will generate the different allomorphs. With this approach we are no closer to providing generalizations of liaison, and we are once again faced with a descriptive list, which is what the abstractionists sought to replace by a set of rules. Yet, Gaatone's approach still requires rules to account for liaison consonants that are not predictable. These liaisons are inserted by a series of insertion rules. The other liaison consonants (those that are predictable from the feminine form, for instance) are considered to be part of one of the allomorphs of the word. The syntactic context is characterized by the strong cohesion between two words, and the phonetic context consists of an initial vowel. His context for sandhi is then \#V (Gaatone 1978b). His rules are:
(44)  a. Insérez [z] derrière un déterminant, un adjectif et un pronom au pluriel.  
    b. Utilisez l'allomorphé de liaison pour un mot non au pluriel.  
    c. Insérez [n] derrière une voyelle nasale finale.  
    d. Insérez [t] derrière un verbe à sujet inversé.  
    e. Insérez [z] derrière un verbe à l'impératif.  
    f. Effacez un schwa final.  

This solution, however, requires the same amount of lexical information as the deletion analysis, the 
only difference being that in the latter the liaison consonant is part of the underlying representation, 
whereas in this approach Gaatone places the consonant in the lexicon. The lexicon becomes quite 
complex in this case, whereas the abstract model has one long allomorph from which the phonetic 
output is derived via rules, and the concrete model has one short allomorph to which liaison 
consonants are inserted via rules.

h. **Summary**

There are numerous advantages to Klausenburger's account of liaison:

a) it possesses a degree of simplicity, whereas the deletion rule has too many exceptions, such as words with fixed final consonants *sec, chef, sens* etc., or postulates abstract segments that do not surface (*h aspiré, certain glides in words that block elision and liaison, etc.*);

b) it provides a single rule of epenthesis (unlike the two deletion rules);

c) the short allomorph is more frequent and therefore learned earlier (and so there is no need to postulate underlying long forms);

d) there is no longer the need to postulate an underlying schwa for the feminine form in order to prevent the truncation of the final consonant. The rules of epenthesis do not apply for the feminine form because there is already a consonant present;

e) there is no longer a need to postulate an abstract underlying consonant for *h-aspiré* words;
d) there is no longer the need to postulate an underlying schwa for the feminine form in order to prevent the truncation of the final consonant. The rules of epenthesis do not apply for the feminine form because there is already a consonant present;

e) there is no longer a need to postulate an abstract underlying consonant for \textit{h-aspiré} words;

f) there are no longer exceptions to the deletion rules (ex. words such as \textit{avec}, \textit{sec}, \textit{chef}, etc. which are now represented in the lexicon as \textit{avek}, \textit{sek}, \textit{jef} with their final consonant);

g) Klausenburger has eliminated from the grammar a phonological rule (the deletion rule) that is no longer applicable\textsuperscript{16};

h) liaison in fixed expressions is merely an insertion rule, as it is in the case of false liaisons;

i) optional liaisons are also inserted via insertion rules, thus eliminating the difficulty posed by the deletion approach in which there is no way of determining in which context the consonant must be deleted and in which context the deletion rules must not apply (although this difficulty is not really eliminated, the problem with insertions lies in determining in which context to insert an optional liaison);

j) child language and other current colloquial trends are accounted for by insertion rules;

k) aphasic data revealing the presence of a [d] also supports the insertion model (although aphasic data will not be discussed in this study, empirical evidence from Kilani-Schoch (1983: 453) supports this claim).

However, while many of the problems the deletion analysis encounters are resolved, the concrete approach encounters nonetheless certain difficulties of its own. First of all, whereas the abstract model already has an underlying word-final consonant, it is uncertain how to determine which consonant to insert (Schane 1978a). Concrete phonologists are forced to propose rules for each context (ex. \textit{/d/- [t]}, \textit{/s/- [z]}, etc.). They maintain that if the consonant must be specified, the logical

analysis in which consonants are part of the lexical entry instead of being part of the underlying representation as in the abstract analysis. The only difference is where the consonants are located.

Second, it seems that any consonant in the surface representation may be explained by an insertion rule. While it is true that consonant insertions may include false liaisons and other current phenomena such as les haricots, there is no explanation for determining which consonant will be inserted. Bennett (1991) argues that consonant insertion cannot explain the speaker’s correct use of liaison, though it may offer an explanation of false liaison. Furthermore, Gaatone (1979) argues that it is impossible to draw conclusions from data on false liaison since there has been no substantial corpus of false liaisons from which to do so. He adds that it is necessary to have a larger corpus of errors in order to verify if false liaisons are not only a function of the phonetic context, but also of the morphological context as well as the syntactic cohesion between two words (Gaatone 1979: 332, fn. 20).

Third, this analysis is descriptive, in that it provides independent rules of insertion for each word. There are no generalizations, since the consonant to be inserted must be specified for each context. Klausenburger disagrees that the dilemma lies in predicting which consonant is to be inserted. He states that

(whatever means is used to determine which final consonant is placed underlyingly in the deletion analysis may also be employed in deciding which consonant has to be inserted. In other words, in order to establish that t exists underlyingly in petit, we use morphological facts like the feminine form petite or the derived noun petitesse "smallness". We put no underlying t in joli ‘pretty’ because the feminine form is jolie, not *jolite, and there is no noun *jolitesse. Therefore, no consonant will be inserted in joli oiseau ‘pretty bird’ (Klausenburger 1978b: 8-9, footnote 7).
Nevertheless, an insertion analysis must stipulate which consonant to insert for each case, whereas the deletion analysis does not encounter this difficulty. The insertion analysis merely eliminates consonants that receive no phonetic realization.

Fourth, while a model of consonant epenthesis accounts for the absence of liaisons in child language (ex. \textit{deux ours} /dœuʁs/), it presents a problem not only for language acquisition, but for second language learning as well. If there are no underlying consonants, how does the child or the learner acquire the correct consonant to insert? For example, how does one know that \textit{les enfants} is pronounced /lezɑ̃fɑ̃/ and not */letɑ̃fɑ̃/? The deletion model does not encounter this difficulty since underlying consonants are present, and the speaker must merely learn to delete consonants before vowel-initial words and in final position. An epenthesis model assumes that the speaker is already aware of which consonant to insert. As for second language learning, this model may account for speaker errors, however, the representation of French liaison by FSL speakers would consist of lists of words in which the liaison consonant is specified for every word (as in Tranel (1981), in example 37 above).

Fifth, a model of liaison based on consonant epenthesis does not include resyllabification, or its absence, as an integral part of liaison.

Arguments in favour of and against both the deletion and the epenthesis analyses are presented in Table III (thus completing Klausenburger's (1983: 613) dichotomy).
<table>
<thead>
<tr>
<th><strong>ABSTRACT ANALYSIS</strong></th>
<th><strong>CONCRETE ANALYSIS</strong></th>
</tr>
</thead>
</table>
| a. consonant deletion: liaison occurs when the rule for final consonant deletion is not applied  
-no question as to which consonant to insert  
-easier to delete consonants than to insert them later  
-accounts for generalizations  
-difficulty: in accounting for child liaison, false liaisons, words with fixed final consonants (avec, sec, etc.), colloquial trends, etc. |
| a. consonant insertion(s): underlying representation where liaison consonants are absent  
-consonants are inserted where necessary (in liaison contexts as well as with suppletive forms)  
-has no exceptions that the deletion analysis has  
-accounts for child language, false liaisons, words with fixed final consonants, colloquial trends, etc.  
-has too many rules, becomes too descriptive  
-no generalizations  
-difficulty: in determining which consonant to insert |
| b. nasalization rule - doesn't account for surface representations of mon ami in which a nasal vowel co-exists with a nasal consonant  
-applies before h-aspiré words, although the structural description for the rule is not met |
| b. lexical nasal vowels in which nasal vowels are underlying and the nasal consonant is inserted via an insertion rule |
| c. presence of protective schwas |
| c. no protective schwas |
| d. underlying abstract /h/ for h-aspiré words - is proposed but has no phonetic value |
| d. rule feature(s) for h-aspiré words - no abstract segment that receives no phonetic value |
| e. glides: -one set of words having an abstract underlying glide and another set beginning with an underlying vowel |
| e. glides: one set of words are like vowel-initial words, which require an epenthetic consonant, and another set of words which are like consonant-initial words, and do not undergo epenthesis |
| f. fixed final consonants: exceptions to the deletion rule |
| f. fixed final consonants: already present |
| g. resyllabification: In Dell's representation, rules transformed C# to #C. No distinction between resyllabification and its absence |
| g. resyllabification: not clear. Consonants are merely inserted before vowel-initial words. No distinction between resyllabification and its absence |
| h. false liaisons: problematic since they are either consonants that are inserted where there is none present underlyingly, or where there is a consonant present, but another consonant is inserted instead |
| h. false liaisons: inserted like other consonants |

Table III

Synthesis of abstract and concrete approaches to French liaison
1.3.4. Non-linear phonology

Linear phonology proposes both underlying consonants that are not deleted in liaison contexts, and epenthetic consonants that are inserted in each specific case. Whether it is by deletion or epenthesis, there is only one level of representation. Non-linear phonology incorporates another level of representation: that of the syllable. In this case, certain features are no longer expressed by the linear rule: A--B/C-- D, rather, they are based on syllable structure. Thus, one-tiered representations are represented by several tiers, each of which constitutes a linear arrangement of segments. Segments in different tiers are linked to each other by association lines. In order to represent the syllable, phonologists opt for a multi-level representation that is able to resolve many of the difficulties encountered in linear phonology (Durand 1986a).

In a multi-tiered approach, syllable structure is a derived property of phonological representations. The syllable consists of an onset (which may contain one or more consonants) and a rhyme (a vowel plus a consonant, which is optional). The nucleus, or the vowel, is the main part of the syllable. The segmental representation consists of segmental lines or tiers where the segments of each line differ according to their features (Goldsmith 1990). Kaye and Lowenstamm’s (1984) syllable structure is:

---

(45) S
     / \
    O   R
     \ /
      N
     X  X  X

(Kaye 1989: 55)

The onset may be empty, but the rhyme must contain at least one segment. Kaye and Lowenstamm (1984: 123) show that "les 'effets de syllabicité' conçus comme découlant de l'action de règles phonologiques relèvent en fait de principes très généraux et ne requièrent aucune stipulation particulière au niveau des grammaires individuelles". Selkirk proposes the following principle ensuring the proper formation of syllables for individual languages:

(46) Principle of Syllabic Structure Preservation
The derived syllable structure produced by rules of resyllabification must conform to the syllable template of the language.
(Selkirk 1982: 368)

a) Various frameworks

Clements and Keyser (1983) propose a segmental tier of elements C and V that are attached to the syllable node. They introduce the concept of an extrasyllabic consonant, which is a consonant that may associate to a following syllable that does not have a C element at the beginning of the CV

---

19See Noske (1982) for the assignment of syllable structure in French. He proposes that syllabification takes place according to the following principles:

a. The prohibition against violating the notion of “possible French syllable”;
b. The tendency to achieve the lowest possible syllable markedness. (Noske 1982: 263)
tier\textsuperscript{20}. Fixed consonants are C elements attached to the syllable node. The different word-final elements are represented as follows:

\begin{align*}
\text{(47) a. } & \textit{don} & \text{ b. } \textit{dont} & \text{ c. } \textit{donc} \\
\sigma & \sigma & \sigma \\
/ \big/ & / \big/ \big/ & / \big/ \big/ \big/ \\
c \big/ v & c \big/ v \big/ c & c \big/ v \big/ c \\
\big/ \big/ \big/ & \big/ \big/ \big/ & \big/ \big/ \big/ \\
d \big/ \ddot{o} & d \big/ \ddot{o} \big/ t & d \ddot{o} \big/ k \\
[\text{d}\ddot{o}] & [\text{d}\ddot{o}] & [\text{d}\ddot{o}k] \\
\end{align*}

\cite{Clements and Keyser 1983: 102}

The authors represent liaison as an extrasyllabic consonant\textsuperscript{21}. Their rule for liaison is the following:

\begin{align*}
\text{(48) } \\
\sigma \\
/ \big/ \\
/ \big/ \\
/ \big/ \\
c \big/ v \\
\end{align*}

\cite{Clements and Keyser 1983: 104}

Thus, liaison takes place when a C element attaches itself to a syllabic node that dominates a V element, as in (49):

\begin{itemize}
\item \textsuperscript{20}Instead of treating latent consonants as extrasyllabic, Levin (1988) treats them as unsyllabified segments.
\item \textsuperscript{21}Klausenburger (1986) discusses the concreteness of the concept of extrasyllabicity.
\end{itemize}
(49)  *dont un ami*

- \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)
- \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)
- \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)
- \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)
- \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)
- \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)

Prunet (1987) has a similar approach. He replaces the CV tier by postulating a skeleton consisting of skeletal points that are unmarked for the feature [syllabic], thus replacing the CV tier of Clements and Keyser. The adjective *petit* is now represented in the following manner:

(50)  *petit*

- \(-\)  \(-\)  \(-\)  \(-\)
- \(-\)  \(-\)  \(-\)  \(-\)
- \(-\)  \(-\)  \(-\)  \(-\)
- \(-\)  \(-\)  \(-\)  \(-\)
- \(-\)  \(-\)  \(-\)  \(-\)
- \(-\)  \(-\)  \(-\)  \(-\)

Liaison in Prunet's model is a floating segment followed by a syllable having an empty onset, as in

(51):  

(51)  *petit ami*

- \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)
- \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)
- \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)
- \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)
- \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)
- \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)  \(-\)

Tranel (1986) examines the notions that linking consonants are a) extrametrical and b) floating. That is, in (a), linking consonants belong to the underlying representation but are excluded from the domain of certain rules. Unless they are syllabified with a following word, they will remain unattached and are deleted. In (b) feature matrices of the melody tier are unassociated with the
skeletal tier, where syllables are constructed. Tranel compares both hypotheses (extrametrical vs. floating) and also compares them to an insertion treatment. The fundamental difference between the extrasyllabic and the insertion treatments is that the first assumes that linking consonants are present in the underlying representation, and the second does not.

Encrevé (1983, 1988) adopts underlying representations consisting of more than one tier. The syllabic structure contains an onset and a rhyme (consisting of a nucleus and a coda), associated to a skeletal position, which is itself associated to a segmental tier. His model is three-dimensional since there are three tiers: the syllabic tier consisting of an onset and a rhyme, a central tier consisting of points that he refers to as the skeleton, and a segmental tier where each segment is represented. These tiers are all associated by association lines. In other words, even a syllable that begins with a vowel still has an initial onset, although it is not connected to the skeleton. Encrevé's syllable structures for a vowel-initial word and a consonant-initial word are represented as follows:

(52) a. aux

```
O   R
|   |
N   C
|   |
.   .
|   |
o   z
[ø]
```

b. lac

```
O   R
|   |
N   C
|   |
.   .
|   |
o   a   k
[ø]   [lak]
```

In (52a), the onset is not connected to the skeleton, and remains empty. In (52b), the onset is filled with a consonant. With this structure, Encrevé is also able to make a distinction between two types of word-final consonants: a) liaison consonants which are floating consonants; that is, a consonant not linked to a position on the skeletal tier, so that they are only pronounced when followed by a vowel-initial word (as in 52a), and b) fixed consonants (such as avec, sec, lac, etc.) which are
anchored on the skeletal tier and are therefore always pronounced (as in 52b). Liaison is then defined as the association of a floating consonant to its own skeletal position. Once it is associated to a skeletal position, the consonant resyllabifies to the following empty onset. The representations in (53) present the distinction between floating and fixed consonants:

(53) a. Floating consonant (liaison) b. Fixed consonant

\[
\begin{array}{c}
C \\
. \\
C
\end{array}
\quad \begin{array}{c}
C \\
. \\
C
\end{array}
\]

Since all segments must be part of a higher-level organization, those in (a) and (b) are realized by prosodic licensing (Goldsmith 1990).

In (54), \textit{j'avais un rêve} shows the difference between the floating consonant [z] which must be associated to a position on the skeletal tier and resyllabified, and the [v] of \textit{rêve} which is a fixed consonant anchored in the skeleton\textsuperscript{22}.

(54) \textit{J'avais un rêve}

\[
\begin{array}{cccc}
O & R & O & R \\
| & | & | & \\
N & N & \emptyset & N \\
| & | & | & \\
\_ & \_ & \_ & \_ \\
\_ & \_ & \_ & \_ \\
3 & a & v & z \\
\text{[javez\oe v\e]} \quad \text{(Encrevé 1988: 177)}\textsuperscript{23}
\end{array}
\]

\textsuperscript{22}Obviously, I am not taking syntactic constraints into account, since liaison after \textit{j'avais} is optional. Encrevé's model is a phonological representation, and thus does not take the syntax into account.

\textsuperscript{23}For reasons of simplification, I will only take into account that which concerns liaison. I have therefore simplified the representation of nasals.
For the [z] to be realized, it must be attached to the skeletal position and resyllabify to the onset of _un_.

Encrevé's approach does not need the rules that were necessary in both the abstract and the concrete approaches. That is, there is no need to postulate deletion or insertion rules in a liaison context. Floating consonants are present underlingly, and are only realized when they are anchored to the following empty onset. Fixed consonants also resyllabify before empty onsets.

Hyman (1985) and Wetzels (1986) also adopt the view that liaison consonants are represented as floating, or untimed consonants. Liaison, for Wetzels (1986), is a process of timing-slot insertion. He states that "with respect to the rules of syllabification, liaison consonants, once they are timed, behave in a way parallel to those consonants that are already timed at the level of underlying representation" (Wetzels 1986: 287).

Thus, in non-linear representations, liaison is a consonant that is present underlingly and must be anchored to a skeletal position or timed in order for the consonant to be realized.

b) _Nasalization_

Nasalization has been represented differently in various analyses. In Prunet's model, a floating /n/ associates to the preceding node if it is not followed by an empty onset. For example,

\[
\begin{array}{c}
\sigma \\
/ \ \\
x \ N \\
/ \ \\
b \ c \ n \\
[bon]
\end{array}
\]
In this case, liaison always occurs with the /n/. However, Prunet takes a syntactic approach in order to account for nasalization in words such as *bon* and its absence in words such as *mon* (discussed in section 1.4.)\(^24\). The difference is not a lexical phonological distinction, but rather both types of words each have a unique structure. *Mon* is a specifier immediately dominated by the maximal projection N", while *bon* is a modifier of N under N'. Vowel nasalization in liaison contexts takes place only with the specifier dominated by the maximal projection. In other words, two conditions must be satisfied in order for nasalization to occur in liaison contexts: a) a syntactic condition, and b) a phonological condition.

One disadvantage to this approach is that it requires two different mechanisms to account for nasalization in liaison. Tranel (1990) notes that vowel nasalization in Prunet's analysis is subject to syntactic conditioning, however, there are cases where vowel nasalization occurs regardless of syntactic structure (where there is no free skeletal slot available for the floating nasal consonant).

Prunet's account also seems to make incorrect predictions in some contexts, as in the following examples:

(56) y va-t-on [ivatõ]
on part [ôpar]
on arrive [ônaRiv]

\(\text{(Tranel 1990: 201)}\)

*On* behaves like *son* in that the vowel is always nasal, even in liaison contexts.

As for nasalization in Encrevé's model, there is a feature [nasal] that associates to a single segment, that is, the one to which the feature is nearest. as in *bon ami* [bô纳米] in (57) and *bon garçon* [bôガルソ] in (58). The vowel /o/ in (57) is denasalized in the case of liaison, and maintains its nasalization in (58).

\(^{24}\text{Clements and Keyser (1983) have nasals in their representations (see previous examples 47 and 49).}\)
In (59), the nasal vowel in words such as *mon* as in *mon ami* [mōnami] is lexically associated to a feature [nasal], which allows for the vowel to be nasalized before a vowel-initial word as well as before a consonant-initial word.
There are then, according to Encrevé, two classes of nasal vowels: those that are lexically associated to a feature [nasal] (as in mon), and those that are not (as in bon).

c) **H aspiré words**

CV phonology accounts for *h aspiré* words by proposing that the onset of these words blocks liaison. In (60), Clements and Keyser (1983) postulate the association of an extra-syllabic C to the following syllable that is blocked:

(60) **héros**

In this proposal, there is no underlying abstract segment that blocks liaison yet never surfaces phonetically. Clements and Keyser do not postulate abstract consonants at the segment level, rather a C element that does not correspond to any particular segment. It is this element that blocks liaison.

In Encrevé’s model, there are three types of onsets: a) a filled onset that contains a consonant or a glide that inhibits liaison, as in (61a); b) an empty null onset for vowel-initial words and certain
glide-initial words that allow liaison, as in (61b), and an empty non-null onset for *h-aspiré* words and certain glide-initial words, as in (61c).

(61)  

<table>
<thead>
<tr>
<th>(a) filled onset</th>
<th>(b) empty null onset</th>
<th>(c) empty non-null onset</th>
</tr>
</thead>
<tbody>
<tr>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>C</td>
</tr>
</tbody>
</table>

Empty null onsets allow for the association of preceding floating consonants once they are anchored. Empty non-null onsets, on the other hand, do not allow the association of a preceding consonant, and are thus able to account for *h aspiré* words. The liaison consonant is prevented from attaching itself to the onset of the following word, and liaison does not occur. In *hibou*, the empty onset is non-null:

(62)    *hibou*  

In this case, a preceding floating consonant cannot be anchored (and liaison is blocked, thereby producing *les/hiboux* and not *les_hiboux*). Thus, *h aspiré* words have an onset that is linked to the skeleton, although there is no segment at the segmental level.

Colloquial trends in which a liaison occurs before words beginning with an *h aspiré* (as in *les haricots* [lezaRiko]) pose no difficulties or exceptions in a non-linear representation. These cases
would be represented as containing an empty null onset, as in vowel-initial words, which allows the liaison consonant to attach itself.

d) **Glides**

Kaye and Lowenstamm (1984) make an important contribution to the representation of glide-initial words such as *whisky, yogourt, huit*, etc. by considering these words as resembling *h aspiré* words: glide-initial words are simply words containing a filled onset. This representation adequately produces *le whisky, le yogourt, le huit*, etc., which are distinguished from *l'oiseau* [lwazo] and *les oiseaux* [lezwazo], whose glide is associated to the onset of the syllable [wa]²⁵. Kaye and Lowenstamm make the distinction in the following manner:

(63) a. *whisky*  

\[ \begin{array}{c}
\delta \\
/ \\
R \\
/ \\
A \\
/ \\
N \\
/ \\
C \\
/ \\
U \\
/ \\
is \\
/ \\
[\text{wiski}] \\
\end{array} \]  

b. *oiseau*

\[ \begin{array}{c}
\delta \\
/ \\
R \\
/ \\
A \\
/ \\
N \\
/ \\
\emptyset \\
/ \\
U \\
/ \\
a \\
/ \\
[\text{wazo}] \\
\end{array} \]  

(Kaye and Lowenstamm 1984: 135)

In *whisky*, the glide occupies the onset position so that the syllable functions as any other consonant-initial syllable. However, in *oiseau*, the glide is part of the diphthong [wa] which is part of the nucleus, thus leaving the onset position empty. The same distinction is made between *watt* and *ouate* in (64):

²⁵See Heap et al. (1992) for an analysis of the various representations of elision and semi-vowels in French.
(64) a. watt  

\[
\begin{array}{c}
\delta \\
U & a & t \\
[\text{wat}]
\end{array}
\]

b. ouate  

\[
\begin{array}{c}
\delta \\
\emptyset & U & a & t \\
[\text{wat}]
\end{array}
\]

(Kaye and Lowenstamm 1984: 139)

Thus, glides are represented according to whether they behave as consonant-initial or vowel-initial words. It is this difference that accounts for liaison in the two types of words. That is, glide-initial words whose glides are in onset position inhibit liaison, while those words whose glides are in nucleus position allow liaison to associate to the empty onset position, as with vowel-initial words.

e) **Fixed final consonants**

One of the main contributions of Encrevé (1988) is the distinction his three-dimensional model provides between floating and fixed consonants. Fixed final consonants in words such as *avec, sec, pour*, etc., are also no longer exceptions to any rules. Unlike floating consonants, fixed final consonants are anchored in the skeleton which is not connected to the rhyme, and so receive a phonetic representation, as in (65):

(65) **pour**

\[
\begin{array}{c}
O \\
| \\
| \\
| \\
N & C \\
| \\
| \\
p & u & r \\
[\text{pur}]
\end{array}
\]

(Encrevé 1988: 174)
Since the consonant is already anchored to the skeleton, it may resyllabify to a following empty onset, as in (66).

(66) *pour elle*

```
  O  R  O  R
  \  \  \  \\
  N  Q  N  C
  .  .  .  .
  p  u  R  ε  l

[purel]
```

A fixed consonant may also be followed by a floating consonant, as in the following examples:

(67) a. *soupirs*  b. *forts*

```
  O  R  O  R
  \  \  \  \\
  N  N  N  C
  .  .  .  .
  s  u  p  i  R  z  f  o  R  t  z

[supiR]  [for]
```

In French, the coda is always floating, whether it corresponds to a fixed consonant or a floating one.

This is so that word-final consonants in French may resyllabify.

Fixed final consonants are then distinguished from floating consonants, which have no phonetic value unless they are followed by a vowel-initial word. Encrevé’s model thus allows for a unique representation of both liaison consonants and fixed final consonants, eliminating rules and exceptions.

---

26Booij (1986) discusses words ending in -r (ex. *rare, bizarre*, etc.) and states that they do not have an extra-syllabic -r, whereas words such as *premier, léger, dernier*, etc. do.
In the case of suppletive forms as in *mon bel ami*, the final consonant can be treated as a fixed consonant. Tranel (1990: 182) assumes that “the fundamental characteristic of linking consonants in non-suppletive case is that they are floating melodies without lexical skeletal slots”. Suppletive forms, however, are similar to words with fixed final consonants in that they contain a lexical skeletal slot.

f) Resyllabification

Another important contribution in Encrevé (1988) is the notion he refers to as liaison with and without *enchaînement*. That is, a floating consonant may syllabify with either the rhyme of the syllable to which it belongs (non-resyllabification, or leftward syllabification) or the onset of the following syllable (resyllabification, or rightward syllabification). The occurrence of non-resyllabification is not part of traditional descriptions of French since it pertains to trends in spoken French, and is the result of certain variables (such as style, for instance, in order to produce a desired effect). Encrevé analyses the speech of French politicians, and observes cases of non-resyllabification. He determines that non-resyllabification only occurs in cases of optional liaison, and not with obligatory liaison. For example, in (54) above, *j'avais un rêve* has a liaison with *enchaînement*, where the liaison consonant has resyllabified to the following empty onset. In (68), the liaison consonant remains attached to the coda and so resyllabification does not take place.
(68) *J'avais un rêve*

\[
\begin{array}{cccccc}
O & R & O & R & \emptyset & R & O & R \\
\mid & N & N & C & N & N & C \\
\mid & \mid & \mid & \mid & \mid & \mid & \mid \\
\mid \mid \mid \mid & \mid \mid \mid & \mid \mid \mid & \mid \mid \mid \\
3 & a & v & e & z & \tilde{\alpha} & R & \varepsilon & v \\
\end{array}
\]

(Encrevé 1988: 177)

In other words, variation with respect to resyllabification is possible only among the optional liaisons, depending on style\(^{27}\).

Encrevé's results are summarized by Gadet (1990: 64) who describes non-resyllabification in the following manner:

Comme les liaisons facultatives, le non-enchaînement est soumis à une forte variation inhérente, ce qui n’empêche pas qu’il soit possible de dégager quelques principes de régularité: quand la liaison est obligatoire, alors l’enchaînement l’est aussi; mais si la liaison est facultative, l’enchaînement l’est aussi; de plus, la monosyllabicité du mot comportant CL, et la nature occlusive de CL semblent favoriser l’enchaînement.

Thus, the monosyllabic nature of words as well as the occlusive nature of the liaison consonant also seem to favour resyllabification.

Resyllabification is described in the descriptive approaches to liaison, and is even described by rules in linear phonology. One of the difficulties with a representation of liaison syllabification is the distinction that Encrevé makes between optional resyllabification for variable liaison and obligatory resyllabification for categorical liaison. As Durand (1986b) notes,

\(^{27}\)Since Encrevé deals with a specific speech sample (public speeches of French politicians), his study does not reflect the status of non-resyllabification in conversational discourse. In fact, non-resyllabification may be more widespread than Encrevé observed (that is, it may also occur with obligatory liaisons), although there is currently no data to support this view.
Encrevé assumes that the linking forward/backward of the node on the skeletal tier associated with the liaison consonant is going to be sensitive to the status of the liaison consonant in question (...). But at the point at which this association is going to be determined there is no way that the rule can know whether the node dominates an optional or an obligatory liaison consonant... (Durand 1986b: 485)

In other words, how does one determine in which context to resyllabify the consonant and in which context to not resyllabify? Encrevé does not deal with syntactic factors that block resyllabification. Nonetheless, a multi-tiered level of representation does allow for resyllabification or non-resyllabification, which must be accounted for in a theory of liaison, since it is an integral part of liaison. The multi-dimensional model includes resyllabification without having to propose an extra set of rules or exceptions. Whether resyllabification occurs or not is merely a selection of skeletal positions: either the coda or the following onset.

This model accounts for the presence or the absence of a liaison (the floating consonant is or is not anchored), as well as liaison syllabification (left or right). Whether or not a speaker chooses to produce a liaison and whether or not a speaker chooses to resyllabify or not is dependent on other non-phonological variables.

g) False liaisons

Liaisons that are realized in cases where there is no consonant in coda position are accounted for by the three-dimensional model. According to Encrevé, the position in the skeleton that is available to the liaison consonant is independent of the following word, which would explain false liaisons. False liaisons can also attach to empty onsets.

As for language acquisition and language disorders, non-linear phonology is able to account for a speaker’s verbal performance. According to Clements and Keyser, "syllable structure provides
an organizational principle which permits a significant degree of simplification in the task of the language learner” (Clements and Keyser 1983: 116). That is, the difficulty of determining which consonant to insert is eliminated.

Thus, non-linear phonology resolves the problems which abstract and concrete phonologists encounter. It proposes, first of all, a theory based on latent consonants which attach themselves to the empty onset of the following syllable, thereby explaining all the contexts that cause difficulties for both deletion and epenthesis rules. There is no need to delete final consonants or insert them. Second, multi-level representations allow for a distinction to be made between floating and fixed final consonants. Third, \textit{h aspiré} words can be accounted for by postulating an empty non-null onset and glides by presenting some as having empty onsets, others as having empty non-null onsets. Even false liaisons can attach to empty onsets. Fourth, Encrevé’s model accounts for resyllabification in both floating and fixed consonants, as well as non-resyllabification for word-final consonants. Most importantly, this approach is able to account for current, colloquial trends, as well as individual variations that are part of spontaneous speech discourses.

The position that is attributed to the liaison consonant in the three-dimensional approach is of significant importance to liaison theory. It is differentiated from other consonants by being identified as a floating consonant that has no skeletal point on which to attach itself. If there is no following empty onset, the consonant receives no phonetic realization. If there is one, the liaison consonant may attach itself either to the following onset (and resyllabify), or remain as part of the coda (and will not resyllabify). This position is different from the other segments anchored to a skeletal point. In linear phonology, the liaison consonant is not represented in a different manner than the other segments. Gadet (1990: 67) describes the advantages of Encrevé’s model:
Ce modèle remédie à toutes les insuffisances des modèles précédents: en représentant la CL comme un segment flottant, on rend compte de son caractère latent d'être présente dans la représentation sous-jacente, sans toutefois être attachée à la syllabe. Et en la représentant comme une coda flottante non associée au squelette, on rend compte de ce qu'elle peut être enchaînée ou non.

Differentiating liaison consonants from other consonants allows for a representation of its unique status.

As previously mentioned, a major contribution of Encrevé’s model to French phonology is the distinction within word-final consonants themselves: between floating and fixed consonants. Whereas words such as sec, chef, avec, etc. are exceptions to the deletion rules, their fixed final consonants are now anchored in the skeleton as part of the coda, yet they are also different from the other segments in that they can both resyllabify onto the following empty onset.

The other contribution of Encrevé’s model is the notion of resyllabification with respect to both fixed and floating consonants. Not only is resyllabification an inherent property of the representation of liaison (which is not present in linear phonology), a multi-tiered representation can also account for cases in which resyllabification does not occur. Thus, the model can represent cases in which a speaker may choose not to resyllabify the floating consonant (for stylistic purposes, or other purposes).

Another advantage of this approach is that it is able to represent individual speaker’s structures, since not all speakers share the same lexical representation, thus accounting for errors and individual variations.

Encrevé’s model allows for aspects of language other than French liaison, such as affricates and diphthongs, which would be represented in the following manner:
(69)  a. *diphthong*  

\[
\begin{array}{c}
/ \\
G V
\end{array}
\]

b. *affricate*  

\[
\begin{array}{c}
/ \\
C C
\end{array}
\]

[-cont]  [+cont]

The diphthong in *trois* would be represented as:

(70)  *trois*

\[
\begin{array}{c}
O R \\
| \\
N C
\end{array}
\]

\[
\begin{array}{c}
| \\
| \\
t R z
\end{array}
\]

\[
U a
\]

[trwa]

Because this model accounts for various aspects of phonology, it is clearly superior.

More recently, Tranel (1993) discusses moraic theory, in which liaison is a process that integrates a consonant into a pronounced phonological string. He points out that moraic theory has eliminated skeletal positions in favour of moras by returning to a purely melodic lexical representation for consonants, as in linear phonology. One of the weaknesses, according to Tranel, is that moraic theory is inherently unable to make the structural distinction between liaison consonants and fixed final consonants. Liaison consonants must be treated through insertion (1993: 98). For the purposes of this study, a three-dimensional model will be adopted for its ability to make the structural difference between fixed and floating consonants, which will be a critical factor in presenting FSL data.
h) **Summary**

It has been shown that a multi-linear model of liaison is able to account for the phonological properties described by traditional grammars, as well as other variations and trends in language:

a) a multi-linear representation of syllable structure accounts for nasalization in liaison contexts, making the distinction between *mon* and *bon*;

b) it accounts for *h* aspiré words by proposing three types of onsets: a filled onset for consonant-initial words, an empty null onset for vowel-initial words, and an empty non-null onset for *h*-aspiré words;

c) it allows for a distinction between glides by representing consonant-type glides as onsets and vowel-type glides as diphthongs that belong in the nucleus position;

d) current trends such as *les haricots* [lezərɪko] are able to be represented by proposing that *haricots* is analysed as vowel-initial, which allows the floating consonant to be associated to its onset position;

e) false liaisons are also consonants that attach to onset positions, although epenthetic rules are required for consonants that are not present underlyingly (such as *quatre-z-enfants*);

f) an absence of liaison in child language is also accountable; the floating consonant is not associated to an onset position (such as *deux/ours*);

g) one of the significant contributions to liaison theory is the presence and absence of resyllabification which depends on the association of the floating consonant to the coda position or the onset position of the following word;

h) another significant contribution to word-final consonants in French is the distinction between floating consonants and fixed final consonants of *avec, sec*, etc., that are anchored to skeletal position and as a result are always realized. Leftward or rightward syllabification applied to fixed final consonants as well;

i) the unique status given to the liaison consonant (that of a floating consonant) is crucial to a model of liaison as it allows for individual speaker variation, and current trends of the language.

However, this model represents only half of the solution, as Encrevé only dealt with phonological constraints. While three-dimensional phonology is better able to account for the
phonological properties of liaison than previous linear accounts, there still remains the task of distinguishing between a syntactic context that allows liaison and one that doesn't. For example, in the sentence *mes amis aiment danser*, the phonological context between a) *mes* and *amis* and b) *amis* and *aiment* is the same (floating consonant + empty onset), yet it is only in (a) that liaison occurs. There is evidence that liaison production is not a random selection.

1.3.5. *Summary*

In summary, the linear approach provides an abstract analysis whereby liaison occurs as the result of the absence of deletion rules, and a concrete analysis whereby liaison is the result of epenthetic rules. Both analyses encounter difficulties that are resolved by the non-linear approach, which is based on a multi-linear representation of syllable structure. There are no longer any rules to describe liaison; merely floating consonants that attach themselves to a following empty onset, provided that syntactic conditions are satisfied. While this approach provides an adequate description of the phonological properties of liaison, it does not distinguish between a context having an empty onset that allows for a liaison consonant to attach itself to it, and one that does not allow this to happen. What must also be determined, for instance, is the difference between *dans une heure* and *pendant/une heure* where both cases share the same phonological structure concerning the liaison consonant. In order to provide an adequate description of liaison, it is necessary to predict the contexts in which the liaison consonant will attach to the following onset, and those contexts in which it will not.
1.4. Syntactic approaches to liaison

1.4.1. Introduction

Liaison is not solely a phonological phenomenon; there are also syntactic properties involved in its production. As a result, in order to completely account for French liaison, both phonological as well as syntactic processes involved in its production must be included. As was shown in the previous section (1.3.), phonologists propose a model of phonological representations of liaison, though they acknowledge that syntax plays a role in the production of liaison. It is imperative to specify that liaison is not purely a phonological process because it only appears in certain syntactic contexts. The phonological condition for liaison to take place is that there must be a following empty onset to which the liaison consonant may anchor itself. However, syntactic conditions are more difficult to establish. This is also because, as was mentioned earlier, many other sociological and linguistic variables are involved. Dell (1973b) stresses that in order for liaison to be produced, two conditions must be fulfilled: a) a phonological condition that ensures that a word with a latent consonant must be followed by a vowel-initial word, and b) a syntactic condition that ensures that the syntactic relationship between two words is "suffisamment étroit".

Phonologists acknowledge syntactic restrictions on liaison. In abstract phonology, syntactic contexts where liaison occurs are accounted for by the presence of word boundaries (#) so that a liaison occurs when there is one # and not two # separating two words (discussed in section 1.4.3.). According to Schane (1974):

(1) the syntactic or readjustment component would delete one of the # boundaries between words just in those cases where liaison is to take place (Schane 1974: 96).

Thus, syntactic cohesion is determined by the number of word boundaries there are between two words, hence dictating whether or not liaison is to take place.
Concrete phonologists also take into account the importance of syntax with respect to liaison.

According to Tranel (1981: 218):

...the application of the insertion process is directly sensitive to the degree of syntactic cohesion between words: everything else being equal, the less tight the cohesion, the less likely the insertion. Style would of course be an additional variable affecting the application of the rule: the more elevated the style, the more likely the insertion.

This is similar to Hewson's (1986) notion of a "close syntactic relationship" necessary for liaison to be produced. Thus, two factors are considered to affect phonological rules: syntactic cohesion between words and style of discourse.

In non-linear phonology, researchers stipulate the same conditions. According to Clements and Keyser (1983: 102):

By the rule of Liaison, a consonant is linked to the syllable node dominating an immediately following vowel, providing the appropriate syntactic conditions are satisfied.

The authors also add as footnotes (Clements and Keyser 1983: 103, fn. 28 and 105, fn. 31) that the rules that determine which final consonants are extrasyllabic depend on the speaker and the speech style. Furthermore, they state that these rules depend on a hierarchy of syntactic contexts, and it may be necessary to include a listing of categories."^28

It seems then that phonological rules favour a description of liaison by means of lists of syntactic contexts. These rules account for phonological properties of liaison, provided that syntactic properties are satisfied. However, there are countless factors involved in establishing syntactic properties of liaison, so the nature of these properties must be determined. Phonologists mention that these properties exist. As Chomsky notes, "(t)he facts of liaison are difficult to establish, in part because the relevant cases are somewhat artificial and perhaps taught" (Chomsky 1981: 224, fn. 25).

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^28This notion of hierarchy is already discussed by Delattre (1955, 1956) and Malécot (1975).
A theory of liaison must be capable of demonstrating the relationship between phonological and syntactic properties of the French language. Some effort has been made to deal with syntactic properties of liaison. The following sections include descriptions of syntactic conditions on liaison, models based on X-bar syntax, c-command and government, and functional categories.

1.4.2. Descriptive approaches

Descriptive approaches (Grammont 1920, Delattre 1951, Fouché 1956) present liaison according to grammatical categories of the words involved. That is, obligatory liaison occurs in the following contexts:

(71) a. determiner + noun, pronoun, or adjective;  
    b. pronoun + verb;  
    c. verb + pronoun;  
    d. certain monosyllabic words + following word;  
    e. certain lexicalized expressions.

Optional liaison occurs between

(72) a. plural noun + following word;  
    b. verb + following word;  
    c. polysyllabic word + following word.

Finally, cases of forbidden liaison are:

(73) a. singular noun + following word;  
    b. et + following word;  
    c. word + h aspiré;  
    d. word+ un, huit, onze and derivatives;  
    e. certain lexicalized expressions.

In general, grammarians (Grammont 1920, Delattre 1951, Fouché 1956) list grammatical contexts according to whether liaison is obligatory, optional or forbidden. They also determine which cases are subject to change according to speech style.

Gross (1975) discusses the nature of “proximity” of a) a pronoun to the following verb, and
b) a noun to the following verb, which explains the presence of liaison in the former
(elles_arriveront) but not in the latter (les_filles/arriveront). Gross does not, however, go into
detail. This notion of “closeness” is a description of the difference between nouns and clitics, for instance,
or the fact that liaison occurs between an unstressed word and the following word in its rhythmic
group, and not between two stressed words, or two rhythmic groups (Léon 1966, 1992). As a result,
[elles_arriveront] consists of one rhythmic group and [les_filles] / [arriveront] consists of two
rhythmic groups.

Thus, while these descriptions are detailed and thorough, they offer no generalizations.
Research in syntax provides generalizations to account for the role that syntax has on liaison
production, as phonologists have done for liaison consonant realization before a vowel-initial word.

1.4.3. X-bar Syntax

X-bar theory attempts to explain the different elements of a sentence by means of a binary
system which demonstrates that there are parallel structures in the phrases of languages. The
following representation, in which X represents any lexical category, reveals the internal structure
of a phrase:

\[
(74) \quad X'' \\
/ \quad \backslash \\
\text{specifier} \quad X' \\
/ \quad \backslash \\
X \quad \text{Comp}_x
\]

(Xackendoff 1974)

X-bar theory, thus, proposes a binary structure for phrases of all languages. In the first level, the
maximal projection (X'') consists of the immediate projection (X') and its possible specifiers, and
in the second level, X' consists of the head (X) and its possible complements (Cook 1988). This
theory is able to replace many idiosyncratic rules with general principles by accounting for the
properties of all phrases. Thus, a noun phrase (NP) consists of a specifier and a N', and a N' consists of a noun head and a complement. In this way, phrase structure contains one level which may contain a specifier and another level which contains the head and possible complements. As a result, phrase structure rules for the formation of every sentence are no longer necessary. X-bar principles provide a generalization about phrases of all languages.

In *The Sound Pattern of English* (SPE), Chomsky and Halle (1968) propose that readjustment rules mediate between syntax and phonology. One of the functions of these readjustment rules is to insert word boundaries on the basis of the surface syntactic structure. The concept of word boundaries within X-bar syntax is used in order to account for the role that syntactic contexts play in the production of liaison. Boundaries are units in the phonological string which define a domain (Basboll 1981). Milner (1967), Schane (1974) and Selkirk (1972 and 1977) propose that liaison depends on the number of word boundaries (#) between two words; that is, liaison is produced before one # but not before two #. A language-specific readjustment rule inserts the # in the surface structures. This approach is based on the notion of the phonological word in Chomsky and Halle’s (1968) SPE, which is described as follows:

(t)he boundary # is automatically inserted at the beginning and end of every string dominated by a major category, i.e. by one of the lexical categories ‘noun’, ‘verb’, ‘adjective’, or by a category such as ‘sentence’, ‘noun phrase’, ‘verb phrase’, which dominates a lexical category (Chomsky and Halle 1968: 366).

Thus, a # is inserted at the beginning and end of every string dominated by a major category (a lexical category such as Noun, Verb, Adjective). Non-lexical items do not form their own maximal projection, but are part of the maximal projection of the lexical head. Consequently, liaison will only occur between a non-lexical item and its head, and not between two maximal projections. Thus, in (75a), the specifiers les and un form part of the phonological word, since they cannot form one on their own (they are not lexical categories), and so liaison occurs with the following noun. The same
occurs between *les* and the following nouns in (75b). However, the following words *humains* and *adorables* form their own phonological word (they are Adjective Phrases) and so liaison does not occur between them and the previous noun.

(75) a. les # enfants [lezâfa] 
    un # instant [œméstâ]

    b. les # êtres # humains [lezêtrymê] 
    les # enfants # adorables [lezâfâdadârâbl]

While this analysis is sufficient for obligatory liaison, it is inadequate for optional cases. In the case of optional liaison, Milner (1967) and Selkirk (1972 and 1977) propose syntactic rules based on the X' notation that apply according to the level of style. Selkirk (1972) distinguishes, in fact, between a) *la conversation familière*, b) *la conversation soignée*, and c) *la lecture et le discours*. For each style, Selkirk accounts for the different production of liaison by proposing readjustment rules that vary according to style. That is, liaison is produced in certain styles and not in others according to the application of readjustment rules that insert or delete a # depending on style. For instance, the *style soigné* has an optional rule, the X-Comp rule below:

(76)

\[
X \\
\left[ x^* \ Y \ [x^* \ [x^* \ [\text{+inflected}] \ #. ] Z \ #. x^* ] \ #. x^* \rightarrow \right. \\
X \\
\left[ x^* \ Y \ [x^* \ [x^* \ [\text{+inflected}] \_x.] Z \ #. \_x.] \ #. \_x. \right. \\
\]

(Selkirk 1972: 160)

This rule deletes a # and allows liaison between an inflected head and its complement, which would then allow a liaison between *enfants* and *adorables*, resulting in [lezâfâzadârâbl]. Liaison does not occur between uninflected heads and their complements, as after singular nouns and adjectives, and after infinitives and other finite tenses.

However, this rule seems to be too powerful for various reasons. First of all, Selkirk predicts
a liaison in cases where liaison is not produced, and fails to predict liaison in cases where it should be produced. For instance, in Morin and Kaye’s (1982) argument against Selkirk’s rule, their observations of liaison production in speech samples from news bulletins and interviews reveal occurrences of liaison after infinitives, present participles and past participles, as in the following examples:

(77)  
   a) Pourquoi emprunter r-ailleurs?  
   b) Ça va discuter r-en diable  
   b) Parlant t-à Montréal, Monsieur Jean-Luc Pepin...  
   c) (un programme) mettant t-en vedette...  
   d) (il) a fait t-au moins quinze blessés  
   e) Le Consiglio avait pris z-une part active...  
      (Morin and Kaye 1982: 310)

These are examples of liaison that should not occur according to Selkirk’s rule. The type of variability in the examples above are not optional for Selkirk. Another problem concerning the predictability of liaison production of Selkirk’s rules is that there is no room for variability in her conversational style. Her rules for variability pertain to formal elevated discourse. As a result, liaisons predicted by the X-comp rule should never occur in conversational style.

Second, there are numerous exceptions to Selkirk’s rules, such as the *h aspiré* words, prenominal adjectives, and the distinction between mono- and polysyllabic prepositions and adverbs. These examples do not conform to Selkirk’s distinction between one and two word boundaries. Morin and Kaye (1982) find that in some cases Selkirk’s description is vague or incomplete, and so they omit the treatment of COMPs, clitic pronouns and prenominal adjectives. However, the status of prepositions and adverbs is mentioned in their argument. Morin and Kaye remark that Jakendoff (1977) shows that prepositions and adverbs should be considered lexical heads. Morin and Kaye present examples of liaison being optional after prepositions and between an adverb and its complement in formal speech:
(78)  a) devant (t-) un hôtel
     pendant (t-) une heure

     b) conformément (t-) à nos instructions
     parallèlement (t-) à cette démarche
     proportionnellement (t-) à nos accords
     subséquemment (t-) à votre visite  (Morin and Kaye 1982: 309)

In other words, the X-comp rule also applies to polysyllabic prepositions and adverbs.

Third, Morin and Kaye (1982) find that there is no systematic difference between plural and singular adjectives. In fact, in (79), their speakers do not produce a liaison in either of these contexts:

(79)  a) Ils sont enclins/à rire, Il est enclin/à rire
     b) Elles sont sujettes/à faire des erreurs, Il est sujet/à faire des erreurs
     c) Ils sont prompts/à se fâcher/Il est prompt/à se fâcher
     d) Ils sont impuissants/à résoudre ces problèmes, Il est impuissant/à
     résoudre ces problèmes  (Morin and Kaye 1982: 311)

This seems to indicate that the feature "inflected" is not pertinent for their speakers. Morin and Kaye conclude:

It appears then that Selkirk’s generalizations about the effect of the morphological feature ‘inflected’ is not valid. The feature accounts correctly for the difference of liaison after nouns. Plural nouns, but not singular nouns, are followed by liaison. For verbs, although liaison is rather infrequent after infinitives and present participles, it is observed with the same frequency after past participles (those that allow liaison on historical grounds) as after finite tenses. For adjectives, there appears to be a strong tendency to avoid liaison, both in the singular and the plural. If we add to these facts the observations...about the existence of elevated liaison after uninflected lexical heads such as prepositions and adverbs, it is clear that the feature ‘inflected’ is not pertinent cross-categorically in the description of liaison in elevated speech (Morin and Kaye 1982: 313).

Thus, Morin and Kaye reject the notion of “inflected” as a feature of liaison use in formal speech.

Finally, by eliminating a word boundary, the X-Comp rule redefines the notion of phonological word that Chomsky and Halle (1968) propose, which elicits, for example, a phonological word such as:
It seems then that readjustment rules that insert or delete word boundaries become arbitrary rules used for the sole purpose of explaining liaison.

To summarize, Selkirk (1972) provides a syntactic rule according to which liaison occurs within a phonological word (between one word boundary) and not between two phonological words (between two word boundaries). Her X-Comp rule accounts for liaison in formal speech by allowing liaison to occur after inflected heads (nouns, adjectives and verbs) and their complements. Morin and Kaye (1982) provide arguments against Selkirk's theory and conclude that there is insufficient support for a syntactic theory of liaison, and that the traditional descriptions provide a better analysis of liaison contexts. Nevertheless, although there are many problems with Selkirk's (1972) analysis, it is an attempt at providing a generalized account of French liaison. Morin and Kaye's (1982) arguments against a syntactic theory show the variable nature of liaison, which cannot be accounted for by means of a purely phonological or syntactic rule of liaison. Booij and De Jong (1987) believe that "no adequate theory about liaison can be developed without taking into account its fundamentally variable nature" (Booij and De Jong 1987: 1015). However, it is not necessarily the case that perhaps the only possible representation of liaison is a description of the syntactic environment in which liaison occurs. In fact, isolating the syntactic processes involved in liaison would be too strong a theory in that such a theory would not account for the variable nature of liaison. It will be shown in section 1.5. that liaison, including its variable nature, can be represented by a prosodic structure in which syntactic contexts affecting liaison production delimit its domains.

1.4.4. C-command and Government

Part of the principles and parameters approach to universal grammar is the theory of
Government and Binding. Two approaches to account for liaison are c-command and government.

C-command is defined in the following manner:

(81) C-command
A c-commands B iff A does not dominate B and every X that dominates A also dominates B.  

(Haegeman 1991: 125)

Government is described as follows:

(82) Government
A governs B iff A m-commands\(^{39}\) B and no barrier intervenes between A and B.
Maximal projections are barriers to government.
Governors are heads.  

(Haegeman 1991: 125)

Kaisse (1985) adopts the notion of c-command and maintains that liaison occurs between two words if the second word c-commands the first. She states that liaison “applies between two words \(a\) and \(b\) if \(b\) c-commands \(a\) and \(b\) is on a right branch (or if \(a\) is nonlexical)” (Kaisse 1985: 163). The following examples demonstrate this concept:

(83) a. N” b. N”
/ \ / \  /
DET N’ DET N’
/ \ / \ /
(A’) N A” N
| | | |
(A) A” A”
| | | |
bon oignon (A’) et A”
| | | |
[bonɔjoŋ] a b

(Kaisse 1985: 64)

---

\(^{39}\)A c-commands B when X is equated with the first branching node. A m-commands B when X is interpreted as a maximal projection (Haegeman 1991: 135).
In (b), the conjunction *et* does not end the constituent (the highest A") that contains *bon*. and no liaison is possible. Thus, in *un endroit/obscur, une maison/en pierre, j'en veux/un, il cherchait/Albert*, the words cannot c-command out of their maximal projection, and so liaison does not occur (Kaisse 1985: 167).

In order to account for liaison between a specifier and an adjective, according to Kaisse, the c-command condition can be weakened to allow liaison if *b* c-commands *a* or if *a* is nonlexical and c-commands *b*.

Kaisse mentions that Selkirk’s X-Comp rule (allowing inflected heads to produce liaison with their complements) can be restated as the relaxation of the c-command condition, so that *a* c-commands *b* and *a* is inflected, and *b* c-commands *a*.

Prunet (1987) also uses the X' notation to account for both liaison and nasalization after liaison. That is, nasalization in liaison contexts will only occur if the word is immediately dominated by the maximal projection. This is what determines the difference between *bon*, which is a modifier of *N* under *N'*, and *mon*, which is a specifier immediately dominated by the maximal projection *N"*. As a result, *mon* will be nasalized and *bon* will not. However, vowel nasalization also occurs in *un bon garçon* [⁠ɔbɔgars̥ø], which means that no free skeletal slot must be available for the nasal consonant. This is the other condition that must be satisfied.

Prunet also makes use of the notion of c-command in order to determine which elements are in a liaison context. Prunet then proposes that liaison will occur if there is reciprocal c-command. The following structures (84 a and b), satisfy the conditions of reciprocal c-command, and so liaison occurs. In (84a), the specifier *ton* is immediately dominated by the maximal projection NP, which produces liaison and nasalization. In (84b), *bon* is not in the position of specifier (and therefore not immediately dominated by *N"*), but is dominated by *N'*, hence there is liaison but no nasalization.
Consequently, because the two words *ton* and *bon* occupy different syntactic positions, nasalization only occurs with *ton*, which is directly dominated by a maximal projection.

(84)  

a. *ton ami*  

```
NP  
/ 
SPEC N'  
| 
N  
ton ami /tɔnami/  
```

b. *bon ami*  

```
NP  
/ 
N'  
MOD N  
bon ami /bɔnami/  
```

(Prunet 1987: 228)

In (85), there is no reciprocal c-command between *enfant* and *adorable* since the adjective is dominated by its maximal projection AP, and so liaison does not occur.

(85) *un enfant adorable*

```
NP  
/ 
spec N'  
| 
/ 
un N AP  
enfant A'  
|  
A  
adorable [œnafœdɔrabl]  
```

This example also creates some difficulties since, while no liaison occurs in this context, it is optional in *des enfants adorable*, which would have the same form as in (85). Thus, the question is, how does c-command account for optional liaisons? Is there a way that c-command distinguishes between the singular form and the plural form in order to account for liaison in one and not in the other? There are other considerations as well. For instance, not all prepositions produce a liaison, so how does this approach explain liaison between a preposition and a noun, such as *en Afrique*?
In (86), the preposition and the noun are separated by the maximal projection (NP), and so there is no reciprocal c-command:

(86) *en Afrique*

```
PP
|    |    
| P' |
| \  |
| P  NP |
|    |    
| en  N' |
|    |    
| N   |
|    |    
| Afrique /
```

On the other hand, there may be a liaison, although optional, in *depuis un mois*, which also has the same structure as (86). Once again, how can c-command distinguish between these two types of prepositions, which have the same syntactic structure? The same is true of mono- and polysyllabic adverbs (as in *très intelligent, extrêmement/intelligent*). Hence, c-command encounters many difficulties, and only seems to account for a very limited number of cases.

Bennett (1991) disagrees that c-command is sufficient to describe liaison, and proposes instead that it is the notion of government that defines the group for external sandhi in French. The difference between c-command and government is that, in order for two elements to be in a context of government, there must not be a maximal projection intervening between the two of them (Haegeman 1991, Cowper 1992). The domain of c-command is therefore not as restricted as that of government. Bennett bases his theory of liaison on this notion. His rule of liaison is the following:
(87) external sandhi is licensed in French between A and B if A governs B.

A and B are
1) in structural equality
2) both dominated by shared maximal projections \((X'', X', X)\) and
3) without barriers, specifically maximal projections, intervening between them. It is notable in this connection that while \(V''\) as a major boundary functions as a barrier to external sandhi, \(V'\) is no barrier to government. (Bennett 1991: 79-80).

The following cases (88) are in a liaison context, whereas the cases in (89) are not, since there is no government between the two elements:

(88)a. \([N' \ [ADJ \text{ dangereux}] \ [N \ [ \ [N \ [ (+Z) \text{ élément } ] ] ]]\]

\text{dangereux} (+Z) élément

b. \([N' \ [DET \text{ les }] \ [N \ [ (+Z) \text{ autres } ] ]]]\)

\text{les} (+Z) autres

c. \([ADP \ [ADV \text{ très}] \ [ADP \ [ADI \text{ (+Z) intelligent}]]]\)

\text{très} (+Z) intelligent

d. \([V' \ [V_{aux} \text{ sont}] \ [PAST \text{ PARTICIPLE} (+T) \text{ arrivés } ]]]\)

\text{sont} (+T) arrivés

e. \([C' \ [C \text{ quand}] \ [r \ [(+T) \text{ on était fermé}]]]\]

\text{quand} (+T) on était fermé

(89) a. \([N' \ [N \ [occasion] \ [r \ [\ldots \text{PRED} (*+N) \text{ affreuse } ] ] ]]]\]

\text{occasion} (*+N) affreuse

b. \([r \ [N' \ [N \ [\text{le politicien}] \ [V' \ [V' \ (*+N) \text{ [arrive]] }]] ]]]\]

\text{le politicien} (*+N) arrive

c. \([V' \ [V' \ [V' \text{ il part } ] \ [ADV' \ [ADV' \ [ADV' (*+T) \text{ [immédiatement]}]]]]]\)

\text{il part} (*+T) immédiatement (Bennett 1991: 79-80)

He concludes that the maximal projections which license government and external sandhi are \(C''\) (=S), \(ADV''\), \(ADJ''\), \(P''\), and \(V'\) also licenses government (Bennett 1991: 81). This allows for liaison between \textit{quand} and \textit{on} in (88c).
Even though government seems to be better able to describe the cases of liaison than c-command, it is still too restrictive. First of all, the definition of government stipulates that a governor must be a lexical category (Haegeman: 1991). If this is the case, then liaison between a determiner and a following noun (88b) could not be accounted for.

Second, in order for prenominal adjectives and some adverbs to be in a liaison context, they cannot be maximal projections (88a,c). Bennett (1991) attributes the semantic difference between pre- and postnominal adjectives to their structural difference. He states that "(t)he post-nominal adjective has its origin in discourse, whilst the pre-nominal adjective is an inherent element of the N" (Bennett 1991: 80). However, if prenominal adjectives function like specifiers, then liaison between a prenominal adjective and the following noun should supposedly not occur since this is not a domain of government. The same assumption applies to monosyllabic adverbs as in (88c).

Third, it would be difficult to account for the optional liaisons in a context of government (ex. avons été, of the type (88d)), or between words that are not in a context of government (ex. occasions affreuses, of the type (89a)). It does not seem likely that government is able to distinguish between cases of forbidden liaison and optional liaison, unless government is only referring to obligatory cases. What would be the restriction stating that liaison is obligatory in certain cases of government, and optional in others, or else forbidden in certain cases of government, and optional in others?

Fourth, this approach, like Prunet’s c-command, is unable to describe the distinction between mono- and polysyllabic prepositions and adverbs. This approach, like c-command, cannot account for all the properties of liaison.

Thus, c-command and government provide an explanation of French liaison that is not sufficient. This analysis does not make certain distinctions, such as the difference between liaison
after certain verbs and not others, or the difference between mono- and polysyllabic prepositions and adverbs. The notion of government is also questionable since governors must be heads, yet liaison occurs between a non-lexical item and a following lexical item.

1.4.5. Functional Projections

Another method of accounting for liaison is by referring to the distinction between lexical and non-lexical items within the Government and Binding framework. Non-lexical categories are termed functional categories. These two categories differ from one another in that they possess different properties; that is, lexical categories have substantive meaning and are open classes, whereas functional classes lack substantive meaning and are closed classes (Cowper 1992: 173). Ouhalla (1993) argues that functional categories "form a natural class in the sense that they have inherent properties which differentiate them from substantives (or the open-class categories)" (Ouhalla 1993: 9). He also notes that functional categories "represent the flesh and blood of grammar, in the sense that they are the locus of grammatical information which determines the structural representation of given constructions, as well as the various grammatical processes they may undergo" (Ouhalla 1991: 8). Functional and lexical heads have different selectional, or licensing, properties, and it is these differences that explain the internal differences between the constituents they head.

Recent studies (Abney 1987, Pollock 1989, Ritter 1988, 1991, Dufresne 1993a and b, Valois 1991) provide evidence for a more indepth representation of the sentence. That is, functional categories have their own X-bar structures, and as a result have become maximal projections (IP, NegP, DP, NumP, etc.). Chomsky's (1986) reformulation of X' theory assigns analogous syntactic structures to NPs and sentences. On this account, NPs are maximal projections of N with a specifier
and an N' constituent immediately dominated by NP. S is analysed as an inflectional phrase (IP), which is the maximal projection of a nonlexical X^0 category of inflection (I). The latter takes a VP complement to yield an I', and the subject NP is the specifier of IP. The inflection head consists of abstract elements tense (TNS) and agreement (AGR). Sentence structure is represented as follows:

(90)

```
    I
   / \  
  NP  I'
   / \  
  I   VP
   \  
   (TNS,
    AGR,
    etc.)
```

This is a functional phrase formed around abstract elements not related to the lexicon. Thus, IP contains a specifier, a head and a complement, except that its head is not lexical. S' is reanalysed as a complementizer phrase (CP) projected from the nonlexical category COMP. C' is headed by a COMP which takes an IP complement. Within this framework, NP and the sentential categories of IP and CP are the only constituents to reach double-bar projections. The other phrasal categories of NP, PP and (non-small-clause) AP are single-bar projections containing only heads, complements, and modifiers. The analogy in the internal syntactic configurations of sentences and NPs reflects certain correspondences in semantic structure. That is, the NP is analysed as a projection of the semantic head N and functions as the complement of the functional head D of the determiner phrase DP. In this manner, the NP now forms part of a determiner phrase (DP) (Abney 1986, Valois 1991, Curat 1993). D corresponds to the I head of IP, and the structures of DP and IP are almost identical. The following structure is that of the DP:
D contains the AGR features of the NP.

One of the grammatical categories that are affected by these studies is adjectives. Jackendoff (1977) notes that the syntax of A' is similar to that of N', but is more limited. In English, adjectives can take PP complements (good at chess, yellow with age, eager for help) and S' complements (afraid that Bill is fierce, eager to please, proud to be a frog, happy that he won) (Jackendoff 1977: 76). However, the position of adjectives with respect to the head N differs in Germanic and Romance languages (Giorgi and Longobardi 1991: 122). In French, adjectives may occupy either a prenominal or postnominal position, though the prenominal position is more restricted. According to Guiraud (1962),

l'adjectif se place avant le nom quand il a une valeur qualitative, exprimant un jugement, une impression, une réaction subjective, souvent affective: une charmante soirée, une noble initiative, un vilain personnage; il se place après le nom quand il a une valeur discriminative, énonçant un caractère spécifique, une catégorie, une qualité physique, une appartenance locale ou temporelle, etc.: la nature humaine, un fonctionnaire civil, les métaux ferreux, la langue française, etc. (Guiraud 1962: 109)

The structures in (92 a and b) demonstrate the position of adjectives for les petits enfants and les enfants adorables:
Many studies demonstrate the differences between prenominal and postnominal adjectives in Romance languages. Luján (1972), Dumas (1978), Lepschy and Lepschy (1981) and Hernanz and Brucart (1987) discuss the position of adjectives from both a semantic and syntactic point of view. Luján (1972: 399) notes that in Spanish, prenominal and postnominal adjectives cannot be represented by the same structure. In Italian, Lepschy and Lepschy (1981: 166) state that often, the descriptive function of an adjective in a prenominal position weakens: normally, the adjective has a literal meaning when it is placed after the noun, and a metaphorical meaning when it precedes the noun. For example,

(93)  
\begin{itemize}
  \item \textit{un povero uomo}  
    \begin{itemize}
      \item \textit{an unfortunate man}
      \item \textit{un uomo povero}  
        \begin{itemize}
          \item \textit{a poor man}\footnote{Note that (93) is also valid for French \textit{(un pauvre homme} and \textit{un homme pauvre) as well as for Spanish \textit{(un pobre hombre} and \textit{un hombre pobre)}}.}
    \end{itemize}
\end{itemize}
\end{itemize}

Dumas (1978) makes the same distinction between these two adjectival positions by stating that adjectives are

post-posés dans les constructions non-marquées; il faut donc compter dès le départ que quand ils se trouvent préposés au nom, cette position même rend la construction marquée et est source d'un effet d'écart sur le plan sémantique comme sur le plan syntaxique... (Dumas 1978: 89).
Hewson's (1986) notion of a "close syntactic relationship" between words was already mentioned in section 1.2. In the case of adjectives, Hewson accounts for the difference between pre- and postnominals by referring to the relationship they have to the noun. For Hewson, the adjective which follows the noun is perceived as a separate entity from the noun, while the preceding adjective is not (Hewson 1986: 151). As a result, since a preceding adjective is considered to be inseparable from the noun, it requires a liaison. The postposed adjective, being separable from the noun, does not. In other words, "(i)f there is no immediate syntactic link of dependency between two sequential elements in the sentence, they may not be connected phonologically by liaison" (Hewson 1986: 152). Bennett (1991: 80) also attributes the semantic difference between the two types of adjectives in French to their structural difference: "l'adjectif postnominal a son origine dans le discours, tandis que l'adjectif prénominal est un élément inhérent du N".

Thus, two assumptions can be made: a) prenominal adjectives have a different syntactic structure than postnominal ones, and b) the syntactic structure of adjectives has a significant effect on the production of liaison: a liaison is required after prenominal adjectives, but is not required between a noun and the following adjective. What is still to be determined is the exact nature of the different representations of these two structures and their effect on liaison production.

Recently however, studies in syntax have attempted to provide a representation of the different positions of adjectives according to lexical and functional categories. In Romance languages, the fundamental order of NPs is [determiner + adjective + noun], and the order [determiner + noun + adjective] is derived via Noun movement31 (Valois 1991, Bernstein 1991). Valois (1991) proposes that the internal syntax of the Determiner Phrase (DP) is similar to that of the CP, where "NP is the nominal counterpart of VP, and DP is the nominal counterpart of CP"

---

31Noun Movement is movement of a noun from one argument position to another argument position, leaving behind a trace. (see Cook 1988, Haegeman 1991).
Like adverbs, the position of adjectives in the DP is predicted according to their meaning. French and English differ with respect to the position of the noun and the adjective. In French, the noun moves to the head of the functional projection NumP, whereas there is no movement in English. Valois notes two facts that distinguish prenominal adjectives from postnominal ones. First of all, prenominal adjectives can never constitute a phrase:

(Valois 1991: 154)  

Second, obligatory liaison occurs only between a prenominal adjective and the following vowel-initial noun, which demonstrates "a reflex of the close phonological relation created by incorporation of the adjective into the head noun" (Valois 1991: 160):

(95) Les fréquentes ([z]) invasions de Jupiter.
Les invasions ([*z]) infréquentes de Jupiter.  
(Valois 1991: 154)

In the same manner, liaison between a determiner and the following noun is explained by "a very close, in fact even stronger, phonological relation" (Valois 1991: 160).

Bernstein (1991) analyses Walloon, a Romance language that possesses prenominal adjectives, and proposes that it is the absence of noun movement that predicts that adjectives never appear in postnominal position. The absence of liaison between an adjective and a noun is explained by the functional projection NumP that intervenes between the adjective (adjoined to the maximal projection) and the noun.

(96) on gros abe [õ grɔ ǝ:p]
un gros arbre

---

32This restriction also occurs in English (Di Sciullo and Williams 1987, Bessier 1992). For example, the [very proud] man
*the [proud of his children] man  
(Valois 1991: 154)

33See Morin (1986) for a study of liaison in Walloon.
The surface structures of *un petit enfant* are found in (97a) for Walloon and in (97b) for French. Liaison does not occur in (97a) because the adjective is "too far" from the noun (that is, the functional projection Num intervenes). In French (97b), the noun moves up to Num0, so that the noun and the adjective are dominated by the same maximal projection, which allows liaison. In other words, if adjectives are analysed according to the proposals presented in Valois (1991) and Bernstein (1991), prenominal adjectives in French would have the structure in (97b), and postnominal adjectives would have that of (98):

(97)  *un petit enfant*

    a) Walloon                      b) French

    DP                                 DP
        |                                 |    
        D'                               D'    

          /    
        D    NUMP                         D   NUMP

          /    
        on    AP    NUMP                   un    AP    NUMP

          /    
        ptit    NUM'                        petit    NUM'    

          /    
        NUM    NP                           NUM'    

          /    
        N    N'                              NUM    NP

          /    
        enfant    N'                         enfant,    N'    

          /    
        éfant    N                           t_1  

(Bernstein 1991: 122)
However, functional categories still cannot account for optional liaisons between a noun and a plural adjective (ex. des enfants aimables). Nothing intervenes between the noun and the adjective in (98), yet there is no liaison. As with previous approaches (c-command and government) there still remains the difficulty of establishing how the phonology determines the difference between functional and lexical categories, since in both cases the phonological context may be satisfied, yet one allows liaison and the other doesn't.

1.4.6. Summary

It has been shown that phonological theories acknowledge the syntactic properties of liaison. Syntactic theories, on the other hand, encounter too many exceptions. Certain distinctions are unable to be made in syntactic theory, such as the difference between obligatory and optional liaison, between mono- and polysyllabic prepositions and adverbs, as well as the difference between singular and plural nouns. Neither phonology nor syntax can adequately describe liaison on its own. What
is necessary is an integration of both phonological and syntactic processes.
1.5. Prosodic Phonology and Liaison

1.5.1. Introduction

One of the major difficulties for theoretical linguistics lies in determining how phonology interprets syntactic information. What is necessary in a linguistic theory of liaison is to be able to describe both its phonological and syntactic constraints. This is exactly what studies dealing with the relationship between phonology and syntax propose to accomplish.

1.5.2. Prosodic structure

Recent research has focused on an integrated approach including both phonology and syntax and the notion of what phonology must know about syntax (Selkirk 1984, Gvozdanovic 1986, Chen 1990, Vogel and Kenesei 1990, Zec and Inkelas 1990). In fact, one of the questions is whether phonology has direct access to syntactic information, or whether there is some phonological component operating between them (Vogel and Kenesei 1990). As mentioned in section 1.3., phonological representations are no longer linear. It is evident that a multi-level representation seems better able to account for various data. Prosodic structure is somewhat similar to multi-linear phonology in the sense that it is not a linear representation, yet it is different in that multi-linear phonology only accounts for phonological facts, excluding syntax. There is no way to demonstrate that certain syntactic structures function differently with respect to the same phonological rule (ex. *dans_un an, pendant/un an*) in non-linear phonology. In prosodic phonology, however, there are rules that map syntactic information onto the phonological structure. However, these rules are not similar in nature to rules applied to word boundaries (Selkirk's X-bar theory). For instance, liaison happens to be a rule that demonstrates how syntactic constituents cannot be the domains of
phonological rules, since inadequate results would be found (as it was determined in the previous section). Syntactic information interacts with phonology by determining the prosodic domains delimiting the operation of phonological rules (Selkirk 1984). As Zec and Inkelas note (1990: 378):

Certain phenomena which belong to the borderland of syntax cannot be characterized in purely syntactic terms. At least part of the burden needs to be shifted to phonology, and this characterization crucially depends on prosodic units and the hierarchy they form. Furthermore, this characterization does not merely depend on the nature of prosodic constituents, but also relies on the relation of the prosodic component to the syntactic one.

Thus, an important part of a theory of liaison is to determine which syntactic properties are relevant to phonological processes.

Prosodic phonology has proposed a hierarchy of prosodic levels or domains (Selkirk 1980a, 1980b, 1986; Nespor and Vogel 1982, 1986) that divide our mental representations. These domains are superior to previous approaches since it has been shown that syntactic constituents are insufficient domains for the application of phonological rules. Nespor and Vogel (1986) demonstrate this notion by discussing three different types of problems:

1) direct reference to syntactic constituents does not make the correct predictions about the domains of phonological rules;

2) whereas syntactic constituency is determined uniquely in terms of structural factors,...a nonstructural factor, the length of a given string, is relevant to the phonology in that constituents of the same syntactic nature but different lengths exhibit different behaviors as far as the application of phonological rules is concerned;

3) in contrast with the implicit prediction made by a syntactic constituent approach to phonology that the largest possible domain of application of a phonological rule is the sentence,...there exist phonological rules that apply in larger domains (Nespor and Vogel 1986: 37).

The authors also mention liaison as another rule that reveals the inappropriateness of syntactic constituents as the domains of phonological rules.

The prosodic subcomponent of phonology consists of phonological (prosodic) constituents
which are, from smallest to largest, the syllable, foot, phonological word, clitic group, phonological phrase, intonational phrase and phonological utterance. These constituents replace the word boundaries of SPE, and are arranged in a hierarchical fashion:

(99) the phonological utterance (U),
    the intonational phrase (I),
    the phonological phrase (ϕ),
    the clitic group (C),
    the phonological word (W),
    the foot (Σ),
    the syllable (σ).

(Nespor and Vogel 1986: 11)

In other words, a sentence is represented by a prosodic hierarchy in which phonological rules whose domains are defined in terms of these prosodic structures apply. Rules can apply at and below the word level, as well as above the word level (Vogel: 1991). The syllable consists of segments (onset and rhyme), the foot consists of weak and strong syllables, and the phonological word represents the interaction between the phonological and the morphological components of the grammar. The clitic group consists of one or more phonological words. It is the first level of the prosodic hierarchy that represents the mapping between the syntactic and phonological components. The phonological phrase consists of a specifier and the head of the phrase, or a nonlexical item (determiners, prepositions, auxiliaries or conjunctions) and its sister constituent. It groups together one or more clitic groups. The intonational phrase is the domain over which an intonation contour is spread. The phonological utterance is the span between two pauses in connected speech.

Selkirk (1984, 1986) shows that a theory of prosodic domains is superior to a theory of word boundaries. The level of prosodic domains is what Selkirk refers to as *P*-structure, which is found between the syntactic structure and the phonetic representation. Phonological rules apply within prosodic domains.

An important factor to consider is that prosodic phonology exists at a phonology-syntax
interface. Information for prosodic domains is encoded from syntax. Selkirk suggests the following:

> a theory of the syntax-phonology mapping based on such end-settings itself provides a theory of possible prosodic constituents (above the foot and below IPh). The hypothesis is that there are only as many prosodic levels as there are possible settings for the label on the end bracket (Selkirk 1986: 387).

Thus, prosodic phonology encodes information from syntax; that is, it reads the right edges of syntactic domains. It delimits phonological domains according to $X^*$ (word) and $X^{\text{max}}$ (phrase). Once this is done, there is no longer any syntactic structure.

Other researchers present studies based on the phonology-syntax interface. Mazzola (1993), for instance, shows that one can account for external sandhi variants in French within metrical phonology (for instance, the occurrence and non-occurrence of liaison and of mute-e). He states that "it is possible to account for the behaviour of segments by positing an interactive network between the syntax and a hierarchical phonology" (Mazzola 1993: 124). Hayes (1990) gives his argument in favour of a theory of prosodic hierarchy:

a) In a number of languages, more than one rule refers to the same phrasal domains, where the domains are not equivalent to syntactic constituent.

b) Typological patterns about junctural strength emerge naturally from the hierarchy.

c) The rules of phrase formation found in the world's languages show an encouraging family resemblance, suggesting that the theory is on the right track in isolating phrase formation as a level of abstraction at which valid generalizations can be made (Hayes 1990: 104).

However, phonological and syntactic structures are not the same. That is, syntactic structure is the input to the phonological component, and readjustment rules make the appropriate changes.

Selkirk distinguishes words that are heads of maximal projections from those that are not. Her example is the following:

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3See Mazzola (1993) for the geometry of metrical rules.
A prosodic word is described as comprising more than a morphological word if it includes clitics, which may be called 'bound morphological words', since they do not occur in isolation (i.e. they cannot form an utterance on their own), and can be separated from the remaining parts of the sentence only in a limited number of cases. As a language-specific matter, clitics are adpositions, short pronominal forms, auxiliaries, particles, and determiners at various levels. They have in common that they have no lexical accent marking of their own (Gvozdanovic 1986: 41).

Therefore, clitics do not form their own prosodic domain, but are part of the word to which they cliticize. So non-lexical items which were referred to earlier as functional categories are now reanalysed as clitics. The following examples illustrate various types of clitics:

(101) [la maison$_{NP}$] [ma maison$_{NP}$] [elle arrive$_{VP}$] [je lui parle$_{VP}$]

The clitics in the above examples consist of determiners, subject pronouns and an object pronoun, all of which cliticize to the following noun or verb.

This approach to non-lexical items has considerable consequences for liaison theory. In fact, liaison has been reanalysed according to prosodic domains that determine its occurrence (as well as its frequency) (Chen 1990, De Jong 1989, 1990, 1991a and b, 1993, Selkirk 1986). Selkirk (1986) reanalyses liaison in terms of prosodic domains, so that obligatory liaison occurs within a phonological phrase, but not between two of them. For example, in (102a), the liaison context is within a phonological phrase and so liaison occurs, while in (102b), the liaison context is between two phonological phrases, and so liaison does not occur.
What is necessary is to define words that are heads of maximal projections, and those that are not. In (102a), *les and *leurs do not project further levels in the X-bar structure, and so are part of the noun’s domain. The pronoun *ils is cliticized to the verb and is also part of the VP. The second part of the phrases in (102b) consist of maximal projections, and so form their own domain. As a result, liaison occurs with cliticized items, and should not be blocked in the following examples:

(103) a) *[les/animaux]
b) *[tu les/adores]  
c) *[ils/ouvrent]  

Dufresne (1993a and b) deals with subject pronouns in French and states that they cannot form a prosodic domain on their own, but must be part of the same domain as the verb. Furthermore, the fact that pronouns cannot appear with determiners demonstrates that these two items belong to the same lexical category (Abney 1986). As a result, the following sentence is ungrammatical:

(104) *Le il est arrivé.

The morphological nature of clitic pronouns allows them to be considered as a functional category since they have the features of gender and number. The very nature of clitics allow for liaison after a pronoun (as in (102a), *ils_on). The structure between a clitic and a verb is different than between a noun and a verb. That is, there is no liaison between a noun and a verb, whereas there is one between a subject clitic and the following verb (ex. *[ils_écoutent] but *[les enfants]_[écoutent]).

So far, this approach seems like a notational variant of Selkirk's word boundaries which allows liaison within one phonological word (where there is only one #) and not between two
(where there are two #s). Only obligatory liaison has been considered until now, which occurs within a phonological word, and not between two phonological words. However, optional liaisons do occur between certain phonological words, although more frequently between some than between others. If liaison is said to occur only within a phonological word, then there would be no way of accounting for optional liaison. The word boundary approach requires readjustment rules to allow for liaison in those optional cases. Yet the problem with word boundaries is that a phrase such as *les enfants intelligents* would have to become a phonological word by a readjustment rule that eliminates a # between *enfants* and *intelligents*. In prosodic phonology, this is no longer a problem. Instead, the production of liaison becomes a question of domains.

From Selkirk's analysis, De Jong (1990) shows that the syntactic structure must first be transformed into a hierarchical prosodic structure consisting of three prosodic constituents: the clitic group (CG)\(^{35}\), the small phonological phrase (SPP), and the maximal phonological phrase (MPP). These three prosodic constituents allow De Jong to make a hierarchy of frequency of liaison. In the first constituent, liaison is very frequent; in the second, it is of a medium frequency; and in the third it is rare. Once again, this approach restates the notion of a frequency hierarchy for liaison described by Malécot (1975); De Jong formalizes this hierarchy by proposing a formal account of the domains of liaison. In other words, De Jong assumes that the domain of obligatory liaison is the clitic group, while the small phonological phrase and the maximal phonological phrase are the domains for optional liaison, varying in frequency.

As previously mentioned, the derivation into prosodic constituents presupposes an analysis of the sentence in terms of X-bar structure. Thus, the right edges of each head (X) defines the domain of frequent (or obligatory) liaison. De Jong's (1990: 199) example in (105) is divided into

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\(^{35}\)The Clitic Group is also called the Prosodic Word.
CGs, SPPs, and MPPs, presented in the section below.

(105) *Ils ont été aidés par des enseignants admirables.*

a) **Clitic group**

The clitic group consists of a clitic or a sequence of clitics and the following word. It "directly dominates one or more phonological words and is dominated by the next category in the prosodic hierarchy, the phonological phrase" (Nespor and Vogel 1986: 149). Clitics either encliticize or procliticize depending on the syntactic structure. The right-edge of each head specifies the domain of frequent (or obligatory) liaison. The sentence from (105) is divided into CGs in (106):

(106) *(ils_ont) (été) (aidés) (par) (des_enseignants) (admirables).*

Liaison within these domains will be very frequent, if not obligatory. *Ils* and *ont* belong to the same CG, as do *des* and *enseignants*. Thus, liaison after *ils* and *des* will be very frequent. In the CG, determiners and pronouns have a similar status in that both are cliticized items. The verbs *étés* and *aidés* form their own CGs, and thus liaison will not be very frequently produced between *ont* and *étés*. It is then the domain of the CGs in which obligatory liaison occurs, and not the SPP, as was argued by Selkirk (1986).

b) **Small phonological phrase**

The SPP consists of one or more CGs, and is derived by choosing only the categories N, A, or V as the ends of domains. The sentence from (105) is divided into SPPs as follows:

(107) *(ils_ont_été aidés) (par des enseignants) (admirables).*

At this level, *ont* and *été* are in the same prosodic constituent, so one can predict that liaison in this
case will occur with a medium frequency. It can be assumed that in this case liaison occurs optionally between two CGs.

c) **Maximal phonological phrase**

Finally, the MPP is derived by taking each edge of a maximal projection as the end of a prosodic constituent, which elicits the following results:

(108) \( \text{(ils ont été aidés) (par des enseignants admirables).} \)

Here, the final /z/ of *enseignants* is part of the same domain as *admirables*, so it is possible to predict that this liaison may occur occasionally. Thus, the sentence from (105) can be parsed into three types of hierarchically ordered prosodic constituents:

(109) \( \begin{array}{cccccccc}
\text{ils} & \text{ont} & \text{été} & \text{aidés} & \text{par} & \text{des} & \text{enseignants} & \text{admirables} \\
\text{P1:} & ( & ) & ( & ) & ( & ) & ( & ) \\
\text{P2:} & ( & ) & ( & ) & ( & ) \\
\text{P3:} & ( & ) & ( & ) \\
\end{array} \)

(De Jong 1990: 82)

In level P1, liaison is obligatory. In level P2, liaison is frequent, while in level P3, liaison is rare.

This analysis of liaison in terms of prosodic structures eliminates one of the main difficulties encountered by previous approaches, in which it was difficult to establish a hierarchy of domains of liaison. This approach is not original, however, as it incorporates previous conclusions, except that it allows for individual variation as well. Allowing for individual variation is a major contribution to liaison theory. It is imperative to recall that Delattre (1955, 1956) and Malécot (1975) also reject the notion that liaison is either obligatory, optional or forbidden in favour of a more precise description of liaison. Delattre opts for a hierarchy of the frequency of optional liaison, while Malécot opts for a four-way distinction (universally required, optional in conversation but obligatory in elocution, rare in conversation but optional in elocution and universally
forbidden), each addressing the need to not group all optional liaisons into one category. In De Jong’s analysis, a hierarchy is also established in which the liaison consonant may associate to an empty skeletal position depending on the prosodic domain.

Thus, liaison is more frequently produced in the CG than in the SPP, and more frequently produced in the SPP than in the MPP. The hierarchy of frequency of liaison with respect to prosodic domains is: a) the CG, b) the SPP, and c) the MPP. De Jong distinguishes three different contexts where liaison is possible:

<table>
<thead>
<tr>
<th>CONTEXTS OF POSSIBLE LIAISON</th>
<th>TYPE OF LIAISON</th>
<th>DOMAIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>after real function words</td>
<td>obligatory</td>
<td>CG</td>
</tr>
<tr>
<td>after closed-category heads</td>
<td>frequent</td>
<td>SPP</td>
</tr>
<tr>
<td>after inflected, open-category heads</td>
<td>rare</td>
<td>MPP</td>
</tr>
</tbody>
</table>

Table IV
Contexts where liaison is possible according to prosodic domain

The notion of frequency (frequent and rare) is more accurate than the terms optional and forbidden since a hierarchy of frequency allows one to account for variations in actual speakers’ speech performance. This hierarchy allows for a representation in which certain optional liaisons are more frequent than others, and in which forbidden liaisons that are produced for whatever reason can be accounted for.

Liaison with and without resyllabification as examined by Encrevé (1988) has already been discussed. Encrevé observes that liaison with leftward syllabification occurs only with optional liaison, and never with obligatory liaison. This suggests that there is never leftward syllabification within a CG. If leftward syllabification only occurs with optional liaison, then it will occur between
two CGs within the SPP.

De Jong (1991b) discusses liaison with leftward syllabification, and notes that it affects floating consonants which are CG-final. He formulates the following condition:

(110) CG-final Consonant Syllabification (formal speech):
Timed CG-final consonants are realized as coda consonants.    
(De Jong 1991b)

Usually, final consonants are resyllabified to the onset of the following word, provided that there is an empty onset. In formal speech, according to De Jong, the CG-final floating consonant will reassociate to the preceding coda. This condition accounts for leftward syllabification of both fixed and floating consonants.

This use of prosodic domains for the description of liaison has numerous advantages. First of all, it incorporates syntactic constraints, and consequently does not deal solely with the phonological properties of liaison. One of the major difficulties with previous theories is that both phonology and syntax are isolated, in that each approach deals with either one or the other. Liaison can now be described with reference to both processes. The latent consonant must be followed by an empty onset. As to its production, various factors (sociolinguistic, idiosyncratic, prosodic, etc.) will determine the domain that the speaker will choose for liaison production (CG, SPP, or MPP). Thus, factors such as speech style, individual variability, etc., are no longer exceptions, but can be incorporated in these domains.

Second, the hierarchy CG>SPP>MPP is sufficient to account for all styles of speech. This eliminates difficulties that Selkirk encounters by providing readjustment rules for different social styles. With prosodic domains, it is no longer necessary to propose separate rules for each style, since the different productions of liaison are described according to the prosodic hierarchy. That is, the more formal the style, the larger the domain becomes for liaison.

However, there still remain factors such as social class, age, sex, style, etc. that are involved
in the production of liaison. Booij and De Jong (1987) conclude that the domain is "an intralinguistic variable constraint on the variable rule of liaison rather than an absolute condition on its application" (p. 1019). This would make liaison a variable rule whereby, instead of proposing fixed parameters of obligatory and optional liaisons, what actually occurs is that certain obligatory ones are not realized, and certain optional ones are realized more frequently than others.

De Jong (1993) proposes the following conclusion:

the variation in liaison usage is not a unified phenomenon, but is of different types. Some of the variation must be accounted for in the lexicon, and can be interpreted as a form of phonological code-switching. Another part of the variation is phonetically motivated and must be accounted for in the postlexical phonology at level P2 (De Jong 1993: 134).

De Jong has also shown that "after some words liaison usage increases with socio-economic class, whereas it decreases after other words" (De Jong 1993: 134). Booij (1986: 99) notes that the "picture of liaison that emerges now is that of an optional, variable (i.e. Labovian) rule that applies both in φ and in I (Intonational Unit, the next larger domain in Selkirk’s prosodic hierarchy), but more frequently in φ than in I". He continues to give the following factors that determine the application of the rule of Liaison:

(111) a) style;

b) social class (De Jong et al. 1981);

c) the nature of the word with the latent consonant (for instance, Liaison always applies to determiners; monosyllabic prepositions show more liaison than polysyllabic ones (Morin and Kaye 1982: 295-296);

d) the nature of the latent consonant (for instance, /t/ liaison is more frequent than /z/ liaison as far as verbs are concerned (Morin and Kaye 1982: 296);

e) idiomatic factors: in frozen expressions like accent aigu and fait accompli we always have liaison;
f) frequency: a frequent expression like *premier étage* ‘first floor’ shows much more liaison than an infrequent phrase such as *singulier ami* ‘singular friend’ (De Jong et al 1981: 93-94).

(Booij 1986: 99)

Thus, while these six factors determine the production of liaison, variability with respect to liaison production can be accounted for by prosodic domains. For instance, a prepositional phrase is an SPP, so that a liaison between a polysyllabic preposition and a following noun phrase may or may not occur (ex. *[pendant un mois]*).

**1.5.3. Summary**

In summary, the relationship between phonology and syntax has been demonstrated by proposing prosodic structures onto which syntactic structures are mapped. Rules apply within prosodic domains. This type of analysis allows for descriptions of liaison according to three specific domains, which are able to account for the hierarchy of frequency that Delattre (1955 and 1956) and Malécot (1975) discuss. Prosodic domains incorporate the variable nature of liaison, as well as leftward syllabification, which is not included in many previous theories.

It is important to acknowledge that the variable nature of liaison of the descriptive approaches presented here should be incorporated into these theories. Yet, the variable nature of liaison is only found in actual speech samples, since liaison is part of the oral production of the French language. As Booij and De Jong (1987) state, "(b)ecause of the complex nature of the variability in liaison usage, neither traditional grammars nor intuitions can be used as empirical evidence: the direct study of liaison in natural speech by means of corpora is an absolute requirement for gaining an insight into the constraints upon its usage" (Booij and De Jong 1987: 1015). Studies on liaison have until now been based on the speech of native adult French speakers from different geographical regions, and
1.6. French as a Second Language

1.6.1. Introduction

While there is no specific research carried out on the production of French liaison by learners of French as a second language, there are various studies in which phonological errors made by FSL speakers are mentioned. Error analyses from data on speakers of FSL have been documented by researchers not only on a phonological level, but on a grammatical level as well. Although these studies are not directly comparable to the present study, data on FSL errors reveals certain generalizations concerning elements that cause the most difficulties for FSL learners. This section deals with findings based on the systematic learning of French as a second language.

1.6.2. Second Language Learning

In the learning of a second language, many factors are involved that have an impact on the target language (TL). One such factor is the assumption that much of the fundamental linguistic knowledge must be innately given (Hyams 1986, Goodluck 1991). This innate knowledge is referred to as Universal Grammar (UG), which consists of principles and parameters, as outlined in Government and Binding Theory (Chomsky 1981, 1986). UG consists of fixed abstract principles which allow the child to organize language in a certain way, as well as parameters with parameter settings along which languages may vary. Another area of interest is the connections between language universals and second language acquisition (White 1989, 1990, Carroll and Meisel 1990, Smith 1994). The assumption is that universal knowledge is innate, while language-specific features must be learned. White (1989, 1990) discusses research on the availability of Universal Grammar for the second language. She reviews three different positions: a) the claim that UG is not available
to L2 learners; b) the claim that UG is fully available; and c) the claim that the L2 learner's access to UG is mediated by the mother tongue (White 1990: 121).

Many studies have been conducted on the learning of a second language in which the L2 learner develops what is referred to as an *interlanguage* (IL) (Richards 1971, Selinker 1972, Corder 1978). Selinker (1972) refers to interlanguage as "the existence of a separate linguistic system based on the observable output which results from a learner's attempted production of a TL norm" (Selinker 1972: 214). Corder (1978) defines it as, "the study of the language systems of language learners, or simply the study of language learner's language" (Corder 1978: 40). Richards (1971) states that the learner's interlanguage is the final level in the learning process that L2 speakers attain. Interlanguage behaviour is the language that is produced when the speaker is performing spontaneously. A speaker's interlanguage contains errors which become fossilized. Selinker refers to fossilization as "linguistic items, rules, and subsystems which speakers of a particular NL (native language) will tend to keep in their IL relative to a particular TL, no matter what the age of the learner or amount of explanation and instruction he receives in the TL" (Selinker 1972: 215). He states that many fossilizable structures "reappear in IL performance when the learner's attention is focused upon new and difficult intellectual subject matter or when he is in a state of anxiety or other excitement, and strangely enough, sometimes when he is in a state of extreme relaxation" (Selinker 1972: 216).

Selinker (1972) and Corder (1983) also discuss strategies of communication in order to account for errors of a second language. Communication strategies are "a systematic technique employed by the speaker to express his meaning when faced with some difficulty" (Corder 1983: 16). Thus, while a communication strategy is an attempt to solve a momentary difficulty, in a learning strategy, the learner attempts to bring long-term competence into being (Cook 1993).
Error analysis, according to Corder (1981), has to do with the investigation of the language of second language learners, which is a special sort of dialect. Corder (1967) makes the distinction between systematic and unsystematic errors. Systematic errors are those that reveal the underlying knowledge that the learner has of the target language, or as Corder calls it, the speaker's *transitional competence*. Unsystematic errors are errors of performance, such as slips of the tongue. Consequently, errors of performance are referred to as *mistakes*, while systematic errors are referred to as *errors*. It is the systematic errors that are significant for various reasons. A learner's errors reveal how much of the target language he has learned, and how much remains to be learned. Errors are inevitable, and constitute a necessary part of the learning process (Corder 1974, 1981). Furthermore, errors provide insight into how a language is learned, and what strategies the learner is using to communicate in the target language.

The interpretation of learners' errors is fundamental to the language teacher. Corder (1981) comments on the importance of the study of errors produced by second language learners. He writes:

> the errors that learners make are a major element in the *feedback* system of the process we call language teaching and learning. It is on the basis of the information the teacher gets from errors that he varies his teaching procedures and materials, the pace of the progress, and the amount of practice which he plans at any moment. For this reason it is important that the teacher should be able not only to detect and describe errors linguistically but also understand the psychological reasons for their occurrence. The diagnosis and treatment of errors is one of the fundamental skills of the teacher (Corder 1981: 35).

Thus, it is through the study of learners' errors that we are able to provide the appropriate teaching material.

An area of research that is fundamental to second language learning concerns temporal variables. Studies show that the difference between L1 and L2 speech is not an increase in the length of pauses, but rather the number of pauses, which results in a loss of fluency (Raupach 1980). Deschamp's (1980) study concerning the syntactical distribution of pauses in English spoken as a
second language by French students, compares descriptions in the native language with descriptions in a second language. One of his results is that "these speakers, confronted with a task which is much more demanding for them, tend to modify a certain number of variables, such as articulation rate, length of runs, but do not use the length of silent pauses as a means of slowing down their speech. Instead of lengthening the pauses, they will generally increase the number of pauses, so as to avoid the long pauses that speakers naturally try to eliminate" (Deschamps 1980: 262).

1.6.3. FSL Learning

Research concerning the study of errors in French as a second language is based primarily on grammatical elements, though some studies include a brief section on pronunciation, and sometimes even on liaison. The majority of studies on FSL learning are based on data from French immersion students in Canadian elementary and high schools. Researchers are concerned mainly with the outcome of French immersion programs: whether students acquire an "acceptable" level of French (acceptable by native francophone speakers), and what the pedagogical implications of the results of error analyses are. Pellerin and Hammerly (1986) summarize the main errors of the oral performance of students in French immersion as the following:

les erreurs grammaticales portent surtout sur le genre des substantifs, les prépositions, l'utilisation des pronoms (surtout des pronoms réfléchis), l'emploi des auxiliaires avoir et être, les flexions verbales, la simplification de leurs formes et l'absence de certaines d'entre elles (comme le conditionnel), etc. On peut aussi noter une tendance à parler plus lentement qu'en langue maternelle, à simplifier les structures syntaxiques, à transférer en langue seconde des structures de la langue maternelle, à éviter les phrases complexes ou à pallier au manque de vocabulaire par des circonlocutions ou des définitions. On remarque enfin un grand nombre de phrases incomplètes ou incorrectes (Pellerin and Hammerly 1986: 593).

These errors form part of the students' classroom interlanguage. The authors also mention that the students and their teacher understand without any difficulties the particular interlanguage of their
Pellerin and Hammerly (1986) present their own study on students who had completed all of their elementary and secondary school education in a French immersion program. They determine the percentage of errors in the speech samples. Results from their study reveal that:

- a) the verb system is the grammatical category that has the highest number of errors. It is the use of tense that causes the greatest difficulties (as opposed to conjugations and auxiliaries, which cause the least percentage of difficulties);

- b) omitted pronouns are more frequent than incorrect pronouns. In fact, there is a total absence of the pronoun y (except in the idiomatic locution *il y a*);

- c) a high number of errors of vocabulary and structure. These errors are for the most part due to interference from the mother tongue. Students often resort to circumlocutions or to their mother tongue to replace a missing word. This also produces incorrect structures such as ...*(des films) qui sont le français qui était mis au-dessus d’anglais* to describe *les films doublés*;

- d) speakers behave in two ways with respect to articles: i) there is a systematic use of the definite article to the detriment of the indefinite and partitive articles (an example of simplification); ii) there is an omission of articles due to mother tongue interference;

- e) at the level of syntactic structure, a lot of utterances consist of short simple sentences, joined together by words such as *et, puis, pis, c’est, c’était*, etc.;

- f) as for pronunciation, they find that it is quite acceptable. The errors they did find are liaison errors (unfortunately, the authors do not give a detailed account of what these errors are);

- g) the discourse of these students consists of a lot of hesitations and false starts.

Pellerin and Hammerly conclude that developmental errors of language don’t disappear; rather they fossilize. They outline several weaknesses of French immersion teaching: 1) the impossibility of recreating in the language classroom the conditions of acquisition of a second language in a natural environment; 2) the incorrect presumption that errors disappear on their own over time; 3) the dangers of putting too much emphasis on the communicative aspect while neglecting formal teaching.
Research on the perception by native French speakers of the speech of non-native speakers has also been carried out. Tardif and d’Anglejan (1981) examine the impact of certain characteristics of French spoken by English speaking Québécois on various aspects of communication. They study the spontaneous reactions of native and non-native speakers of French to certain errors produced by anglophone speakers. Sentences containing errors are read by two non-native French speakers: one having a slight accent in French and the other having a strong French accent. The sentences are evaluated according to certain variables. One of the authors’ conclusions is that phonology has a serious impact on communication, and often has more of an impact than the errors themselves. Phonology causes difficulties in comprehension and irritates the native listener. Tardif and D’Anglejan note the following:


This observation reinforces the notion that phonology must not be ignored in language teaching.

While many studies concern non-native speaker errors in French as a second language (Spilka 1976, Tardif and D’Anglejan 1981, Kenemer 1982, Adiv 1984, Chaudenson et al. 1986), liaison is rarely identified as a separate category of error. It is generally classified under pronunciation. As a result, there is little data available on liaison errors. A study by Dejean de la Bâtie and Bradley (1995) involves the perception of liaison by non-native speakers of French. Because liaison consonants are resyllabified to the following onset, the resyllabified consonant causes difficulties for word recognition, in which speakers may confuse the liaison-initial word with another lexical item, or they may think it is a word they do not know that begins with a consonant. Thus, non-native speakers’ lexical knowledge is crucial for word identification in a liaison context. Vocabulary
limitations may cause the speaker to not recognize a liaison consonant. Native speakers, on the other hand, are able to recognize word junctures and can identify words in a liaison context. Dejean de la Bâtie and Bradley examine the segmentation strategies used by native and non-native listeners of French. Listeners had to detect the presence of a word-initial /t/ in potential liaison phrases (ex. excellent tableau/excellent acteur) and in non-liaison phrases (ex. vrai tableau/vrai acteur). The results reveal that non-native speakers do not use contextual information as efficiently as native speakers, and tend to rely on guessing strategies, while native speakers use contextual information as a guide for word recognitions.

As the previous sections have shown, most of the research and work on liaison has been based almost exclusively on native speakers of French, though from various geographical areas. Although some quantitative analyses exist for liaison production by native speakers, I am not aware of any substantial analysis for FSL speakers. Furthermore, whatever work has been carried out on prescriptive grammars is of course for language learners, but is based on the speech of native speakers. That is, the French that is described is a standard form. It does not represent the speech of language learners. What still remains to be carried out is a detailed analysis of the learning and production of liaison by language learners in order to answer certain questions: 1) Do language learners acquire the rules of liaison? That is, does liaison occur according to phonological and syntactic constraints governing its production? Do L2 speakers behave similarly to L1 speakers of French? 2) What factors are involved in the production of liaison among FSL learners? This question concerns all the linguistic and paralinguistic variables that influence liaison. Variables may be similar to or different than those of L1 speakers. 3) Is it possible to describe and account for liaison in FSL speakers by providing an adequate theoretical framework, or is L2 liaison production random and thus not predictable?
A model of liaison that accounts for L2 data as well as L1 data is essential for various reasons. First of all, such a model will allow for a comparison with L1 data. Secondly, it will allow for an interpretation of L2 errors. Thirdly, it will be useful in identifying and correcting second language errors. Fourthly, fundamental differences between native and non-native speakers also contribute to research concerning the availability of UG. Studies on second language learning demonstrate that "the nearer we can approximate language teaching to the learning of second languages in an informal setting the more successful we shall be" (Corder 1978: 60).

While native French speakers are able to make a distinction between fixed and floating consonants, FSL learners must learn all the steps involved in the realization of word-final consonants. The following processes are involved in word-final consonant realization in French:

a) the speaker must determine the nature of the word-final consonant (fixed or floating);

b) the speaker must determine the phonetic nature of the word-final consonant (ex. /d/ or /t/);

c) if the word-final consonant is a floating consonant, the floating consonant must be anchored to a skeletal position;

d) if there is a following empty onset, both fixed and floating consonants must be resyllabified.

However, any step may be avoided or not learned adequately, producing incorrect results. An error in (a) will produce a floating consonant that is temporally anchored to the coda position, or a fixed consonant that is not anchored. For example, if the consonant /z/ in *il a l'air anxieux* is temporally anchored, the result will be [ilalæræksjøz]. An error in (b) will produce a non liaison consonant error as in *un grand ami* [œgrədami]. In (c), if the floating consonant /z/ is not anchored to a skeletal position, the result will be *les additifs* [leəditif]. Finally, if (d) is omitted, the result will be a leftward syllabification, as in *les additifs* [lez-əditif]. Thus, these examples may occur during any
of the four steps required for realization of word-final consonants. However, word-final consonants are not taught in this manner (that is, differentiating fixed and floating consonants). Although language manuals as well as phonetic manuals may introduce French liaison (Léon. M. 1964, Companys 1966, Remacle 1969, Casagrande 1984, Ostiguy and Sarrasin 1985), they do not distinguish between fixed and floating consonants.

Since liaison is a phenomenon that native French speakers have to acquire, FSL learners have to develop strategies to learn it as well. Previous sections have so far presented rules that predict liaison production by French adults. Data taken from child language is used in order to assist in the construction of better rules. From a pedagogical perspective, Thomas (1998) presents practical advice for French teachers on liaison.

One of the main difficulties with the acquisition of French liaisons concerns the optional liaisons. Not only must learners be able to produce a liaison in the proper context, they must also be aware of other non-linguistic variables contributing to the production of optional liaisons. Delattre (1955) adds to this notion that “(l)a difficulté est augmentée, pour l’étranger, par le fait que dans les innombrables liaisons facultatives, certaines se font plus fréquemment que d’autres” (Delattre 1955: 43). In fact, the results on optional liaisons in this study will confirm Delattre’s comment that the FSL learners will produce certain optional liaisons more frequently than others.

1.6.4. Summary

This section has presented various studies carried out with a specific group of speakers: learners of French as a second language. However, it was shown that while much work has been done on liaison in the speech of native French speakers, very little research exists for liaison in the speech of FSL speakers. According to Kilani-Schoch, "(l)’argumentation autour d’un modèle
phonologique ne doit pas être limité à un point de vue interne mais doit intégrer des contraintes plus fortes provenant de modalités verbales diverses" (Kilani-Schoch 1983: 445). Furthermore, the research that describes liaison in FSL learners is merely a description, and does not include a model of liaison that is able to account for FSL liaison production. Thus, not only does a detailed analysis of liaison production by FSL speakers still need to be carried out, a model of liaison that is able to explain FSL data also needs to be considered.
Chapter 2. Study

This study aims to provide new data on the production of liaison in adult learners of French as a second language. Its purpose is fourfold:

i. to collect, describe and analyse speech samples of the production of liaison by learners of French as a second language;

ii. to account for occurrences of liaison in the speech of FSL learners according to an appropriate theoretical framework;

iii. to determine what the data on FSL learners can contribute to linguistic theories on liaison;

iv. to discuss the implications of the results of this research for the teaching and learning of French as a second language.

The first reason for carrying out this study is to present speech samples from two groups of FSL speakers which were recorded, transcribed, and coded for all liaison contexts (obligatory, optional and forbidden), as well as for liaison and other errors (such as false liaisons and realized word-final consonants in non-liaison environments). The results are presented in terms of a detailed description of the liaison patterns of FSL speakers, including a quantitative analysis based on an established set of criteria designed especially to account for FSL data (type of liaison, type of false liaison, syllabification, realized word-final consonants in non-liaison contexts, and liaison with creations, interferences and voiced hesitations). However, this study was not carried out for statistical purposes, in order to predict liaison behaviour in FSL. The quantitative analyses are presented in order to describe L2 behaviour, so that an adequate theoretical model can then be proposed. The results are followed by an analysis of liaison according to a phonological model (Encrevé’s (1988) three-dimensional model) and Selkirk’s (1986) and De Jong’s (1989, 1990, 1991a and b, 1993) prosodic domains of liaison.

My initial hypothesis is that FSL learners produce a lower frequency of liaisons and make
more liaison errors (i.e. false liaisons, non-resyllabification, and realizing floating consonants in a non-liaison environment) than native French speakers. This hypothesis is based solely on the perception of learner's errors in the language classroom, prior to any type of quantitative analysis. Given the complexity of liaison, it can be predicted that if liaison involves two linguistic processes, complications at the phonological or the syntactic level (or both) may result in an error.

The questions to be answered in this study are:

1. How are the results on FSL data comparable to liaison production by native French speakers? First of all, how does the frequency of liaison compare, and secondly, how do the type of errors compare?

2. Is liaison sensitive to group variation?

3. Is liaison sensitive to individual variation?

4. Is liaison sensitive to task variation?

5. Is liaison sensitive to syntactic categories?

The second reason is that research on previous as well as current linguistic theories of liaison (presented in chapter 1) is crucial in providing an appropriate theoretical framework to account for the results of this study. A model of liaison must be able to account not only for native speaker data, but for FSL data as well. This was the major factor in determining which model to adopt for the purposes of this research.

The third reason pertains to the implications of FSL data for linguistic theories on liaison in general. As was mentioned earlier, one of the main contributions of this study is to analyse the production of liaison by non-native speakers of French. While linguistic theories of liaison describe liaison patterns of adult French speakers, more research is required on the acquisition of liaison by both first and second language learners. Thus, subjects for this study are adult learners of French.

Finally, the fourth reason concerns the implications of the results of this study for the learning
and teaching of French as a second language. The results of the quantitative analyses reveal certain tendencies and patterns that the language instructor should be aware of for the correction of learner errors. Moreover, the analysis of the realization of floating consonants revealed other problem areas for language learners that may initially appear to be liaison errors. The proper identification of learner’s errors is crucial for their correction.

2.1. Methodology

I have chosen to analyse speech samples of two groups of university students learning French as a second language. Group 1 consists of 19 students (speakers 1-19) who were all in the same French class, thus taught by the same instructor. Group 2 consists of 30 students (speakers 20-49) who were all in another French class taught by a different instructor. The two groups were analysed and presented separately in order to preserve the differences between them:

1. each group was taught by a different instructor;
2. each group had its own set of tasks;
3. the groups were taught a year apart.

The decision to present each group separately was made for various reasons: a) to determine whether the liaison patterns of each group would be similar or different; b) to determine whether the actual content of the tasks affected liaison production; c) to examine the nature of individual errors.

A control group is not included since it is not my intention to do a comparison of native speakers of French and learners of French as a second language. Furthermore, there exists considerable data on native speaker’s realization of liaison (see Malécot 1975, Van Ameringen & Cedergren 1981, Morin & Kaye 1982, Encrevé 1988, De Jong 1991a, 1993). Observations on liaison by native speakers will be discussed briefly in certain instances in which a comparison of native speakers to second language learners is necessary to reveal either similarities or differences.
a) **Subjects**

Subjects for this study are university students completing a second-year course in French as a second language (Language Practice II: Oral French) at the University of Toronto. The prerequisite for this course was first year university French, or OAC French immersion. This course was not open to native or fluent speakers of French. Students were exposed to four hours a week of French for a total of 13 weeks.

Groups 1 and 2 consist of both male and female students: there are 2 males and 17 females in Group 1, and 7 males and 23 females in Group 2, for a total of 9 males and 40 females. Students are approximately the same age, around 19-21. I did not, however, attempt to study a homogeneous group with respect to gender and age. Students were selected for their French language proficiency: all subjects in this study are at the same level of French. All speak English, and possibly another language. Second-year university students taking a French language course were selected because they already possess some previous knowledge of French and are thus able to converse in that language. Previous knowledge of French is pertinent for this study since speech samples were taken from a reading passage as well as from two types of discourse which required speakers to respond spontaneously, without the help of visual material, so that they were required to rely solely on their proficiency in French.

b) **Procedure**

Both groups were given three specific tasks, all three of which were recorded in the language laboratory at the University of Toronto. Instructions were recorded by a female native speaker of French. Students were instructed to record their responses.

In the first task, students were asked to read some short sentences and a small passage (Group
1), or an entire passage (Group 2). Before recording their reading, students were given two minutes of preparation time. Students then had two minutes to read their sentences or passage. This task is the only task in which the students were given written material to read.

The second task is spontaneous discourse, in which students were given a situation they had two minutes to prepare before giving their comments. One minute was allotted to record their answer.

The third task is a description of a picture. Students were given two minutes in which to study the picture and prepare their comments, and two minutes to give their comments. The spontaneous and description tasks were both completely oral, in that no written material was presented to the students. They were, however, allowed to prepare their answers.

While both groups were given the same three types of tasks, each group had its own set of readings, situations and pictures so that the stimuli were different for each group (see Appendix for transcriptions of the readings, situations and pictures for all 49 speakers). The three tasks were selected in order to avoid an artificial corpus that is directly related to liaison. The object of this study is not to predict the learners' behaviour, but to determine what their structure of knowledge is, how liaison works within their knowledge, and more generally, what they know about word-final consonants in French.

c) Data analysis

Speech samples of the students of both groups were recorded and transcribed orthographically for each of the three tasks. Once transcribed, all floating consonants in pre-vocalic position were coded according to whether or not liaison was produced. This was accomplished by establishing and adhering to four criteria:
i. floating consonants were identified as realized or not realized (ex. *les enfants* [lezāfa] or *les/enfants* [leāfa]);

ii. the context in which the floating consonant occurs was coded according to the type of liaison: obligatory, optional or forbidden (ex. *les/enfants* [obl], *sont/arrivés* [opt]);

iii. grammatical categories of the words involved were also coded (ex. *les/enfants* [DET+N])

iv. floating consonants that were realized were also coded for leftward or rightward syllabification (ex. *les/enfants* or *les/enfants*).

Thus, for example, the sentence *les enfants sont arrivés*, pronounced [lezāfə̃sɔʁaʁivə] would be coded as follows:

(112)  *Les/enfants* ([DET+N], OBL) *sont/arrivés* ([AUX+V], OPT)

where the liaison between *les* and *enfants* is placed under the heading of obligatory liaison and liaison between *sont* and *arrivés* under optional liaison. Both liaisons in this sentence are resyllabified. The nature of the liaison consonant (i.e. which consonant (/t/, /z/ or /n/) was more frequently produced) was not analysed in this study.

The system for coding liaison was established according to the traditional description of obligatory, optional and forbidden, using Selkirk's (1972) model based on X-bar syntax and Delattre's (1951) representations as a source of reference. That is, liaison occurs within a syntactic phrase and not between phrases (obligatory). Liaison may, however, be produced between an inflected head and its complement (optional). Almost all other cases were considered contexts where liaison is forbidden. During the coding process, there were a number of cases of uncertainty, where decisions had to be made for the sole purpose of categorizing liaison. For the purposes of this study, it was decided, for instance, that prenominal adjectives have a different status than postnominal

37For the purposes of this study, the string [DET+N] will be referred to as an NP instead of a DP.
adjectives (which are full APs), which accounts for an obligatory liaison consonant in *les petits enfants*, but an optional liaison in *les enfants adorables*, and no liaison in *l'enfant/adorable* (Delattre 1951, Selkirk 1972). Post-nominal adjectives follow Selkirk's rule of no liaison between phrases except after inflected heads (thus, *[le garçon]$_{\text{NP}}$ [intelligent]$_{\text{AP}}$). The negative *pas* was considered to be an optional case of liaison and not an obligatory, as in Delattre's classification. Certain decisions also had to be made for utterances produced by FSL learners that are not produced by native French speakers. Other cases such as lexicalized expressions, *h aspiré* words, etc. were coded according to Delattre's representations. While these approaches were selected as a source of reference for the description of the data, many changes were made in order to account for FSL speech. Since at this point a classification of FSL data is necessary (before attempting an analysis), traditional accounts are sufficient for that purpose. As such, a classification of liaisons produced by FSL speakers will be presented according to the traditional three-way typology: obligatory, optional and forbidden liaison. Percentages of liaisons will reveal how many liaisons of each type were produced. Since this typology is for classification purposes, it’s sole objective is to describe L2 liaison production, in order for the data to be analysed by a more recent phonological model of liaison. As a result, whether liaison contexts are frequently produced, infrequently produced, or rare can only be determined from the actual speaker realizations.

However, during the transcribing of the speech samples, it became apparent that the three categories of liaison (obligatory, optional and forbidden) were unable to represent all of the students' liaison patterns. In some cases, floating consonants were being produced in non-liaison contexts. There were also cases of false liaisons. The transcriptions revealed that liaison cannot be studied in isolation. It's only one aspect of word-final consonants in French, and concerns various other phonological components as well (i.e. glides, *h aspiré*, etc.). As a result, supplementary categories
were established in order to include possibilities other than the realization of floating consonants in pre-vocalic position under appropriate syntactic conditions. The final categories that were selected to described liaison in FSL speakers are:

1. **Obligatory liaison**: these are all the cases in which liaison is obligatory and should therefore be produced. Both phonological and syntactic constraints are satisfied.  
   Ex. *les amis*

2. **Optional liaison**: these are the cases in which a speaker may or may not produce a liaison, depending on sociological and linguistic factors. Both phonological and syntactic constraints are satisfied.  
   Ex. *les enfants adorables*, or *les enfants/adorables*

3. **Forbidden liaison**: these are the cases in which liaison should not be produced, before a following vowel-initial word. Here, liaison is forbidden due to morpho-syntactic constraints.  
   Ex. *l’enfant/aime sa maman*

Forbidden liaison also refers to phonological constraints. For instance, a floating consonant before a following *h aspiré* word or other words that function in a similar manner (i.e. *onze, huit*, etc.), even though the syntactic structure allows for a liaison.  
Ex. *les/homards, les/once chapitres, les/huit livres*

4i. **False liaison: consonant insertion**: these are the cases in which both the syntactic and the phonological contexts allow the insertion of a consonant. However, an insertion occurs where there is no underlying consonant.  
   Ex. *quatre-z-enfants*

4ii. **False liaison: liaison consonant error**: this is also a case in which both the syntactic and phonological contexts allow for the realization of the existing floating consonant, yet the anchoring of an incorrect liaison consonant to the following empty onset occurs.  
   Ex. *ce n’est pas-t-à moi*

4iii. **False liaison: non-liaison consonant insertion**: once again, the syntactic and phonological contexts allow for the insertion of a consonant, yet there is insertion of a consonant that is not normally a liaison consonant.  
   Ex. *un grand ami* [grädami] (/d/ is not in the set of liaison consonants)
5i. **Resyllabification**: this refers to a floating consonant that has been temporally anchored. In this case, the liaison consonant is resyllabified to the onset of the following syllable (rightward syllabification occurs).

Ex. *mes étudiants* [me-ze-ty-djä]

5ii. **Non-resyllabification**: this also refers to a floating consonant that has been temporally anchored, although in this case the speaker does not resyllabify the consonant onto the following syllable, so that the consonant remains in coda position (leftward syllabification occurs).

Ex. *mes étudiants* [mez-ty-djä]

6i. **Temporally anchored consonants: within a clitic group in pre-consonantal position**: these are the cases of a floating consonant that is realized before a consonant-initial word within the same syntactic phrase. The syntactic context allows for a liaison (between a determiner and a noun), but the phonological context does not (before a following consonant-initial word).

Ex. *les garçons* [lezgarsō]

6ii. **Temporally anchored consonants: pre-pausal position (within a prosodic domain, at the end of a prosodic domain and in sentence-final position)**: these are cases in which a floating consonant is realized either within a prosodic domain that has been interrupted for whatever reason, in phrase-final position or in sentence-final position. Both the syntactic and the phonological contexts should prevent production of a liaison.

Ex. *les* [lez], *les Américains* [lezamerikœn], *il a les cheveux courts* [ilalefɔkʊ阅读全文]

7i. **Creation**: these are the cases in which the speaker has created a word that is not part of a native speaker’s vocabulary. This case is differentiated from interferences in order to account for a liaison that may occur in a context not found in French.

Ex. *des boucles_oreilles* (for *des boucles d’oreille*)

7ii. **Interference**: this category applies to cases in which the utterance is definitely the result of interference from the mother tongue. Interferences are differentiated from creations in cases where the lexical item from another language can be identified as the cause of the pronunciation.

Ex. *las autoritès* [lasawtorite], (source language: Spanish)

8. **Voiced hesitations**: these are all the cases in which a word is followed by a voiced hesitation (*um, uh, etc.*).

Ex. *les um, et uh*

The eight categories were necessary in order to represent all the variations in the speech of FSL.
learners. Obligatory, optional and forbidden categories (1, 2, and 3) are the traditional descriptions for native speakers of French. The category of false liaisons (4) was included because it belongs to the speech of native speakers of French, and also occur in the learners’ speech samples. However, while consonant insertions (4i) and liaison consonant errors (4ii) occur in the speech of native francophones, non-liaison consonant insertions (4iii) were found to be particular to second language learners. These errors are termed “false liaisons” for phonological purposes, whether they are semantic or performance errors. The source of the errors is examined in subsequent sections, however, they are classified according to their phonological properties. The fifth category concerns resyllabification. Both (5i) and (5ii) occur in the speech of native francophone speakers, though the notion of leftward syllabification seems to have a different status in FSL learners’ speech performance (leftward syllabification is noted by Encrevé (1988) to occur only in optional liaisons in the speech of French politicians). The category of temporally anchored consonants (6) was created for second language speakers, since temporally anchored consonants in pre-consonantal or pre-pausal position are not produced by native French speakers. The only difference between (5ii) and (6i) is the following onset (a vowel in the first case and a consonant in the latter). Both creations and interferences (7) were also based on the data produced by second language speakers for occurrences of liaisons that do not correspond to any of the other categories. Finally, though hesitations (8) are prevalent and occur frequently in the speech of FSL learners, they also occur in native speakers’ speech performances. Hesitations, both voiced and unvoiced are part of spontaneous discourse. It is not unusual that hesitations appear predominantly in the spontaneous and description tasks. Language learners use hesitations as a planning strategy, and as a result were included in this study.

Once all transcriptions were coded according to the eight categories, tables of all the data
gathered were created from the liaison contexts. The grammatical categories for all floating consonants analysed were also coded in order to determine the effect of the syntactic relationship between words on liaison production. A quantitative and analysis was then carried out.

2.2. Results

The results from the analyses are presented as follows for both groups:

i. Liaison realization:
   i. obligatory liaison;
   ii. optional liaison;
   iii. forbidden liaison;
ii. false liaisons;
iii. resyllabification;
iv. temporally anchored consonants, both within a phrase pre-consonantally and in pre-pausal position;
v. creations and interferences;
vi. voiced hesitations.

Results for section (i) are subdivided into four sections for obligatory, optional and forbidden liaisons:

i. results for all 49 speakers;
ii. group variation (results for both groups individually);
iii. task variation (reading, spontaneous, description);
iv. syntactic categories.

For section (i), overall results of all speakers are presented first in order to compare FSL data to native speaker data. Then, results for Groups 1 and 2 are presented individually in order to determine whether there is variation between the two groups. Liaison according to each task is also examined in order to determine the effect of the task on liaison production. Finally, results for syntactic categories involved in liaison production are also presented in order to determine the effect of syntax on liaison. That is, do FSL speakers respect certain syntactic conditions? Or are liaisons inserted randomly, at any syntactic boundary? Each of the three types of liaison (obligatory, optional
and forbidden) were analysed according to the syntactic categories to which the words belong. For instance, *les animaux* would be categorized as [DETERMINER+NOUN]. All liaisons were calculated according to the total number of occurrences out of the total number of possible cases. This was carried out for obligatory, optional and forbidden liaisons in each of the three tasks: reading, spontaneous discourse and description. For each of the three contexts, data for all 49 speakers followed by results for Group 1 and then for Group 2 will be presented. Individual variations are also considered in cases that are examined with greater detail, and in which actual examples are discussed.

Group variation, task variation and the nature of syntactic categories are also examined.

2.2.1. Liaison realization

This section presents obligatory, optional and forbidden liaisons for both groups of speakers. Results for all 49 speakers are presented first, followed by individual group results, results for each task, and results according to syntactic categories.

i. Obligatory liaison

The domain of obligatory liaison in this study consists of liaison after determiners, prenominal adjectives, clitics, *c'est*, monosyllabic prepositions, monosyllabic adverbs such as *très*, *moins, plus*, between a verb and a pronoun (in the inversion) and in certain lexicalized expressions. Contexts with *c'est* were included in this category, based on Delattre’s classification, and as a result is separated from verb categories, which are optional contexts.
i.i. Results for all speakers

The overall results for the production of obligatory liaisons by all 49 speakers are found in table V.

<table>
<thead>
<tr>
<th>OBLIGATORY LIAISONS PRODUCED</th>
<th>TOTAL POSSIBLE OBLIGATORY LIAISONS</th>
<th>% OF OBLIGATORY LIAISONS PRODUCED</th>
</tr>
</thead>
<tbody>
<tr>
<td>955</td>
<td>1016</td>
<td>94%</td>
</tr>
</tbody>
</table>

Table V
Obligatory liaisons produced by all speakers

The results show that there was a total of 955/1016 obligatory liaisons produced (94%). Only 61 liaisons were omitted. These findings were completely unforseen, as it was expected that there would be a lower frequency of obligatory liaisons. The results reveal first of all, that obligatory liaison contexts occur frequently (compared to the 596 possible optional liaisons discussed in the next section). Secondly, the number of occurrences of obligatory liaisons is high, since there is only a 6% error rate. This suggests that the notion of obligatory liaison seems to have been learned by FSL speakers. With the exception of the 61 omitted liaisons (which will be discussed in detail in subsequent sections), obligatory liaisons do not appear to cause difficulties for language learners. Thirdly, these results reveal that the perception that L2 speakers have difficulties with liaison production in not entirely true.

In De Jong's (1989) study in which 3800 liaison contexts were gathered from 45 interviews of the Corpus d'Orléans (Mullineaux & Blanc 1982), the author refers to domain 1 as the domain of liaison between a nonlexical word and the following item within the same phrasal constituent. Prenominal adjectives are also included in this domain. De Jong finds that the number of realized
liaison consonants in this domain is 1709/2791 (61.2%), and concludes that domain 1 is not a domain of obligatory liaison. Although liaison is much more likely to be produced in domain 1 than in domain 2 (optional liaison contexts), it is far from obligatory.

Compared to De Jong’s native speakers of French, it would seem that subjects in this study produced a much higher percentage of obligatory liaisons. However, a closer look at De Jong’s domain 1 reveals that his interpretation of obligatory liaison includes items that are considered optional cases of liaison in this study, and excludes all nonlexical items in which liaison was realized obligatorily. De Jong notes that

(i)n the Orleans corpus, liaison was realized obligatorily in only a few types of contexts, mainly after determiners, personal pronouns and clitics. After all other nonlexical items, as well as after prenominal adjectives, liaison was realized variably. We considered as nonlexical items the prepositions, the modifying adverbs (like très, moins, plus), the auxiliary avoir, and the auxiliary or copula être (De Jong 1989: 21).

While the auxiliaries avoir and être are also included in domain 1, as in the following examples,

(113) ils ont_été
je suis_un ingénieur

auxiliaries in this study were classified as optional cases (except for c’est), and only monosyllabic prepositions and adverbs were included as obligatory domains of liaison. The difference in determining the domain of liaison contributes to the difference in percentages of obligatory liaison production among FSL speakers and De Jong’s native French speakers. The percentage of produced liaisons will diminish considerably by eliminating nonlexical items such as determiners, clitics and personal pronouns. As a result, De Jong’s numbers for the domain of obligatory liaison are not comparable to the numbers for FSL speakers’ domain of obligatory liaison since the domains do not include the same items.
i.ii. **Group variation**

The results for obligatory liaisons produced by Groups 1 and 2 individually are presented in table VI.

<table>
<thead>
<tr>
<th>GROUP 1</th>
<th>GROUP 2</th>
<th>GROUP 1 VS. GROUP 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>OBL. LIAISONS PRODUCED</td>
<td>TOTAL POSSIBLE OBL. LIAISONS</td>
<td>% OF OBL. LIAISONS PRODUCED</td>
</tr>
<tr>
<td>417</td>
<td>449</td>
<td>92.87%</td>
</tr>
</tbody>
</table>

Table VI

Obligatory liaisons produced for Group 1 and Group 2

Group 1 produced a total of 417/449 (93%) obligatory liaisons and Group 2 produced a total of 538/567 (95%). There is no significant difference between the two groups, since both groups produced over 90% liaisons, with only a 2% difference among them. It is not a coincidence that both groups behaved similarly with respect to obligatory liaisons. In fact, the same pattern is found in both groups who were taught by different instructors a year apart, and were given different reading passages, situations and pictures. The differences among the two groups will be apparent as the individual tasks are compared.

i.iii. **Task variation**

This section divides the results of obligatory liaisons into the three separate tasks in order to determine whether liaison production is sensitive to the nature of the task. The overall results for obligatory liaisons produced by all 49 speakers are found in table VII.
<table>
<thead>
<tr>
<th>TASK</th>
<th>OBLIGATORY LIAISONS PRODUCED</th>
<th>TOTAL POSSIBLE OBLIGATORY LIAISONS</th>
<th>% OF OBLIGATORY LIAISONS PRODUCED</th>
</tr>
</thead>
<tbody>
<tr>
<td>READING</td>
<td>543</td>
<td>570</td>
<td>95.26%</td>
</tr>
<tr>
<td>SPONTANEOUS</td>
<td>128</td>
<td>136</td>
<td>94.12%</td>
</tr>
<tr>
<td>DESCRIPTION</td>
<td>284</td>
<td>310</td>
<td>91.61%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>955</td>
<td>1016</td>
<td>93.99%</td>
</tr>
</tbody>
</table>

Table VII
Obligatory liaisons for all speakers, according to each task

While each of the three tasks elicited over 90% of obligatory liaisons, the reading task contained a slightly higher percentage of liaisons at 95%, followed by spontaneous discourse at 94% and description at 92%. Thus, while the reading passage contained a slightly higher percentage of liaisons, learners did not find any task too difficult to impede the production of obligatory liaisons.

Obligatory liaison production did not depend on the nature of the task in these speakers. One would expect a higher number of liaisons in a reading task than in a spontaneous discourse even among French speakers. However, Booij and De Jong (1987) present results of the corpus of De Jong et al. (1981) in which thirty-eight native speakers of French were asked to read aloud a text containing 11 contexts of obligatory liaison. The authors report that obligatory liaison was realized in 223 out of 418 cases (53.3%). Compared to the results of De Jong's (1989) data on interviews in which obligatory liaison occurred in 1709 out of 2791 cases (61.2%), it would appear that native French speakers produce a higher frequency of liaisons in a spontaneous discourse than in a reading. However, the criteria for establishing the domains of liaison have a direct impact on the interpretation of the data. Table VIII presents the liaison usage in the domain of obligatory liaison
in the corpus of De Jong et al. (1981).

<table>
<thead>
<tr>
<th>LIAISON CONTEXTS</th>
<th>%</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>grandes_averses</td>
<td>86</td>
<td>32</td>
</tr>
<tr>
<td>anciennes_amies</td>
<td>82</td>
<td>31</td>
</tr>
<tr>
<td>en_un bouquet</td>
<td>82</td>
<td>31</td>
</tr>
<tr>
<td>trop_innocent</td>
<td>82</td>
<td>31</td>
</tr>
<tr>
<td>certains_exécutants</td>
<td>76</td>
<td>29</td>
</tr>
<tr>
<td>fort intéressant</td>
<td>71</td>
<td>27</td>
</tr>
<tr>
<td>autres_activités</td>
<td>50</td>
<td>19</td>
</tr>
<tr>
<td>après_un moment</td>
<td>26</td>
<td>10</td>
</tr>
<tr>
<td>pendant_un moment</td>
<td>20</td>
<td>8</td>
</tr>
<tr>
<td>assez_humide</td>
<td>11</td>
<td>4</td>
</tr>
<tr>
<td>depuis_un an</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>TOTAL</td>
<td>53.3</td>
<td>223</td>
</tr>
</tbody>
</table>

Table VIII
Liaison usage in the domain of obligatory liaison
from the corpus of De Jong et al. (1981)
(Booij and De Jong 1987: 1010)

The domain of obligatory liaison in the corpus of De Jong et al. is restricted to 11 contexts, of which four are considered optional cases of liaison by Delattre (1951) and others. The four contexts De Jong et al. have included as belonging to the domain of obligatory liaison consist of three polysyllabic prepositions and a polysyllabic adverb:

(114) après un moment
   pendant un moment
   assez humide
   depuis un an

If these four contexts were excluded, the percentage of liaison would be much higher: 200 out of 266 cases (75%). However, the remaining seven contexts do not include contexts such as [determiner+noun], [personal pronoun+verb] and [verb+pronoun] as well as certain lexicalized expressions in which liaison appears obligatorily. If these contexts had been included, the frequency
of liaison would have been much higher. Thus, the domain of obligatory liaison from De Jong et al. is not defined in the same way as the FSL data in this study, and therefore the results are not comparable.

Results for each group according to task are presented in table IX below.

<table>
<thead>
<tr>
<th>TASK</th>
<th>GROUP 1</th>
<th>GROUP 2</th>
<th>GROUP 1 VS. GROUP 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>OBL. LIAISONS PRODUCED</td>
<td>TOTAL POSSIBLE OBL. LIAISONS</td>
<td>% OF OBL. LIAISONS PRODUCED</td>
</tr>
<tr>
<td>READ.</td>
<td>267</td>
<td>283</td>
<td>94.35%</td>
</tr>
<tr>
<td>SPONT.</td>
<td>60</td>
<td>65</td>
<td>92.31%</td>
</tr>
<tr>
<td>DESC.</td>
<td>90</td>
<td>101</td>
<td>89.11%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>417</td>
<td>449</td>
<td>92.87%</td>
</tr>
</tbody>
</table>

Table IX
Obligatory liaisons for group 1 and group 2, according to each task

Group 1 speakers produced 94% obligatory liaisons in the reading task, 92% in the spontaneous task and 89% in the description task. Obligatory liaisons were thus more frequently produced in the
reading. Results for Group 2 were slightly higher than those of Group 1 for all three tasks, and speakers produced over 90% liaisons in all three tasks. There were 96% obligatory liaisons in the reading task, slightly less in the spontaneous task (95.77%), and 93% in the description task. Both groups of speakers seemed to perform in a similar fashion. None of the three tasks posed difficulties for the speakers, although the description task produced the lowest percentage of liaisons. There was no significant difference in liaison production between the two groups, as well as between the three tasks. FSL speakers were aware that obligatory liaisons must be produced, and attempted to produce them in all tasks.

i.iv. Syntactic categories

Words in all liaison contexts were coded according to grammatical categories in order to determine which syntactic contexts produced liaisons and which ones did not, and the role that syntax plays with respect to liaison production. If a syntactic category is not followed by any number, this indicates that the syntactic category did not appear in the corpus. A zero (0) indicates that the syntactic category was present, but liaison did not occur.

Words involved in an obligatory liaison context were identified according to their grammatical category. However, certain considerations were made to differentiate various cases from one another. For instance, pronouns were identified according to whether or not they were clitics; and clitics were identified according to the type of clitic (subject or object) in order to determine whether they exhibit different behaviour with respect to liaison. Haegeman states that “(i)t is proposed that the weak object pronoun attaches morphologically to the head V with which it forms one complex lexical unit. Elements which attach obligatorily to heads are called clitics, they cliticize onto a head” (Haegeman 1991: 577). Thus, a category was created for strong pronouns
such as _elle_, _eux_, etc. which "occur in the same position as full NPs" (Haegeman 1991: 574). Weak pronouns were "excluded from those positions. Neither strong forms nor full NPs are allowed in the pre-verbal position occupied by the weak pronoun" (Haegeman 1991: 574). Since clitics have a different syntactic status than strong forms or full NPs, a separate category was established for them.

Pronouns were differentiated in the following manner:

a) a subject pronoun was coded as NCLIT
b) an object pronoun was coded as CLIT
c) a strong pronoun (_eux_, _elles_) as well as pronouns such as _autre_ were coded as PRO

In this way, strong pronouns were separated from clitics, and within clitics themselves, subject clitics were also separated from object clitics. Pronouns were distinguished from nouns in order to establish the difference, for instance, between a noun and a verb (_les enfants arrivent_) and a nominal clitic and a verb (_ils arrivent_) or an object clitic and a verb (_ils les adorent_). Also, lexicalized expressions such as _peut-être_, _c'est-à-dire_, _plus ou moins_, etc., were labelled LEXICALIZED. The notion of syntactic context will refer to the phrasal constituents involved in liaison. For example, liaison occurring between a determiner and a noun will be considered the syntactic context [DET+N].

a) All speakers

Obligatory liaisons that were produced by all 49 speakers are represented in table X, according to each of the three tasks, including an overall total. Overall, 21 different syntactic contexts for obligatory liaison occurred in the speech of all speakers (one context [PREP+V] never occurred). Seventeen of these contexts contained over 90% of the possible liaisons, including nine contexts which contained 100% liaisons.
<table>
<thead>
<tr>
<th>SYNTACTIC CATEGORY</th>
<th>READING</th>
<th>SPONTANEOUS</th>
<th>DESCRIPTION</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TOTAL NUMBER PRODUCED</td>
<td>TOTAL NUMBER OF OCCURRENCES</td>
<td>TOTAL NUMBER PRODUCED</td>
<td>TOTAL NUMBER OF OCCURRENCES</td>
</tr>
<tr>
<td>DET+ADJ</td>
<td>3</td>
<td>3</td>
<td>19</td>
<td>19</td>
</tr>
<tr>
<td>DET+N</td>
<td>265</td>
<td>275</td>
<td>56</td>
<td>60</td>
</tr>
<tr>
<td>DET+PRO</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>ADJ+N</td>
<td>19</td>
<td>19</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>C'EST+ADJ</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>C'EST+PREP</td>
<td>19</td>
<td>20</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>C'EST+DET</td>
<td>19</td>
<td>19</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>C'EST+ADV</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>NCLIT+CLIT</td>
<td>24</td>
<td>24</td>
<td>19</td>
<td>20</td>
</tr>
<tr>
<td>NCLIT+V</td>
<td>34</td>
<td>40</td>
<td>19</td>
<td>20</td>
</tr>
<tr>
<td>CLIT+CLIT</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>CLIT+V</td>
<td>40</td>
<td>41</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>ADV+ADJ</td>
<td>15</td>
<td>20</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>ADV+NCLIT</td>
<td>3</td>
<td>4</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>PREP+DET</td>
<td>24</td>
<td>26</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>PREP+N</td>
<td>58</td>
<td>60</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>PREP+V</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>PREP+ADV</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>PREP+PRO</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>PREP+INF</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>V+NCLIT</td>
<td>25</td>
<td>25</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>LEXICALIZED</td>
<td>7</td>
<td>7</td>
<td>54</td>
<td>54</td>
</tr>
<tr>
<td>TOTAL</td>
<td>543</td>
<td>570</td>
<td>128</td>
<td>136</td>
</tr>
</tbody>
</table>

Table X

Syntactic categories for obligatory liaison for all speakers
The syntactic contexts for all speakers can be ranked according to the percentage of occurrences of obligatory liaisons, and are shown in table XI.

<table>
<thead>
<tr>
<th>SYNTACTIC CONTEXT</th>
<th>PERCENTAGE OF OBLIGATORY LIAISONS PRODUCED</th>
</tr>
</thead>
<tbody>
<tr>
<td>DETERMINER+ADJECTIVE</td>
<td>100%</td>
</tr>
<tr>
<td>DETERMINER+PRONOUN</td>
<td>100%</td>
</tr>
<tr>
<td>NOM.CLITIC+CLITIC</td>
<td>100%</td>
</tr>
<tr>
<td>CLITIC+CLITIC</td>
<td>100%</td>
</tr>
<tr>
<td>PREPOSITION+ADVERB</td>
<td>100%</td>
</tr>
<tr>
<td>PREPOSITION+PRONOUN</td>
<td>100%</td>
</tr>
<tr>
<td>PREPOSITION+INFinitive</td>
<td>100%</td>
</tr>
<tr>
<td>VERB+NOM.CLITIC</td>
<td>100%</td>
</tr>
<tr>
<td>LEXICALIZED</td>
<td>100%</td>
</tr>
<tr>
<td>PREPOSITION+NOUN</td>
<td>97%</td>
</tr>
<tr>
<td>CLITIC+VERB</td>
<td>96%</td>
</tr>
<tr>
<td>DETERMINER+NOUN</td>
<td>95%</td>
</tr>
<tr>
<td>PREPOSITION+DETERMINER</td>
<td>95%</td>
</tr>
<tr>
<td>ADJECTIVE+NOUN</td>
<td>93%</td>
</tr>
<tr>
<td>C'EST+PREPOSITION</td>
<td>92%</td>
</tr>
<tr>
<td>NOM.CLITIC+VERB</td>
<td>92%</td>
</tr>
<tr>
<td>C'EST+DETERMINER</td>
<td>90%</td>
</tr>
<tr>
<td>ADVERB+ADJECTIVE</td>
<td>82%</td>
</tr>
<tr>
<td>ADVERB+NOM.CLITIC</td>
<td>67%</td>
</tr>
<tr>
<td>C'EST+ADJECTIVE</td>
<td>60%</td>
</tr>
<tr>
<td>C'EST+ADVERB</td>
<td>0%</td>
</tr>
</tbody>
</table>

Table XI
Percentage of obligatory liaison produced in each context for all speakers in all tasks

Obligatory liaisons, then, were almost always produced (94%). Most syntactic contexts produced a liaison over 90% of the times (17 out of 21 contexts). The 17 contexts can be summarized as consisting of the following:

- [DETERMINER+OTHER]
- [CLITIC+OTHER]
- [PREPOSITION+OTHER]
- [VERB+NOM.CLITIC]
- [LEXICALIZED EXPRESSIONS]
- [ADJECTIVE+OTHER]
In other words, cliticized non-lexical items and lexicalized expressions trigger frequent use of liaison. The 9 contexts which produced 100% liaisons can be summarized by the following syntactic contexts:

[DETERMINER+OTHER]
[CLITIC+OTHER]
[PREPOSITION + OTHER]
[VERB+CLITIC]
[LEXICALIZED EXPRESSIONS]

These contexts seem to be more closely associated with liaison production. They have in common cliticized items (including monosyllabic prepositions).

One context produced over 80% liaisons ([ADVERB+ADJECTIVE]), two others produced over 60% ([ADVERB+NOMCLITIC] and [C'EST+ADJECTIVE]), while [C'EST+ADVERB] did not produce any liaisons. Thus, adverbs and c'est do not seem to elicit liaisons as frequently as determiners, clitics and prepositions.

The syntactic contexts in which errors were made (i.e. where obligatory liaisons were not produced) are found in table XII. It can be seen that [DET+N] had the highest absolute number of omissions (a total of 20/409), though this represents only 5% of potential liaisons in this context since this is a very frequently occurring category. Another frequently occurring category is [NCLIT+V] with a total of 12 omissions (out of 119).
It is interesting to compare these results with native speaker data from Malécot's (1975) study of 50 conversations averaging 30 minutes in duration by members of the educated middle-class of Paris. Malécot analyses the grammatical function of the first word and that of the second word. The results of Malécot's study are presented in table XIII. While Malécot does not present an overall numerical result of obligatory liaisons, he notes that, in general, obligatory liaisons are produced. He refers to those liaisons which are very frequently produced as universally required. Liaisons in this category would occur within the noun phrase (i.e., after an article or an adjective), the verb phrase (after a subject pronoun or between the verb and the pronoun in an inversion), the prepositional phrase (after some monosyllabic prepositions), after *quand* (non-interrogative), and after some *groupes figés*. Monosyllabic adverbs are classified as optional in conversation but obligatory in elocution, and rare in conversation but rare in elocution.

<table>
<thead>
<tr>
<th>SYNTACTIC CATEGORIES</th>
<th>NUMBER OF OMITTED OBLIGATORY LIAISONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) 'C'EST+ADV</td>
<td>1/1 (100%)</td>
</tr>
<tr>
<td>b) 'C'EST+ADJ</td>
<td>2/5 (40%)</td>
</tr>
<tr>
<td>c) ADV+NCLIT</td>
<td>2/8 (25%)</td>
</tr>
<tr>
<td>d) ADV+ADJ</td>
<td>7/36 (19%)</td>
</tr>
<tr>
<td>e) 'C'EST+DET</td>
<td>5/42 (12%)</td>
</tr>
<tr>
<td>f) 'C'EST+PREP</td>
<td>3/24 (12%)</td>
</tr>
<tr>
<td>g) NCLIT+V</td>
<td>12/119 (10%)</td>
</tr>
<tr>
<td>h) ADJ+N</td>
<td>3/43 (7%)</td>
</tr>
<tr>
<td>i) DET+N</td>
<td>20/409 (5%)</td>
</tr>
<tr>
<td>j) PREP+DET</td>
<td>3/64 (5%)</td>
</tr>
<tr>
<td>k) CLIT+V</td>
<td>2/56 (4%)</td>
</tr>
<tr>
<td>l) PREP+N</td>
<td>2/63 (2%)</td>
</tr>
</tbody>
</table>

Table XII
The number of occurrences of omitted liaisons according to syntactic categories
<table>
<thead>
<tr>
<th>Grammatical function</th>
<th>Liaison made before</th>
<th>Liaison made after</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>possible cases</td>
<td>percent made</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Noun</td>
<td>815</td>
<td>98.0</td>
</tr>
<tr>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Article</td>
<td>512</td>
<td>54.1</td>
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<tr>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjective</td>
<td>280</td>
<td>62.9</td>
</tr>
<tr>
<td>Pronoun</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pers. pron. subj.</td>
<td>230</td>
<td>33.1</td>
</tr>
<tr>
<td>Pers. pron. compl.</td>
<td>59</td>
<td>75.6</td>
</tr>
<tr>
<td>Non-pers. pron.</td>
<td>34</td>
<td>85.3</td>
</tr>
<tr>
<td>Verb</td>
<td>1,175</td>
<td>76.9</td>
</tr>
<tr>
<td>Main verb other than être or avoir</td>
<td>188</td>
<td>93.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>être (main verb)</td>
<td>117</td>
<td>86.3</td>
</tr>
<tr>
<td>avoir (main verb)</td>
<td>311</td>
<td>97.1</td>
</tr>
<tr>
<td>être (auxiliary)</td>
<td>9</td>
<td>100.0</td>
</tr>
<tr>
<td>avoir (auxiliary)</td>
<td>196</td>
<td>99.5</td>
</tr>
<tr>
<td>Modal auxiliary</td>
<td>4</td>
<td>100.0</td>
</tr>
<tr>
<td>Past participle</td>
<td>192</td>
<td>37.0</td>
</tr>
<tr>
<td>Pres. participle</td>
<td>9</td>
<td>66.7</td>
</tr>
<tr>
<td>Infinitive</td>
<td>149</td>
<td>26.8</td>
</tr>
<tr>
<td>Adverb</td>
<td>379</td>
<td>10.6</td>
</tr>
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<td></td>
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</tr>
<tr>
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<td></td>
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<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Preposition</td>
<td>458</td>
<td>19.9</td>
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<tr>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Conjunction</td>
<td>37</td>
<td>0.0</td>
</tr>
<tr>
<td>Interjection</td>
<td>24</td>
<td>0.0</td>
</tr>
</tbody>
</table>

Table XIII
Effect of grammatical function upon liaison (Malécot 1975: 164)
One of the main differences between Delattre’s classification and Malécot’s is that Malécot makes a distinction between monosyllabic prepositions ending in a nasal vowel and those that do not. Liaison after monosyllabic prepositions ending in a nasal vowel such as *dans un an, en un jour, sans un sou* is universally required, whereas after monosyllabic prepositions not ending in a nasal vowel such as *dès à présent, chez un ami, sous un arbre*, are considered optional in conversation but obligatory in elocution (Malécot 1975: 174).

Comparing the three tasks to one another (from table X), the reading passage had the highest percentage of obligatory liaisons at 95%, compared to spontaneous discourse (94%) and description (92%). However, only 12 contexts occurred in the reading task. Of these, 10 contexts produced over 90% liaisons. They were:

- **[ADJ+N]** (100%)
- **[C’EST+DET]** (100%)
- **[NCLIT+CLIT]** (100%)
- **[PREP+ADV]** (100%)
- **[V+NCLIT]** (100%)
- **[CLIT+V]** (98%)
- **[PREP+N]** (97%)
- **[DET+N]** (96%)
- **[C’EST+PREP]** (95%)
- **[PREP+DET]** (92%)

The other two contexts were **[NCLIT+V]** at 85% and **[ADV+ADJ]** at 75%. Thus, in this task, liaison was realized quite frequently in almost all the contexts that occurred.

The spontaneous task contained a higher number of syntactic contexts of obligatory liaison than the reading task (18). Of these, 15 contained over 90% liaisons. They were:

- **[DET+ADJ]** (100%)
- **[DET+PRO]** (100%)
- **[ADJ+N]** (100%)
- **[C’EST+ADJ]** (100%)
- **[C’EST+PREP]** (100%)
- **[CLIT+CLIT]** (100%)
- **[CLIT+V]** (100%)
The three other contexts were [C‘EST+DET] at 80%, [C‘EST+ADV] at 0% and [ADV+NCLIT] at 75%.

The description task contained 16 contexts of obligatory liaisons. Of these, 9 produced over 90% liaisons. They were:

- [DET+ADJ] (100%)
- [DET+PRO] (100%)
- [PREP+N] (100%)
- [PREP+ADV] (100%)
- [PREP+PRO] (100%)
- [LEXICALIZED] (100%)
- [PREP+DET] (97%)
- [DET+N] (92%)
- [NCLIT+V] (92%)

The other seven contexts were:

- [ADJ+N] (84%)
- [CLIT+V] (80%)
- [ADV+ADJ] (80%)
- [C‘EST+DET] (83%)
- [ADV+NCLIT] (75%)
- [C‘EST+ADJ] (33%)
- [C‘EST+PREP] (33%)

It seems that although six out of sixteen contexts produced 100% liaisons, there was more variability with respect to obligatory liaison production in the description task than in the other tasks. Table XIV summarizes the number of contexts that produced 100% and over 90% liaisons for each task.
It can be seen that the spontaneous task had the highest number of contexts with 100% liaisons. However, both the reading task and the spontaneous task had more contexts producing over 90% liaisons than the description task. This shows once again that there was more variability in the description task than in the other two tasks.

Obligatory liaison was respected in almost all contexts. There were only four contexts in which the majority of omissions occurred: [NCLIT + V], [CLIT + V], [ADV + OTHER] and [C'EST + OTHER]. All other contexts produced over 90% obligatory liaisons.

Certain conclusions can be drawn from the results on the syntactic contexts of obligatory liaison. First of all, within the domain of obligatory liaison, there is a distinction among contexts that always produced a liaison (100%), such as after non-lexical items including prenominal adjectives and monosyllabic prepositions, lexicalized expressions, and those contexts in which there was some variability, such as after monosyllabic adverbs and after c'est. This concurs with De Jong's (1981) conclusions from the Orleans corpus in which liaison was realized obligatorily in only a few types of contexts, mainly after determiners, personal pronouns, clitics and in certain lexicalized expressions. In all other cases liaison was variable. In the case of FSL speakers, there were 100% liaisons after determiners, personal pronouns, clitics, lexicalized expressions, as well as after prepositions and within [verb + pronoun]. Other cases produced a great deal of variability (i.e.
liaison after adverbs and between [C'EST+ADJECTIVE] and [C'EST+ADVERB]).

Secondly, liaison production seems to depend on the nature of the following item. For instance, whereas 100% liaisons occurred between a determiner and a following adjective or pronoun, only 95% liaisons occurred between a determiner and a noun. The same is true of liaison after clitics, prepositions and c'est. That is, liaisons occurred invariably between [PREPOSITION+ADVERB, PRONOUN OR INFINITIVE], but variably between [PREPOSITION + DETERMINER]. The same is true of c'est, in which there was 92% liaison in [C'EST+PREPOSITION], 90% in [C'EST+DETERMINER], 60% in [C'EST+ADJECTIVE] and 0% in [C'EST+ADVERB]. This suggests that liaison production does not depend solely on the item with which it is associated, but depends on the nature of the following item as well. Other factors which will be considered in subsequent sections may determine the effect of the following item in liaison production (i.e. length of following word, previous knowledge of following word, etc.).

Thirdly, the results reveal that the domain of obligatory liaison is not a domain in which liaison is always produced. In fact, there is variability, suggesting that the notion of obligatory liaison does not adequately account for FSL data. This concept conforms to Booij and De Jong’s (1987) conclusions that ‘domain’ “is an intralinguistic variable constraint on the variable rule of liaison rather than an absolute condition on its application. The variable-rule status of liaison is confirmed by the fact that its rate of application covaries with extralinguistic factors such as style, social class, sex, and age” (Booij and De Jong 1987: 1019). Already, certain conclusions can be drawn. First of all, it is evident that the traditional notion of “obligatory” liaison is inadequate, since these liaisons are not produced in 100% of the contexts, but are variable. The distinction between obligatory, optional and forbidden liaison is prescriptive, stating in which cases liaison “must” be produced. The three-way distinction does not, however, describe what actual speakers are saying.
Thus, referring to liaison production in terms of domains, in this case as the domain of the most frequently occurring liaisons is more adequate than the concept of obligatory liaisons. Second, the very notion that the so-called obligatory liaisons are in fact variable suggests that other factors must affect their production, as Booij and De Jong (1987) conclude.

In order to determine why certain contexts were more vulnerable than others to variation, actual examples from Groups 1 and 2 will be considered.

b) Group 1

Obligatory liaisons that were produced according to syntactic categories are found in table XV.

Group 1 speakers produced a total of 14 obligatory contexts, 10 of which contained over 90% liaisons. The four other contexts were:

- [C’EST+DET] (92%)
- [NCLIT+V] (87%)
- [ADV+ADJ] (79%)
- [ADV+NCLIT] (67%)

The reading task contained a total of 8 obligatory contexts, 6 of which produced over 90% liaisons. The two other contexts were [ADV+ADJ] at 75% and [NCLIT+V] at 85%.

Thus, all syntactic contexts in the reading produced obligatory liaisons.

While almost all speakers in Group 1 produced over 90% of all obligatory liaisons in the reading task, three speakers differed from the others in the group, with 12 out of 14 liaisons (86%, speaker 6), 12 out of 15 (80%, speaker 14) and 14 out of 18 (78%, speaker 16). The cases where an obligatory liaison was omitted in the reading task are found in (115).
<table>
<thead>
<tr>
<th>SYNTACTIC CATEGORY</th>
<th>READING</th>
<th>TOTAL NUMBER OF OCCURRENCES</th>
<th>SPONTANEOUS</th>
<th>TOTAL NUMBER OF OCCURRENCES</th>
<th>DESCRIPTION</th>
<th>TOTAL NUMBER OF OCCURRENCES</th>
<th>TOTAL NUMBER OF OCCURRENCES</th>
</tr>
</thead>
<tbody>
<tr>
<td>DET+ADJ</td>
<td>97</td>
<td>100%</td>
<td>41</td>
<td>91%</td>
<td>11</td>
<td>100%</td>
<td>11</td>
</tr>
<tr>
<td>DET+N</td>
<td>2</td>
<td>2%</td>
<td>2</td>
<td>100%</td>
<td>2</td>
<td>2%</td>
<td>2</td>
</tr>
<tr>
<td>DET+PRO</td>
<td>19</td>
<td>100%</td>
<td>2</td>
<td>100%</td>
<td>7</td>
<td>70%</td>
<td>28</td>
</tr>
<tr>
<td>ADJ+N</td>
<td>19</td>
<td>100%</td>
<td>2</td>
<td>100%</td>
<td>10</td>
<td>70%</td>
<td>28</td>
</tr>
<tr>
<td>C'EST+ADJ</td>
<td>24</td>
<td>100%</td>
<td>2</td>
<td>100%</td>
<td>4</td>
<td>80%</td>
<td>24</td>
</tr>
<tr>
<td>C'EST+PREP</td>
<td>19</td>
<td>20%</td>
<td>1</td>
<td>50%</td>
<td>1</td>
<td>50%</td>
<td>20</td>
</tr>
<tr>
<td>C'EST+DET</td>
<td>19</td>
<td>100%</td>
<td>1</td>
<td>100%</td>
<td>2</td>
<td>100%</td>
<td>25</td>
</tr>
<tr>
<td>C'EST+ADV</td>
<td>34</td>
<td>40%</td>
<td>3</td>
<td>100%</td>
<td>2</td>
<td>100%</td>
<td>39</td>
</tr>
<tr>
<td>NCLIT+CLIT</td>
<td>40</td>
<td>41%</td>
<td>4</td>
<td>100%</td>
<td>1</td>
<td>100%</td>
<td>45</td>
</tr>
<tr>
<td>NCLIT+V</td>
<td>15</td>
<td>20%</td>
<td>3</td>
<td>100%</td>
<td>1</td>
<td>100%</td>
<td>19</td>
</tr>
<tr>
<td>CLIT+V</td>
<td>1</td>
<td>1%</td>
<td>1</td>
<td>100%</td>
<td>1</td>
<td>100%</td>
<td>2</td>
</tr>
<tr>
<td>ADV+ADJ</td>
<td>1</td>
<td>1%</td>
<td>1</td>
<td>100%</td>
<td>1</td>
<td>100%</td>
<td>2</td>
</tr>
<tr>
<td>ADV+NCLIT</td>
<td>22</td>
<td>23%</td>
<td>2</td>
<td>96%</td>
<td>2</td>
<td>36%</td>
<td>22</td>
</tr>
<tr>
<td>PREP+DET</td>
<td>15</td>
<td>15%</td>
<td>15</td>
<td>100%</td>
<td>17</td>
<td>17%</td>
<td>17</td>
</tr>
<tr>
<td>TOTAL</td>
<td>267</td>
<td>283%</td>
<td>60</td>
<td>92%</td>
<td>90</td>
<td>89%</td>
<td>417</td>
</tr>
</tbody>
</table>

Table XV
Syntactic categories for obligatory liaison for Group 1
(115) a. [DET+N]
des/ingrédients (speaker 16)
des/emballages (speaker 16)
un/arrangement (speaker 14)

b. [ADV+ADJ]
très/honnête (speakers 1, 8, 9, 12, 13)

c. [CLIT+V]
elle en/est fière (speaker 2)

d. [C'EST+PREP]
c'est/en plein air (speaker 6)

e. [NCLIT+V]
tout/est terminé (speakers 2, 6, 14, 16)
vous/achetez (speakers 14, 16)

In (a), the absence of liaison may be due to non-syntactic factors such as the nature of the following word, phrase-internal pauses, etc., since liaison after determiners was generally produced. It is possible that either the length of the following word or its unfamiliarity causes the speaker to pause and omit the liaison. Liaison omissions in this case may not be a liaison error (i.e., that the speaker failed to apply the rule of liaison); a liaison was omitted for reasons of language difficulties. Omissions are also not due to the phonetic nature of the liaison consonant since omissions occurred with /z/ as well as with /n/.

In (b), the absence of a liaison may be phonological in nature, in that the adjective honnête is reanalysed as having an initial h aspiré. As with (a), its absence does not seem to be syntactic in nature.

In (c) only one speaker omitted a liaison after an object clitic, and all others produced a liaison between en and est. This may be an error due to individual variation, and not related to the syntactic nature of the two words involved.

In (d), the absence of liaison in this case may be due to the verb c'est. However, it is
interesting to note that this is the only case of an omitted liaison after *c’est* in the reading (38/39).

In (e), four speakers omitted liaison after *tout*, and only two after *vous*. Thus, obligatory liaisons that were omitted may be the result of factors such as length of word, word familiarity, phonological factors such as an *h muet* interpreted as an *h aspiré*, etc. Omissions may also simply be the result of individual variation (performance errors), since speakers did not always omit a liaison in these cases. For instance, a liaison between *c’est* and the preposition *en* occurred in 19 out of the 20 cases (in the sentence *C’est en plein air.*), and between *c’est* and the determiner *une*, it occurred 19 out 19 times (in the sentence *C’est une question intéressante.*).

The spontaneous task produced a total of 10 contexts, 9 of which contained 90% liaisons. The only context that did not is [ADV+NCLIT] at 50% (although it was one out of two contexts). As with the reading task, there is no context in the spontaneous discourse that did not elicit any liaisons. It seems that in general, obligatory liaison contexts tend to elicit liaisons.

Considering individual speakers, 13 out of 19 speakers produced 100% of the obligatory liaisons. Of the other six speakers, the discourse of two subjects did not contain any contexts of obligatory liaison (speakers 3 and 9), while the other four speakers had one or two cases in which a liaison was omitted. The cases of the four speakers in which the obligatory liaisons were omitted were:

(116) a. [DET+N]
   les/avertissements (speaker 11)
   des/additifs (speaker 16, twice)

b. [ADV+NCLIT]
   quand/on (speaker 2)

c. [NCLIT+V]
   I/(ls)/utilisent (speaker 7)

In (a), as in the reading, these two cases may be due to the length or unfamiliarity of the following
word, or may be the result of the spontaneous nature of the task (they're constructing their sentences as they speak). Unlike the reading task, speakers did not have the opportunity to write in liaisons where they felt it was appropriate. They could merely be due to performance errors. In (b), quand may have been confused with the interrogative as in quand avez-vous mangé? In (c), Ils was pronounced as [j], and so the liaison was omitted.

Generally, for those speakers who did not produce 100% liaisons, they only omitted one liaison, with the exception of speaker 16 who omitted two. There were only a total of five obligatory liaisons omitted, and the rest of them were all produced.

The description task produced 11 contexts, 7 of which contained 90% liaisons. The other 4 were:

- [DET+N] (86%)
- [ADJ+N] (70%)
- [C'EST+DET] (67%)
- [C'EST+PREP] (50%)

Out of the 19 speakers in Group 1, 11 speakers produced 100% of the obligatory liaisons. Of the rest, one speaker (speaker 17) did not produce any contexts of obligatory liaison, while the other seven speakers did produce obligatory liaisons context, but omitted at least one of the liaisons.

The omitted cases of liaison were:

(a) [DET, ADJ+N]
   - un/oiseau (speakers 2, 5, 7, 8)
   - un petit/oiseau (speakers 11, 13)
   - un petit/arbre (speaker 13)

(b) [C'EST+OTHER]
   - c'est/un (speakers 7, 8)
   - c'est/à cette heure (speaker 11)

(c) [PREP+DET]
   - dans/un grand lit (speaker 16)

In (a), these omissions are due to the glide of oiseau. It seems that these students reanalysed oiseau
as belonging to the group of words such as whisky, watt, etc. Unfortunately, these were the only occurrences of oiseau by these speakers, and as a result it is not possible to determine whether this would occur in other cases as well. However, there were other examples suggesting that with respect to glides, FSL learners do not seem to have the correct distinction. That is, they interchange words from both types of glides, or change the gender. In (118), for example,

(118) a. une bouteille d’whisky (speaker 3)  
    b. à côté du oiseau (speaker 2)  
    c. une oiseau (speakers 6, 9, 15)  
    d. une oi- (speaker 5 started with the feminine form and changed it to the masculine)  
    e. une petite oiseau (speaker 17)

speakers either processed a glide-initial word that functions as a vowel-initial word, did not make a liaison or an elision (in the case of du oiseau) where it was necessary, or processed a glide-initial word that functions as a consonant-initial word (in the case of whisky) as vowel-initial. Another option is to make the word feminine. There were, however, examples where glide-initial words were preceded by the correct form of the determiner or adjective, as in (119):

(119) un petit oiseau (speaker 1)  
    du whisky (speaker 12)  
    un oiseau (speaker 14)

It seems then that FSL speakers (as well as native speakers) must learn to make the distinction between vowel-initial and consonant-initial-type glides, which has considerable implications for liaison and elision.

Another common omission is the liaison after c’est (in 117b), which may be an optional case for these learners, although there were only four omissions. All other cases of c’est elicited a liaison.

Liaisons with petit and dans were also omitted. These omissions may be due to individual variation, possibly as a result of performance errors.

Thus, obligatory liaisons in Group 1 were very frequently produced, with some exceptions.
Thus, obligatory liaisons in Group 1 were very frequently produced, with some exceptions. Difficulties in this case were predominantly due to the glide-initial *oiseau*, and with the impersonal *c'est*.

c) **Group 2**

Obligatory liaisons according to syntactic contexts for Group 2 are found in table XVI. The data for Group 2 show a total of 20 obligatory liaison contexts. Of these, 14 contained over 90% liaisons. The other 6 were:

<table>
<thead>
<tr>
<th>Context</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>[C'EST+DET]</td>
<td>(88%)</td>
</tr>
<tr>
<td>[ADV+ADJ]</td>
<td>(83%)</td>
</tr>
<tr>
<td>[ADV+NCLIT]</td>
<td>(80%)</td>
</tr>
<tr>
<td>[C'EST+ADJ]</td>
<td>(60%)</td>
</tr>
<tr>
<td>[C'EST+PREP]</td>
<td>(50%)</td>
</tr>
<tr>
<td>[C'EST+ADV]</td>
<td>(0%)</td>
</tr>
</tbody>
</table>

If contexts with *c'est* are grouped together, 18 out of the 24 contexts of [C'EST+OTHER] are produced, or 75%. This is the context that contains the highest percentage of omitted liaisons. This may mean that for FSL learners, *c'est* is not to be included in the domain of obligatory liaison. Although liaison after *c'est* is frequent, it is nonetheless optional.

The reading task produced a total of 5 obligatory contexts, all 5 containing over 90% liaisons. The contexts were:

<table>
<thead>
<tr>
<th>Context</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>[PREP+ADV]</td>
<td>(100%)</td>
</tr>
<tr>
<td>[V+NCLIT]</td>
<td>(100%)</td>
</tr>
<tr>
<td>[PREP+N]</td>
<td>(97%)</td>
</tr>
<tr>
<td>[DET+N]</td>
<td>(96%)</td>
</tr>
<tr>
<td>[PREP+DET]</td>
<td>(92%)</td>
</tr>
</tbody>
</table>

In this task, 22 out of the 30 speakers in Group 2 produced 100% of the obligatory liaisons. The other seven speakers each omitted only one liaison, and one speaker missed 4 liaisons (speaker 29).

The eleven obligatory liaisons (out of 287) that were not produced were:
<table>
<thead>
<tr>
<th>SYNTACTIC CATEGORY</th>
<th>READING</th>
<th></th>
<th>SPONTANEOUS</th>
<th></th>
<th>DESCRIPTION</th>
<th></th>
<th>TOTAL</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TOTAL</td>
<td>NUMBER</td>
<td>TOTAL</td>
<td>NUMBER</td>
<td>TOTAL</td>
<td>NUMBER</td>
<td>TOTAL</td>
<td>NUMBER</td>
</tr>
<tr>
<td></td>
<td>PRODUCED</td>
<td>OF OCCUR-</td>
<td>PRODUCED</td>
<td>OF OCCUR-</td>
<td>PRODUCED</td>
<td>OF OCCUR-</td>
<td>PRODUCED</td>
<td>OF OCCUR-</td>
</tr>
<tr>
<td>DET+ADJ</td>
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<td>3</td>
<td>100%</td>
<td>8</td>
<td>8</td>
<td>100%</td>
</tr>
<tr>
<td>DET+N</td>
<td>168</td>
<td>175</td>
<td>96%</td>
<td>15</td>
<td>15</td>
<td>100%</td>
<td>43</td>
<td>45</td>
</tr>
<tr>
<td>DET+PRO</td>
<td></td>
<td></td>
<td>3</td>
<td>3</td>
<td>100%</td>
<td>9</td>
<td>9</td>
<td>100%</td>
</tr>
<tr>
<td>ADJ+N</td>
<td></td>
<td></td>
<td>2</td>
<td>2</td>
<td>100%</td>
<td>1</td>
<td>3</td>
<td>33%</td>
</tr>
<tr>
<td>C'EST+ADJ</td>
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<td></td>
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<td>1</td>
<td>100%</td>
<td>0</td>
<td>1</td>
<td>0%</td>
</tr>
<tr>
<td>C'EST+PREP</td>
<td></td>
<td></td>
<td>3</td>
<td>4</td>
<td>75%</td>
<td>11</td>
<td>12</td>
<td>92%</td>
</tr>
<tr>
<td>C'EST+DET</td>
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<td>0</td>
<td>100%</td>
<td>0</td>
<td>1</td>
<td>0%</td>
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<tr>
<td>NCLIT+CLIT</td>
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<td></td>
<td>16</td>
<td>17</td>
<td>94%</td>
<td>52</td>
<td>57</td>
<td>91%</td>
</tr>
<tr>
<td>NCLIT+V</td>
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<td></td>
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<td>2</td>
<td>100%</td>
<td>6</td>
<td>6</td>
<td>100%</td>
</tr>
<tr>
<td>CLIT+V</td>
<td></td>
<td></td>
<td>6</td>
<td>6</td>
<td>100%</td>
<td>3</td>
<td>4</td>
<td>75%</td>
</tr>
<tr>
<td>ADV+ADJ</td>
<td></td>
<td></td>
<td>3</td>
<td>3</td>
<td>100%</td>
<td>7</td>
<td>9</td>
<td>78%</td>
</tr>
<tr>
<td>ADV+NCLIT</td>
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<td></td>
<td>2</td>
<td>2</td>
<td>100%</td>
<td>2</td>
<td>3</td>
<td>67%</td>
</tr>
<tr>
<td>PREP+DET</td>
<td></td>
<td></td>
<td>24</td>
<td>26</td>
<td>92%</td>
<td>4</td>
<td>4</td>
<td>100%</td>
</tr>
<tr>
<td>PREP+N</td>
<td></td>
<td></td>
<td>58</td>
<td>60</td>
<td>97%</td>
<td>2</td>
<td>2</td>
<td>100%</td>
</tr>
<tr>
<td>PREP+V</td>
<td></td>
<td></td>
<td>2</td>
<td>2</td>
<td>100%</td>
<td>1</td>
<td>1</td>
<td>100%</td>
</tr>
<tr>
<td>PREP+ADV</td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>100%</td>
<td>1</td>
<td>1</td>
<td>100%</td>
</tr>
<tr>
<td>PREP+PRO</td>
<td></td>
<td></td>
<td>2</td>
<td>2</td>
<td>100%</td>
<td>1</td>
<td>1</td>
<td>100%</td>
</tr>
<tr>
<td>PREP+INF</td>
<td></td>
<td></td>
<td>2</td>
<td>2</td>
<td>100%</td>
<td>2</td>
<td>2</td>
<td>100%</td>
</tr>
<tr>
<td>V+NCLIT</td>
<td></td>
<td></td>
<td>25</td>
<td>25</td>
<td>100%</td>
<td>1</td>
<td>1</td>
<td>100%</td>
</tr>
<tr>
<td>LEXICALIZED</td>
<td></td>
<td></td>
<td>5</td>
<td>5</td>
<td>100%</td>
<td>39</td>
<td>39</td>
<td>100%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>276</td>
<td>287</td>
<td>96%</td>
<td>68</td>
<td>71</td>
<td>96%</td>
<td>194</td>
<td>209</td>
</tr>
</tbody>
</table>

Table XVI
Syntactic categories for obligatory liaison for Group 2
As in Group 1, words that are long or unfamiliar seem to cause difficulties for the language learner. It may also be possible that omissions are due to the phonetic nature of the following vowel. In (120a), two examples consist of a nasal. One example consists of a word whose English equivalent is glide-initial (university). However, while liaison with les Américains was produced by all speakers, it was also produced with des ambitions. In the case of universités, it may be influenced by English, in which university is glide-initial. Once again, since the number of omissions is not very numerous, individual variation cannot be ruled out.

In (120b), liaison after dans was omitted in this group as well as in first group. It is notable that all of the cases in (b) involve words that end in a nasal consonant, since nasal vowels seem to pose difficulties for L2 learners.

Generally, obligatory liaisons were very frequently produced in all syntactic contexts in the reading task.

The spontaneous discourse produced a total of 16 obligatory contexts, 14 of which contained over 90% liaisons. The other two that did not were: [C’EST+DET] at 75% and [C’EST+ADV] at 0%.

In this task, 22 of the 30 speakers produced 100% of the obligatory liaisons. Five speakers (speakers 21, 22, 23, 33, 45) did not have any obligatory contexts in their discourse, while only 3 speakers failed to produce one obligatory liaison each. Their omissions were:
(121) a. [NCLIT+V]
   ils/ont (speaker 20, though she later corrects herself)

b. [C'EST+OTHER]
   c'est/aussi (speaker 32)
   c'est/un parc (speaker 38, although she later says c'est_une...)

As with Group 1 speakers, it seems that c'est is not an obligatory case for certain Group 2 speakers.

In both groups, speakers may or may not make a liaison with c'est. As for ils, speaker 20 first resyllabified the [l] ([i-lô]), and then corrected the absence of a liaison.

Overall, obligatory liaisons in Group 2 were all produced in the spontaneous task, with only three exceptions. These results are analogous to the spontaneous task of Group 1 speakers, whose four speakers only omitted one to two liaisons each.

The description task contained a total of 16 obligatory contexts, 11 of which contained over 90% liaisons. The other five were:

[ADV+ADJ] (78%)
[CLIT+V] (75%)
[ADV+NCLIT] (67%)
[C'EST+ADJ] (33%)
[C'EST+PREP] (0%)

In this task, 19 out of the 30 speakers produced 100% of the obligatory liaisons. One speaker (speaker 15) did not produce any obligatory liaison context, and the ten other speakers omitted one to three liaisons. Omitted liaisons were,

(122) a. [NCLIT+V]
   ils/ont (speaker 23)
   i(ls)/ont (3 times) (speaker 25)
   ils/habitent (speaker 48)

b. [DET+N]
   les/instruments (speaker 29)
   un/oiseau (speaker 40)
In (a), the absence of liaison after *ils* was also found in Group 1, in which the final consonant [l] is omitted, as in *ils veulent* [ivœl]. The floating consonant of the plural marker is dropped as well before the vowel-initial word. In (b), absence of liaison may be due to the following word. *Oiseau* was already discussed as being considered as consonant-initial type glide. In (c), as with Group 1, *c'est* occurs without a liaison consonant, although it also occurs with a liaison consonant, as in the following examples:

(123)  
\begin{itemize}
  \item *c'est une image* (speaker 41)
  \item *c'est un avertissement* (speaker 21)
  \item *c'est une représentation* (speaker 28)
  \item *c'est une petite fille* (speakers 31, 44)
  \item *c'est évident* (speaker 33)
  \item *c'est une photo* (speaker 40)
\end{itemize}

In fact, combining all the occurrences of *c'est* followed by another item, there were a total of 12 out of 16 liaisons produced (75%). In (f), *quand* was also found in the Group 1 data without a liaison. Thus, obligatory liaison in the description task was quite frequently produced, though not as frequently as in the reading and the spontaneous task for Group 2 speakers. Omitted liaisons in the description present almost the same patterns as omitted liaisons in other tasks, namely, before long words (or possibly as a result of searching for a word), after *c'est, quand* and *ils*. However, these
omitted liaisons represent less than 7% of the total number of possible obligatory liaisons.

Thus, as with Group 1 speakers, the description task contained the greatest variety of syntactic contexts as well as the greatest number of omissions of obligatory liaisons.

The number of liaisons produced with obligatory categories (regardless of the grammatical category of the following word) are as follows for each group:

<table>
<thead>
<tr>
<th></th>
<th>GROUP 1</th>
<th>GROUP 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEXICALIZED:</td>
<td>17/17 (100%)</td>
<td>44/44 (100%)</td>
</tr>
<tr>
<td>PREPOSITION:</td>
<td>23/24 (96%)</td>
<td>VERB+N.CLITIC: 26/26 (100%)</td>
</tr>
<tr>
<td>DETERMINER:</td>
<td>176/187 (94%)</td>
<td>ADJECTIVE: 12/12 (100%)</td>
</tr>
<tr>
<td>ALL CLITICS:</td>
<td>108/115 (94%)</td>
<td>DETERMINER: 241/250 (96%)</td>
</tr>
<tr>
<td>C'EST:</td>
<td>44/49 (90%)</td>
<td>PREPOSITION: 104/108 (96%)</td>
</tr>
<tr>
<td>ADJECTIVE:</td>
<td>28/31 (90%)</td>
<td>ALL CLITICS: 79/86 (92%)</td>
</tr>
<tr>
<td>ADVERB:</td>
<td>21/27 (78%)</td>
<td>ADVERB: 14/17 (82%)</td>
</tr>
<tr>
<td>VERB+N.CLITIC:</td>
<td>0/0 (0%)</td>
<td>C'EST: 18/24 (75%)</td>
</tr>
</tbody>
</table>

Table XVII
Frequency of obligatory liaison contexts for each group, for all tasks

It is interesting to note that for both groups, liaison with lexicalized expressions was always realized (100%). Also, six contexts produced over 90% liaisons by both groups. The context that differed among the two groups is liaison after c'est. Furthermore, liaison with adverbs doesn't seem to be as frequent as with other categories.

Thus, the results on syntactic contexts have shown that

a) obligatory liaison contexts were respected, with a few exceptions;

b) these exceptions can be syntactically determined. They are: [C'EST+OTHER] and [ADVERB+OTHER];

c) the most frequently occurring syntactic context is [DETERMINER+OTHER]. Some contexts never occurred at all in FSL speech;

d) lexicalized expressions produced 100% liaisons in both groups. These expressions must be learned as expressions containing liaisons, and so do not produce any omissions. The majority of these lexicalized expressions were peut-être.
Summary

The results for the liaison patterns of both groups of speakers suggest that first of all, both groups have acquired the concept of obligatory liaison. There was no significant difference between the two groups. That is, speakers are aware of the notion that word-final consonants are produced before vowel-initial words in certain cases. Obligatory liaisons were almost always produced, with few exceptions. In fact, almost 94% of all obligatory liaisons were produced, and they do not depend on the nature of the discourse.

The two grammatical categories that did not produce over 90% liaisons were adverbs and *c'est*. Omissions with determiners and other occurrences may have been due to individual variation, performance errors, and other factors such as length and unfamiliarity of the following noun (ex. *avertissements, additifs*), etc. This is somewhat analogous to Booij and De Jong (1987) and De Jong's (1989) conclusion for native French speakers, in which the authors conclude that the intralinguistic factors determining the usage of liaison may include word length and word frequency (though they refer to the liaison word), among other factors. In fact, they also suggest that word-combination frequency in a factor. The main conclusion to consider from the data on obligatory liaison is that the notion "obligatory" is inadequate in that these liaisons are in fact variable, even if they are very frequently produced. This is not only true of FSL speakers, but for native speakers as well.

Optional liaison

Optional liaison was also analysed according to the different syntactic contexts. The domain of optional liaison in this study consists of liaison after plural nouns and adjectives, strong pronouns, inflected verbs, infinitives, polysyllabic prepositions and adverbs, and conjunctions. In the case of
verbs, separate categories were established depending on whether they were inflected or infinitives in order to differentiate, for example, *je vais à Paris* from *je préfère aller au restaurant*. The negative particle *pas* was included as an optional liaison, unlike Delattre's classification in which it belongs to the obligatory category. Due to the polysyllabic nature of *c'étais*, it was included as an optional case under the verb category.

ii.i. **Results for all speakers**

Overall results for optional liaisons produced by all 49 speakers are found in table XVIII. Optional liaisons were produced in only 81 out of 596 possible cases (14%). Compared to obligatory liaisons which were very frequently produced, optional liaisons occurred much less frequently.

<table>
<thead>
<tr>
<th>OPTIONAL LIAISONS PRODUCED</th>
<th>TOTAL POSSIBLE OPTIONAL LIAISONS</th>
<th>% OF OPTIONAL LIAISONS PRODUCED</th>
</tr>
</thead>
<tbody>
<tr>
<td>81</td>
<td>596</td>
<td>13.59%</td>
</tr>
</tbody>
</table>

Table XVIII
Optional liaisons produced by all 49 speakers

In De Jong's (1989) study of the domains of liaison from the *Corpus d'Orléans*, he establishes the domain of optional liaison (domain 2) as consisting of "noun-adjective sequences, semi-auxiliaries (*devoir, pouvoir*) plus infinitive, and the main verb *avoir* followed by a direct object" (De Jong 1989: 21). De Jong does not take into account the contexts where the liaison word is a negation (*pas* or *jamais*) or a so-called lexical adverbial specifier (adverbs ending in *-ment*, like *totalement, absolument, tellement*) as he claims it is difficult to determine to which domain they
belong. In the FSL contexts, however, a negation such as pas and adverbs in -ment were considered optional contexts of liaison. The liaison frequency in De Jong's domain 2 is 83 out of 383 possible contexts (21.7%). As with FSL speakers, liaison frequency is much lower in domain 2 than in domain 1 for native speakers. The frequency of optional liaisons in the speech of native speakers is just slightly higher than in the speech of FSL speakers. This suggests that since optional liaison is relatively similar in both groups of speakers, FSL speakers have also acquired the concept of optionality.

ii.ii. Group variation

Results for optional liaisons produced by each group individually are presented in table XIX.

<table>
<thead>
<tr>
<th></th>
<th>GROUP 1</th>
<th></th>
<th>GROUP 2</th>
<th></th>
<th>GROUP 1 vs. GROUP 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Optional Liaisons Produced</td>
<td>TOTAL POSSIBLE OPTIONAL LIAISONS</td>
<td>% OF OPTIONAL LIAISONS PRODUCED</td>
<td>TOTAL POSSIBLE OPTIONAL LIAISONS</td>
<td>% OF OPTIONAL LIAISONS PRODUCED</td>
<td>t=5.286 p (47df) =.0000</td>
</tr>
<tr>
<td>42</td>
<td>235</td>
<td>17.87%</td>
<td>39</td>
<td>361</td>
<td>10.80%</td>
</tr>
</tbody>
</table>

Table XIX
Optional liaisons produced for Group 1 and Group 2

Group 1 produced 42/235 optional liaisons (18%), while Group 2 produced 39/361 (11%). There is a difference among the two groups in that Group 1 produced a higher frequency of optional liaisons than Group 2 (7% more liaisons). However, both groups behaved in a similar manner compared to obligatory liaisons. That is, both groups produced under 20% optional liaisons. Thus, both groups produced very few optional liaisons. The difference in the two groups is due to the
actual occurrences of optional liaison, which will be presented below.

ii.iii. **Task variation**

The results for optional liaisons represented by task for all 49 speakers are found in table XX.

<table>
<thead>
<tr>
<th>TASK</th>
<th>OPTIONAL LIAISONS PRODUCED</th>
<th>TOTAL POSSIBLE OPTIONAL LIAISONS</th>
<th>% OF OPTIONAL LIAISONS PRODUCED</th>
</tr>
</thead>
<tbody>
<tr>
<td>READING</td>
<td>17</td>
<td>173</td>
<td>9.83%</td>
</tr>
<tr>
<td>SPONTANEOUS</td>
<td>25</td>
<td>187</td>
<td>13.37%</td>
</tr>
<tr>
<td>DESCRIPTION</td>
<td>39</td>
<td>236</td>
<td>16.53%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>81</td>
<td>596</td>
<td>13.59%</td>
</tr>
<tr>
<td>READ. VS. SPONT.</td>
<td>$t = -2.598$, $p(96df) = .7956$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>READ. VS. DESC.</td>
<td>$t = 1.604$, $p(96df) = .1121$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPONT. VS. DESC.</td>
<td>$t = 1.098$, $p(96df) = .2749$</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table XX

Optional liaisons produced by all 49 speakers, according to each task

This table reveals that while all tasks produced less than 20% optional liaisons, the lowest frequency of optional liaisons was found in the reading task (10%), while the frequency of optional liaisons was 13% for the spontaneous discourse and 17% for the description. Thus, both spontaneous discourses produced a higher frequency of optional liaisons than the reading task. This seems at first to be a surprising result since one would expect that the more formal reading task would have more optional liaisons. Yet the results show the opposite is true. It also seems that the frequency of optional liaisons depends on the nature of the task. However, the lower frequency of optional liaisons in the reading task is not due to the nature of the task, but rather to the nature of the words involved. That is, the readings consisted of words with which liaison is not frequent (such as *les commerçants qui*
veulent/augmenter..., des aliments naturels/en conserve). The spontaneous and description tasks, on the other hand, presented optional contexts in which liaison is more probable (such as je suis_une étudiante, je suis_heureuse, sont_attirés, etc.). Thus, it is the type of optional liaison contexts included in the reading task that produced a low frequency of liaison occurrence. However, results for each group will reveal that this was the case for only one group of speakers.

The data from De Jong’s (1989) Corpus d’Orléans is based on interviews, and is thus comparable to the FSL data from the spontaneous tasks. The frequency of optional liaisons in the interviews is 22%. This percentage is higher than the percentages for both the spontaneous task and the description task.

The results for optional liaisons represented by task for Groups 1 and 2 separately are found in table XXI. The frequency of optional liaisons for Group 1 speakers is 19% in the reading task, compared to 13% in the spontaneous task and 21% in the description task. The frequency of optional liaisons in the reading task for Group 2 speakers, on the other hand, is 5%, compared to 14% in the spontaneous task and 13% in the description task. The reading task produced less than half the frequency of liaisons than the two other tasks in Group 2. The main difference between the two groups was the reading task. Possible reasons for these percentages will be examined in the next section on syntactic categories in which data on optional liaisons are reviewed in detail.
<table>
<thead>
<tr>
<th>TASK</th>
<th>GROUP 1</th>
<th>GROUP 2</th>
<th>GROUP 1 VS. GROUP 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>OPTIONAL LIAISONS PRODUCED</td>
<td>TOTAL POSSIBLE OPTIONAL LIAISONS</td>
<td>% OF OPTIONAL LIAISONS PRODUCED</td>
</tr>
<tr>
<td>READ.</td>
<td>11</td>
<td>58</td>
<td>18.97%</td>
</tr>
<tr>
<td>SPONT.</td>
<td>9</td>
<td>71</td>
<td>12.68%</td>
</tr>
<tr>
<td>DESC.</td>
<td>22</td>
<td>106</td>
<td>20.75%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>42</td>
<td>235</td>
<td>17.87%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TASK</th>
<th>GROUP 1 VS. GROUP 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>READ. VS. SPONT.</td>
<td>t=.569, p(36df) =.1255</td>
</tr>
<tr>
<td>READ. VS. DESC.</td>
<td>t=.3529, p(36df) =.7262</td>
</tr>
<tr>
<td>SPONT. VS. DESC.</td>
<td>t=.1259, p(36df) =.2163</td>
</tr>
</tbody>
</table>

Table XXI
Optional liaisons produced for Group 1 and Group 2, according to each task

ii.iv. **Syntactic categories**

In the case of optional liaison, grammatical number was considered in order to determine whether plural heads produce more liaisons than singular heads, as Selkirk's (1972) X-Comp rule states (that a liaison may occur after inflected heads and their complements in elevated speech). The following is the system used for coding certain syntactic categories:
a) plural nouns were coded as NPL;
b) plural adjectives were coded as ADJPL;
c) V+N indicates a verb followed by any noun (singular or plural);
d) conjunctions such as et, mais, etc. were coded as CONJ;
e) auxiliary verbs were coded as AUX.

Auxiliary verbs were differentiated from main verbs. In cases where the following item is not specified, the term OTHER is used.

a) **All speakers**

The results for optional liaison for all 49 speakers are found in table XXII. Speakers used a total of 40 different syntactic contexts of optional liaisons. Out of these, more than half (27) did not produce any liaisons. Five of the 13 contexts that did produce a liaison were between 50%-59%, and the rest (8 contexts) varied between 3%-38%. Thus, optional liaisons were limited to less than half the syntactic contexts available to the learners.

Of the 13 contexts that did produce liaisons, more than half (8) consisted of contexts involving verbs (7 contexts of [VERB+OTHER] and 1 context of [AUX + VERB]). The other two contexts containing optional liaisons were three cases of [ADVERB+OTHER], and one [CONJ+OTHER]. No other context produced any liaisons.

Syntactic categories of words in optional liaison contexts can be ranked according to percentages of optional liaisons produced, which are presented in table XXIII.
<table>
<thead>
<tr>
<th>SYNTACTIC CATEGORY</th>
<th>READING</th>
<th>TOTAL NUMBER PRODUCED</th>
<th>TOTAL NUMBER OF OCCURRENCES</th>
<th>SPONTANEOUS</th>
<th>TOTAL NUMBER PRODUCED</th>
<th>TOTAL NUMBER OF OCCURRENCES</th>
<th>DESCRIPTION</th>
<th>TOTAL</th>
<th>TOTAL NUMBER PRODUCED</th>
<th>TOTAL NUMBER OF OCCURRENCES</th>
</tr>
</thead>
<tbody>
<tr>
<td>NPL + V</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NPL + PREP</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NPL + ADJ</td>
<td>6</td>
<td>29</td>
<td>21%</td>
<td></td>
<td>6</td>
<td>67%</td>
<td>3</td>
<td>33%</td>
<td>9</td>
<td>35%</td>
</tr>
<tr>
<td>NPL + ADV</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NPL + CONJ</td>
<td>0</td>
<td>30</td>
<td>0%</td>
<td></td>
<td>0</td>
<td>0%</td>
<td>2</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>ADJ + PREP</td>
<td>0</td>
<td>19</td>
<td>0%</td>
<td></td>
<td>0</td>
<td>0%</td>
<td>4</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>ADJ + ADV</td>
<td>0</td>
<td>27</td>
<td>0%</td>
<td></td>
<td>0</td>
<td>0%</td>
<td>1</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>ADJ + V</td>
<td>0</td>
<td>1</td>
<td>0%</td>
<td></td>
<td>0</td>
<td>0%</td>
<td>1</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>ADJ + CONJ</td>
<td>0</td>
<td>2</td>
<td>0%</td>
<td></td>
<td>0</td>
<td>0%</td>
<td>4</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>PRO + NCLIT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PRO + CONJ</td>
<td>0</td>
<td>1</td>
<td>0%</td>
<td></td>
<td>0</td>
<td>0%</td>
<td>1</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>AUX + V</td>
<td>1</td>
<td>1</td>
<td>100%</td>
<td></td>
<td>4</td>
<td>50%</td>
<td>8</td>
<td>50%</td>
<td>5</td>
<td>9%</td>
</tr>
<tr>
<td>V + N</td>
<td>1</td>
<td>2</td>
<td>50%</td>
<td></td>
<td>1</td>
<td>2%</td>
<td>2</td>
<td>50%</td>
<td>1</td>
<td>2%</td>
</tr>
<tr>
<td>V + DET</td>
<td>2</td>
<td>10</td>
<td>20%</td>
<td></td>
<td>4</td>
<td>9%</td>
<td>46</td>
<td>9%</td>
<td>6</td>
<td>57%</td>
</tr>
<tr>
<td>V + CLIT</td>
<td>1</td>
<td>1</td>
<td>100%</td>
<td></td>
<td>1</td>
<td>0%</td>
<td>1</td>
<td>0%</td>
<td>1</td>
<td>50%</td>
</tr>
<tr>
<td>V + PREP</td>
<td>10</td>
<td>19</td>
<td>53%</td>
<td></td>
<td>12</td>
<td>38%</td>
<td>23</td>
<td>38%</td>
<td>23</td>
<td>38%</td>
</tr>
<tr>
<td>V + INF</td>
<td>0</td>
<td>19</td>
<td>0%</td>
<td></td>
<td>0</td>
<td>0%</td>
<td>7</td>
<td>10%</td>
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<td>1</td>
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</tr>
</tbody>
</table>
| TOTAL              | 17      | 173                   | 10%                        | 25          | 187                   | 13%                        | 39          | 236   | 17%                    | 596                        | 14%  

Table XXII

Syntactic categories for optional liaison for all speakers
The optional liaisons that were produced occurred mainly after verbs. Another important consideration is the fact that liaison after infinitives seems to be, in the case of FSL learners, forbidden. No liaisons were produced after infinitives. The same is true of plural adjectives. There is an obvious distinction among the contexts that may produce an optional liaison (however low the frequency may be) and those that do not produce any at all. Perhaps the cases of optional liaisons are restricted to a smaller number of contexts, and the rest of the contexts not producing liaisons belong to the forbidden cases. The notion of inflection is also not pertinent to FSL speakers since while there is a difference between inflected verbs and infinitives in their speech samples, there is no liaison after singular or plural nouns and postnominal adjectives.

Table XXII also presents results for syntactic categories in each of the three tasks for all speakers. The reading task contained a total of 9 optional liaison contexts, 3 of which produced liaisons. They were [VERB+CLITIC], [VERB+PREP] and [NOUNPL+ADJ]. Liaison occurred more frequently in both contexts containing verbs than in the context with plural nouns.

The spontaneous task contained more optional liaison contexts than the reading task (31 contexts), 11 of which produced liaisons. They were, in order of frequency of liaison:

<table>
<thead>
<tr>
<th>SYNTACTIC CONTEXT</th>
<th>PERCENTAGE</th>
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</thead>
<tbody>
<tr>
<td>VERB</td>
<td>64/266 (24%)</td>
</tr>
<tr>
<td>CONJUNCTION</td>
<td>2/17 (12%)</td>
</tr>
<tr>
<td>ADVERB</td>
<td>6/67 (9%)</td>
</tr>
<tr>
<td>PLURAL NOUN</td>
<td>9/135 (7%)</td>
</tr>
<tr>
<td>PLURAL ADJECTIVE</td>
<td>0/63 (0%)</td>
</tr>
<tr>
<td>PREPOSITION</td>
<td>0/5 (0%)</td>
</tr>
<tr>
<td>PRONOUN</td>
<td>0/2 (0%)</td>
</tr>
<tr>
<td>INFINITIVE</td>
<td>0/42 (0%)</td>
</tr>
</tbody>
</table>

Table XXIII
Percentage of optional liaisons produced in each context for all speakers, for all tasks
Of the 11 contexts, 7 involved a verb followed by another item. The other contexts contained plural nouns, conjunctions and adverbs.

The description task also contained more optional liaison contexts than the reading task (32 contexts), 7 of which produced liaisons. They were, in order of frequency of liaison:

- [ADV+V] (100%)
- [V+ADJ] (65%)
- [AUX+V] (50%)
- [V+PREP] (38%)
- [NPL+ADJ] (33%)
- [V+ADV] (12%)
- [V+DET] (9%)

Five of these contexts involve a verb followed by another item. The other three contexts involve adverbs and plural nouns.

Thus, the relation between syntactic categories and the nature of the task is not an important factor in determining optional liaison production. All three tasks provided evidence that liaison production is limited to plural nouns, adverbs and conjunctions, but mainly to verbs.

b) **Group 1**

Optional liaisons that were produced according to syntactic categories for Group 1 are found in table XXIV.
<table>
<thead>
<tr>
<th>SYNTACTIC CATEGORY</th>
<th>READING TOTAL NUMBER PRODUCED</th>
<th>TOTAL NUMBER OF OCCURRENCES %</th>
<th>SPONTANEOUS TOTAL NUMBER PRODUCED</th>
<th>TOTAL NUMBER OF OCCURRENCES %</th>
<th>DESCRIPTION TOTAL NUMBER PRODUCED</th>
<th>TOTAL NUMBER OF OCCURRENCES %</th>
<th>TOTAL TOTAL NUMBER PRODUCED</th>
<th>TOTAL NUMBER OF OCCURRENCES %</th>
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<td>71</td>
<td>13%</td>
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</table>

Table XXIV

Syntactic categories for optional liaison for Group 1
Group 1 speakers produced a total of 29 possible contexts of optional liaisons. There were only 9 contexts in which a liaison occurred. These contexts were, in order of frequency of liaison:

- [V+CLIT] (100%)
- [CONJ+ADV] (100%)
- [AUX+V] (80%)
- [V+ADJ] (67%)
- [V+N] (50%)
- [V+PREP] (43%)
- [V+ADV] (20%)
- [ADV+ADV] (17%)
- [V+DET] (4%)

Of these contexts, 7 include liaisons after verbs. The other two contexts involve conjunctions and adverbs.

The reading task contained only 4 optional contexts, two of which produced liaisons. They were [V+CLIT] and [V+PREP]. Both of these contexts include a verb followed by another item.

There were three cases in the reading task for Group 1 speakers, which were very infrequently produced. The three optional cases were:

(124) des aliments naturels/en conserve [NOUN PLURAL + PREP]
les commerçants qui veulent/augmenter [VERB+INF]
mis/en relief [V + PREP] (speakers 1, 2, 3, 7, 9, 10, 13, 15, 18, 19)

Nine speakers did not produce any of the three optional liaisons, while the ten other speakers always produced a liaison in one of these cases: mis/en relief. The other two cases were not produced at all. Thus, it seems that liaison after plural nouns and certain verbs was excluded for these speakers.

As for the third case, mis/en relief may be regarded as a fixed locution by the ten speakers who produced a liaison.

Speaker 7 made a reading error and so made an extra optional liaison. The sentence elle en est fière was read as elle est en fière.

The spontaneous task contained 22 optional contexts, 6 of which produced liaisons. They
were, in order of frequency of liaison:

- [AUX+V] (100%)
- [V+ADJ] (100%)
- [CONJ+ADV] (100%)
- [V+N] (50%)
- [V+DET] (33%)
- [ADV+ADV] (20%)

Four of these contexts include a verb followed by another item. The other two contexts involve conjunctions and adverbs.

Optional liaisons in the spontaneous task were very infrequently produced. In fact, less than 10% of all optional liaisons were produced. Of the 19 speakers, one speaker had no occurrence of an optional context in the speech sample, 13 speakers did not produce any of the optional liaisons, while 5 speakers produced at least one optional liaison. The optional liaisons that were produced were:

(125) a.  [ETRE+DET, ADJ]
  je suis_une (speaker 1)
  je suis_une étudiante (speaker 9)
  je suis_heureuse (speaker 6)
  sont_attirés (speaker 15)
  je suis_étudiante (speaker 19)

b.  [AUX+V]
  je suis_allée (speaker 9)

c.  [NEG+ADV]
  j'ai pas_assez d'argent (speaker 9)

d.  [CONJ+OTHER]
  quand_enfin (speaker 1, twice)

From (a) and (b), it can be seen that the more commonly occurring optional liaisons are with the verb être, specifically with être. The negative pas in (c) may also produce a liaison. In (d), this speaker used quand_enfin as interjections in her discourse. This case was classified an optional liaison since it is a conjunction, and not an adverb.
Thus, optional liaisons occurred very infrequently in the spontaneous task, though some cases of optional liaison (such as être, the negative pas) seem to be more likely to elicit a liaison than other cases. This result is not unlike the distribution of liaison among verbs by native speakers. Malécot (1975) finds that liaison in the context of [être+complement] is more frequent than any other verb followed by a complement. In his four-way distinction, he places être in the category of optional in conversation but obligatory in elocution (i.e. ils sont en ville, elle est heureuse), and all other verbs are considered rare in conversation but optional in elocution (i.e. ils ont un livre, il faut écouter) (Malécot 1975: 174). Thus, être maintains a unique status concerning liaison production.

The description task contained 19 optional contexts, 5 of which produced liaisons. They were, in order of frequency of liaison:

- [AUX+V] (75%)
- [V+ADJ] (60%)
- [V+PREP] (43%)
- [V+ADV] (22%)
- [V+DET] (4%)

All of these contexts include verbs followed by another item.

Eleven speakers produced at least one optional liaison. The other eight speakers did not produce any. There were only 22 optionals produced out of 106 possibilities (21%). Cases that produced a liaison were:

(126) [EST+OTHER]

- est_accrochée (speaker 1)
- elle est_en train de... (speaker 1, three times)
- la femme est_en train de.... (speaker 3, 14 twice)
- il est_en train de... (speakers 3, 5)
- (elle) est_allongée (speakers 7, 12)
- (elle) s'est_allongée (speaker 13)
- qui est_aussi... (speaker 7)
- un lampe est.attaché (speaker 10)
- suspendu au plafond est_un canari (speaker 12)
- est_ouverte (speaker 13)
- la chambre est_assez... (speaker 14)
une oiseau est assis (speaker 15)
(elle) s’est assise (speaker 19)
(elle) est assise (speaker 19)
(elle) est au lit (speaker 18)
un chat qui est à gauche (speaker 18)

All of these cases of liaison contain the verb être in the third person singular. It seems that this case is the most commonly occurring optional case of liaison. The syntactic category of the following word does not seem to be relevant, since there are adverbs, adjectives and prepositions following the verb in (126). No other case of optional liaison was produced (84 omitted optional liaisons).

Thus, while optional liaisons were infrequent in the description task (under 20%), the only case of optional liaison was after the third person singular of être followed by an adjective, an adverb or a preposition. All 22 cases of optional liaisons produced belong to this category ([EST+OTHER]). There were no other occurrences.

Thus, for Group 1 speakers, though optional liaisons were not frequent, the context in which these liaisons occurred most frequently was [VERB+OTHER]. The only other contexts in which liaisons occurred were [CONJ+OTHER] and [ADVERB+OTHER]. Only three categories produced a liaison with a following item, and all other optional liaison contexts contained no realized final consonants. More specifically, liaison occurred after the verb être, the negation pas and the conjunction quand. Various factors may be involved in the production of these few optional liaisons. It may be, for instance, that these liaisons are memorized, or that they are the most frequently occurring contexts of optional liaison. The role of the instructor may also be significant in that speakers produce liaisons they’ve heard.

c) Group 2

Optional liaisons according to syntactic categories for Group 2 are found in table XXV.
<table>
<thead>
<tr>
<th>SYNTACTIC CATEGORY</th>
<th>READING</th>
<th>SPONTANEOUS</th>
<th>DESCRIPTION</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TOTAL NUMBER PRODUCED</td>
<td>TOTAL NUMBER PRODUCED</td>
<td>TOTAL NUMBER PRODUCED</td>
<td>TOTAL NUMBER PRODUCED</td>
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<td>NPL + V</td>
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<td>11</td>
</tr>
<tr>
<td>NPL + PREP</td>
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<td>2</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>NPL + ADJ</td>
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<td>2</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>NPL + ADV</td>
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<td>0</td>
<td>4</td>
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<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>NPL + CONJ</td>
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<td>30</td>
<td>0</td>
<td>16</td>
</tr>
<tr>
<td>ADJPL + PREP</td>
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<td>2</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>ADIPL + ADV</td>
<td>0</td>
<td>27</td>
<td>0</td>
<td>28</td>
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<td>1</td>
</tr>
<tr>
<td>ADIPL + CONJ</td>
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<td>0</td>
<td>2</td>
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<tr>
<td>PRO + NCLIT</td>
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<td>0</td>
<td>1</td>
</tr>
<tr>
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</tr>
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<td>1</td>
</tr>
<tr>
<td>V + N</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
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<td>0%</td>
<td>0</td>
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</tr>
<tr>
<td>V + INF</td>
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<td>38</td>
<td>18%</td>
<td>6</td>
</tr>
<tr>
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<td>0</td>
</tr>
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<td>0%</td>
<td>0</td>
</tr>
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<td>2</td>
<td>0%</td>
<td>0</td>
</tr>
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<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>ADV + DET</td>
<td>0</td>
<td>1</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>ADV + NCLIT</td>
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<td>1</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>ADV + CLIT</td>
<td>0</td>
<td>1</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>ADV + V</td>
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<td>28</td>
<td>0%</td>
<td>1</td>
</tr>
<tr>
<td>ADV + INF</td>
<td>3</td>
<td>5</td>
<td>60%</td>
<td>1</td>
</tr>
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<td>25%</td>
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<td>ADV + ADJ</td>
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<td>0%</td>
<td>0</td>
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<td>ADV + PREP</td>
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</tr>
<tr>
<td>CONJ + ADV</td>
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<td>1</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>CONJ + PREP</td>
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<td>1</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>TOTAL</td>
<td>6</td>
<td>115</td>
<td>5%</td>
<td>16</td>
</tr>
</tbody>
</table>

Table XXV
Syntactic categories for optional liaison for Group 2
Group 2 speakers produced a total of 37 optional liaison contexts. Of these contexts, 10 produced liaisons. They were:

- [V+ADJ] (53%)
- [ADV+INF] (50%)
- [NPL+ADJ] (27%)
- [AUX+V] (25%)
- [ADV+ADV] (25%)
- [V+PREP] (17%)
- [V+INF] (16%)
- [V+DET] (13%)
- [V+ADV] (13%)
- [ADV+V] (3%)

As with Group 1, the majority of these contexts involve verbs (6 out of 11 contexts). The other two were [ADVERB+OTHER] and [NOUNPL+OTHER].

The reading task contained 5 optional liaison contexts, only 1 of which produced liaisons. It was [NOUNPL+ADJ] (21%).

In this task, 24 out of the 30 speakers did not produce any optional liaison, while the other 6 speakers produced one liaison in the same context which was:

(127) les meilleurs chercheurs américains (speakers 21, 24, 27, 32, 47, 48)

This liaison was probably made by the 6 speakers as a result of having read the sentence. It is sensitive to the nature of the task. None of the other optional liaisons were produced. As in Group 1, optional liaisons are in general very infrequently produced in the reading. However, there is a significant difference in the frequency of optional liaisons in the reading tasks of both groups: while Group 1 produced almost 19% liaisons, Group 2 only produced 5%. This difference may be due to the words involved in optional liaison contexts in the Group 2 reading task. The possible liaison cases were:

(128) les meilleurs chercheurs américains [NPL+ADJ]
par les universités ou par les entreprises [NPL+CONJ]
les meilleurs chercheurs américains actuellement employés [ADJPL+ADV], [ADV+V]
These four cases are all contexts of rare liaisons, which in turn accounts for the low frequency of optional liaisons in this group.

The spontaneous task contained 25 optional liaison contexts, 6 of which produced liaisons.

They were:

- [NPL+ADJ] (67%)
- [ADV+INF] (60%)
- [V+ADV] (25%)
- [ADV+ADV] (25%)
- [V+INF] (18%)
- [V+PREP] (11%)

Three of these contexts involve verbs followed by another item; the other contexts involve [NPL+OTHER] and [ADVERB+OTHER].

Only 16 out of 116 possible cases of optional liaison were realized. These cases were produced by nine out of the 30 speakers. The optional liaisons that were produced were:

(129)  a.  [VERB+OTHER]
   les chiens devraient être... (speaker 24)
   votre chien est en train d'attaquer (speaker 24)
   Tu dois être (speaker 27)
   un chien doit être tenu... (speaker 31)
   Je suis ici (speaker 34)
   ce chien doit être ([dwatR]) (speaker 38)
   il doit être (speaker 39, twice)
   ils sont aussi... (speaker 39)
   il peut être très, très dangereux (speaker 43)

b.  [NEG+OTHER]
   je ne peux pas être (speaker 36)
   je ne peux pas avoir (speaker 36)
   je ne veux pas avoir (speaker 36)
   mais pas ici (speaker 20)

c.  [PLURALNOUN+ADJ]
   des personnes innocents (speaker 39)
   des personnes âgées (speaker 39)

The liaisons that were produced in (a) are between verbs and the following word. The two verbs
used were *devoir* and *être*. Optional liaisons with *être* also appeared in Group 1 examples. In (b), optional liaisons occurred with the negative *pas*, which was also present in the Group 1 data. There were two cases of liaison with *personnes*. The other speakers did not produce any optional liaisons.

Thus, optional liaisons in the spontaneous description belong to three groups: after the verbs *devoir* and *être*, after the negative *pas* and after the plural noun *personnes*. As with Group 1 speakers, it seems that the more commonly used optional liaisons are to be found with the verbs *devoir* and *être* and the negative *pas*. Some of the possibilities to account for liaison production in these cases may be word frequency, in that these words are more frequently used than other verbs and adverbs, or possibly that the learners have heard liaisons produced in these cases, and are reproducing the words with liaisons.

The description task contained 29 optional liaisons contexts, 6 of which produced liaisons. They were:

- [NPL+ADJ] (100%)
- [ADV+V] (100%)
- [V+ADJ] (69%)
- [AUX+V] (25%)
- [V+PREP] (22%)
- [V+DET] (18%)

Four of these contexts involved verbs followed by another item; the other contexts were [NPL+OTHER] and [ADVERB+OTHER]. This is similar to the spontaneous task.

Fourteen speakers produced at least one liaison (there were a total of 17 liaisons produced out of 133). Produced liaisons were,

(130) a. [ÊTRE+OTHER]
   qui est un... (speaker 20)
   Cette image est une image... (speaker 21)
   (il) est assis (speaker 23, 36)
   (il) est assise (speaker 38, 43)
   une est assise (speaker 24)
   (elle) est assise (speakers 29, 42)
leur père est en train... (speaker 24)
qui est avec (speaker 25)
ceci est une annonce (speaker 25)
ils sont allés (speaker 26)
(ils) sont amusants (speaker 33)
ils sont habillés (speaker 49)

b. [PLURAL NOUN+OTHER]
   ses bras étirés (speaker 38)

c. [NEG+PASTPARTICIPLE]
   ils n’ont pas attendu (speaker 45)

As with Group 1, the most common optional liaison that occurs is with the verb être in the third person (both singular and plural). Of the 17 produced liaisons, 15 were with être. Liaisons in (b) occurred after a plural noun, which did not occur in the Group 1 data, but did occur in all three tasks in Group 2. In (c), there was a liaison after the negative pas, which was also found in the first group.

Thus, optional liaisons occurred very infrequently, yet those that were produced seem to follow a pattern: the most frequently occurring optional liaisons are with the third person singular and plural of être, followed by less frequently occurring liaisons after plural nouns and the negative pas. These three cases of optional liaisons were also found in the other tasks as well as in the speech of Group 1 speakers.

ii.v. Summary

Optional liaisons were very infrequently produced (14%), and only in a few syntactic contexts. Both groups performed similarly with respect to the frequency of optional liaisons compared to that of obligatory liaisons. However, the second group produced a lower frequency of optional liaisons which was due to the contexts involved (cases of rare liaisons). The low frequency of optional liaisons is analogous to the speech of French adults, who in general produce a low frequency of optional liaisons, and who may produce certain optional liaisons more than others
Malécot (1975). The most frequent cases where an optional liaison consonant occurs were found to be with the third person singular and plural of the verb être, the negative pas, the conjunction quand, and plural nouns. Similar results are presented for native French speakers by Malécot (1975) whose statistics reveal that the number of optional liaisons is very low, especially for certain grammatical categories.

Comparing optional liaisons to obligatory liaisons, there is first of all a significant difference between obligatory and optional liaisons in FSL speech. While obligatory liaisons were very frequent, optional liaisons did not occur very often. In fact, optional liaisons seem to be rarely produced. Secondly, not only did optional liaisons occur very infrequently, they only occurred in a small number of contexts. Only 14 out of 40 possible contexts produced a liaison. Thirdly, of the optional liaisons that were produced, the syntactic category of the first word seems to play a role in liaison production. It seems that the majority of optional liaisons occur with inflected verbs followed by another item. The other contexts that elicit liaisons are plural nouns and adverbs followed by another item. This shows that Selkirk's X-comp rule is somewhat in effect for these speakers, in that inflected verbs and plural nouns may produce liaisons. However, liaison is not made after plural adjectives. As for liaison after plural nouns, it was quite limited, and not widely produced. Fourthly, considering the syntactic distribution of optional liaisons that were produced, it seems that inflection plays a role in the production of verbs. That is, liaison after infinitives did not occur at all. However, Selkirk's rule is quite restricted in L2 speech since only verbs and nouns are involved in liaison production, and not adjectives, for example. This may be accounted for by recalling the data from both groups of speakers, which revealed that the majority of optional liaisons that occurred were mainly with the verbs être, and some with devoir. The adverb that elicited liaisons was the negative pas. As a result, stating that verbs and adverbs produce liaisons is not specific enough,
since it is very clearly only certain verbs and adverbs with which liaisons occurred. Thus, the type of verb as well as the verb form (third person singular) are factors affecting liaison production.

iii. Forbidden liaison

The last type of liaison that was analysed is the forbidden liaison.

iii.i. Results for all speakers

Results for forbidden liaisons produced by all 49 speakers are found in table XXVI.

<table>
<thead>
<tr>
<th>FORBIDDEN LIAISONS PRODUCED</th>
<th>TOTAL POSSIBLE FORBIDDEN LIAISONS</th>
<th>% OF FORBIDDEN LIAISONS PRODUCED</th>
</tr>
</thead>
<tbody>
<tr>
<td>13</td>
<td>389</td>
<td>3.34%</td>
</tr>
</tbody>
</table>

Table XXVI
Forbidden liaisons produced by all speakers

Forbidden liaisons were very rarely produced (13/389, less than 4%). This confirms the notion that FSL learners have acquired the concept of French liaison. In general, learners produced a liaison in “obligatory” cases, and omitted one in “forbidden” cases. The 13 liaisons that were produced are not liaison errors, but rather other types of errors that will be examined in the section on syntactic categories. It is in fact not the number or errors that differentiates native speakers from FSL learners; it will be shown that it is the type of error that differs. Native speakers also produce forbidden liaisons such as *les haricots* ([lezaʁiko]) in which there is a change in the representation of *haricots*, but do not produce liaison after singular nouns such as *une question intéressante* ([ynkɛstjo̞nɛteʁɛsatas]), which occurred in the FSL corpus.
iii.ii. Group variation

Results for groups 1 and 2 individually are presented in table XXVII.

<table>
<thead>
<tr>
<th>GROUP 1</th>
<th>GROUP 2</th>
<th>GROUP 1 VS. GROUP 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>FORBIDDEN LIAISONS PRODUCED</td>
<td>TOTAL POSSIBLE FORBIDDEN LIAISONS</td>
<td>% OF FORBIDDEN LIAISONS PRODUCED</td>
</tr>
<tr>
<td>8</td>
<td>231</td>
<td>3.46%</td>
</tr>
</tbody>
</table>

Table XXVII
Forbidden liaisons produced by Group 1 and Group 2

Group 1 speakers produced 8 out of 231 forbidden liaisons, and Group 2 speakers produced 5 out of 158 forbidden liaisons. There was no difference among the two groups of speakers, since both produced a total of less than 4% forbidden liaisons. Forbidden liaisons did not cause major difficulties for either group.

iii.iii. Task variation

Results of forbidden liaisons produced by all speakers for each task presented individually are found in table XXVIII. The reading task elicited the lowest percentage of forbidden liaisons at less than 1%, while the spontaneous task contained 7% forbidden liaisons and the description, almost 4%. It seems that forbidden liaisons vary according to the nature of the discourse. A reading task is likely to elicit fewer forbidden liaisons than a spontaneous discourse. A relatively higher number of forbidden liaisons in a spontaneous discourse may be due to a lower number of errors in the reading task than in the two other spontaneous tasks. Without the aid of visual material, speakers are
building their sentences as they speak, and as a result will tend to produce more errors.

<table>
<thead>
<tr>
<th>TASK</th>
<th>FORBIDDEN LIAISONS PRODUCED</th>
<th>TOTAL POSSIBLE FORBIDDEN LIAISONS</th>
<th>% OF FORBIDDEN LIAISONS PRODUCED</th>
</tr>
</thead>
<tbody>
<tr>
<td>READING</td>
<td>1</td>
<td>126</td>
<td>0.79%</td>
</tr>
<tr>
<td>SPONTANEOUS</td>
<td>4</td>
<td>56</td>
<td>7.14%</td>
</tr>
<tr>
<td>DESCRIPTION</td>
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<td>207</td>
<td>3.86%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>13</td>
<td>389</td>
<td>3.34%</td>
</tr>
</tbody>
</table>

|               | t=1.802, p(96df) = .0746     |                                  |                                  |
| READ. VS. SPONT. |                              |                                  |                                  |
| READ. VS. DESC.   | t=2.224, p(96df) = .0285     |                                  |                                  |
| SPONT. VS. DESC.  | t=0.3925, p(96df) = .6955    |                                  |                                  |

Table XXVIII
Forbidden liaison produced by all speakers, according to each task

Results for forbidden liaisons produced by Group 1 and Group 2 speakers for each task are presented in table XXIX. In Group 1, there was 1% forbidden liaisons in the reading task, and 5% in both the spontaneous and the description tasks. In Group 2, there were no forbidden liaisons produced in the reading, 8% in the spontaneous task and 2% in the description. Thus, for both groups of speakers, the reading elicited the lowest frequency of forbidden liaisons. The difference in the results are explained by examining the actual utterances, which are presented below.
### Table XXIX
Forbidden liaison produced by Group 1 and Group 2, according to each task

<table>
<thead>
<tr>
<th>TASK</th>
<th>GROUP 1</th>
<th></th>
<th></th>
<th>GROUP 2</th>
<th></th>
<th></th>
<th>GROUP 1 VS. GROUP 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>FORBIDDEN LIAISONS PRODUCED</td>
<td>TOTAL POSSIBLE FORBIDDEN LIAISONS</td>
<td>% OF FORBIDDEN LIAISONS</td>
<td>FORBIDDEN LIAISONS PRODUCED</td>
<td>TOTAL POSSIBLE FORBIDDEN LIAISONS</td>
<td>% OF FORBIDDEN LIAISONS</td>
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<td></td>
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<td>0</td>
<td>29</td>
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<td>t = -3.951, p(47df) = .6945</td>
</tr>
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<td></td>
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<td>20</td>
<td>5.00%</td>
<td>3</td>
<td>36</td>
<td>8.33%</td>
<td>t = 1.912, p(47df) = .0620</td>
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<tr>
<td>DESC.</td>
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<td>93</td>
<td>2.15%</td>
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<tr>
<td>TOTAL</td>
<td>8</td>
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<td>5</td>
<td>158</td>
<td>3.16%</td>
<td></td>
</tr>
<tr>
<td>READ. VS. SPONT.</td>
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<td></td>
<td></td>
<td>t = 1.742, p(58df) = .0867</td>
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<tr>
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<td></td>
<td></td>
<td>t = 1.566, p(58df) = .1227</td>
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</tr>
<tr>
<td>SPONT. VS. DESC.</td>
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<td></td>
<td></td>
<td>t = 1.161, p(58df) = .2504</td>
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</tbody>
</table>

iii.iv. **Syntactic categories**

The syntactic contexts of forbidden liaison include all possible cases in which liaison should not be produced, according to the traditional description. Included as forbidden contexts are singular nouns and adjectives, strong pronouns, the conjunction *et* and a following item, and items followed by *h aspiré*, *onze*, and *oui*.

a) **All speakers**

Results for syntactic contexts of forbidden liaisons for all speakers are found in table XXX.
<table>
<thead>
<tr>
<th>SYNTACTIC CATEGORY</th>
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<th></th>
<th></th>
<th></th>
<th></th>
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<th></th>
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<td>TOTAL</td>
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</tr>
<tr>
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<td>NUMBER</td>
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</tr>
<tr>
<td></td>
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<td>OCCUR-</td>
<td>PRODUCED</td>
<td>OCCUR-</td>
<td>PRODUCED</td>
<td>OCCUR-</td>
<td>PRODUCED</td>
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<tr>
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<tr>
<td>PRO + CONJ</td>
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<td>0%</td>
</tr>
<tr>
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<td>0%</td>
</tr>
<tr>
<td>ET + ADV</td>
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<td>0%</td>
<td>1</td>
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<tr>
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<td>1</td>
<td>0%</td>
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<tr>
<td>TOTAL</td>
<td>1</td>
<td>126</td>
<td>1%</td>
<td>4</td>
<td>56</td>
<td>7%</td>
<td>8</td>
</tr>
</tbody>
</table>

Table XXX
Syntactic categories for forbidden liaison for all speakers
As stated above, forbidden cases of liaison were generally respected, in that only 3% of forbidden liaisons were produced. Speakers produced a total of 37 forbidden contexts. Of these, 9 produced a liaison. The syntactic contexts that produced a liaison are found in Table XXXI.

<table>
<thead>
<tr>
<th>SYNTACTIC CONTEXT</th>
<th>PERCENTAGE OF PRODUCED FORBIDDEN LIAISONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>PREPOSITION+ASP H</td>
<td>(3/3) 100%</td>
</tr>
<tr>
<td>PRONOUN+PREPOSITION</td>
<td>(1/1) 100%</td>
</tr>
<tr>
<td>SING. ADJECTIVES+ET</td>
<td>(3/10) 30%</td>
</tr>
<tr>
<td>SING. NOUN+OTHER</td>
<td>(4/79) 5%</td>
</tr>
<tr>
<td>ET+OTHER</td>
<td>(2/98) 2%</td>
</tr>
</tbody>
</table>

Table XXXI  
Percentage of produced liaisons according to syntactic category for all speakers, for all tasks

Comparing results according to the type of discourse, the reading contained a total of 6 forbidden contexts, one of which produced a liaison. It was [NSG+ADJ] (5%). No other forbidden liaisons occurred in the reading.

The spontaneous task contained a total of 19 forbidden liaison contexts, 4 of which produced liaisons. The contexts were:

- [NSG+ADV] (100%)
- [PRO+PREP] (100%)
- [NSG+PREP] (14%)
- [NSG+V] (5%)

Three of these contexts involved a liaison after a singular noun.

The description task contained a total of 27 forbidden liaison contexts, 4 of which produced liaisons. They were:

- [PREP+ASP H](100%)
- [ADJSG+ET] (33%)
- [ET+ADV] (6%)
Thus, forbidden liaisons that were produced were limited to a small number of contexts, and can be summarized by the following syntactic contexts:

\[
[ET+DET] \\
[ET+OTHER] \\
[NSG+OTHER] \\
[ADJSG+OTHER] \\
[PREP+ASPH] \\
[PRO+PREP]
\]

No other contexts elicited a forbidden liaison. However, these liaisons may not have been produced for syntactic reasons, or as the result of failing to apply the rules of liaison. In fact, there may be a phonological explanation for their production, such as the nasal liaison consonant /n/ in *c'est une question intéressante*.

b) Group 1

Results for forbidden liaison according to syntactic categories for Group 1 are found in Table XXXII. Group 1 speakers produced a total of 24 forbidden liaison contexts, 4 of which produced liaisons. They were:

\[
[PREP+ASPH] 
(100\%) \\
[ADJSG+ET] 
(33\%) \\
[NSG+PREP] 
(14\%) \\
[NSG+ADJ] 
(4\%)
\]

The reading contained a total of 5 forbidden liaison contexts, only 1 of which produced a liaison. It was [NSG+ADJ] (5%). This liaison was produced by one speaker who produced a forbidden liaison in the following sentence:

(131) *c'est une question intéressante.* (speaker 13)
<table>
<thead>
<tr>
<th>SYNTACTIC CATEGORY</th>
<th>READING</th>
<th>TOTAL NUMBER PRODUCED</th>
<th>TOTAL NUMBER PRODUCED %</th>
<th>SPONTANEOUS</th>
<th>TOTAL NUMBER PRODUCED</th>
<th>TOTAL NUMBER PRODUCED %</th>
<th>DESCRIPTION</th>
<th>TOTAL NUMBER PRODUCED</th>
<th>TOTAL NUMBER PRODUCED %</th>
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</tr>
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</tr>
<tr>
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<td>1%</td>
<td>1</td>
<td>20</td>
<td>5%</td>
<td>6</td>
<td>114</td>
<td>5%</td>
</tr>
</tbody>
</table>

Table XXXII
Syntactic categories for forbidden liaison for Group 1
A liaison in this sentence may be due to the nasal consonant and not to a liaison error, which will be discussed in subsequent sections. Nasal vowels tend to be problematic for language learners whose first language lack these vowels. Rather than produce a nasal vowel in some cases, the nasal consonant will be realized, and the preceding vowel undergoes denasalization. This phenomenon is found predominantly with the indefinite article *un*, which results in [un] or [œn], whether before vowel- or consonant-initial words (as in *un petit enfant* [unpititaf], speaker 26, spontaneous).

Generally, it may be assumed that forbidden liaisons are not produced. Those that are produced are the result of factors such as the difficulty of nasal vowels.

The spontaneous task contained a total of 10 forbidden liaison contexts, only one of which produced a liaison. It was [NSG+PREP] (50%). This is similar to the reading task, which also contained one forbidden liaison after a singular noun.

Eighteen of the nineteen speakers did not produce a liaison. The one speaker who made a forbidden liaison produced the following phrase:

(132) du pain au blé (speaker 4)

In this case, it could be possible that the speaker considered *pain au blé* as a compound noun in which liaison is obligatory (as in *les Etats-Unis, plus ou moins*, etc.). However, this case was the only forbidden liaison that was produced in the spontaneous task, and it involves a nasal consonant, as those cases in the reading task. Nasal consonants cause difficulties in pre-consonantal position, which shows that the pronunciation of such consonants is not a liaison error, but rather an inability to produce a nasal vowel.

The forbidden cases in the description, as with the two previous tasks, presented very few liaisons. However, it is the description that contains the highest number of forbidden liaisons. It contained a total of 20 forbidden liaison contexts, 2 of which produced liaisons. They were
There were a total of 6 out of 114 cases of forbidden liaison. Fourteen speakers did not produce any forbidden liaisons, while 5 speakers produced at least one. The following forbidden liaisons were produced:

(133) a. un nez long et mince (speaker 6)  
son nez qui est aussi long et gros (speaker 7)  
son nez est long et épais (speaker 15)  

b. en haute (en haut) (speaker 9, twice)  
en haut (speaker 17)  

In these cases, there were two sets of omissions. One occurred with the adjective long, which triggered a [g], which may be a liaison consonant or a temporally anchored consonant. The realization of the final consonant may also be due to difficulties with the nasal vowel. The other cases were with haut, which speakers reanalysed as belonging to the class of h muet, such as hôtel, homme, etc. All other cases of forbidden liaisons were not produced.

Thus, while forbidden liaisons were not very frequent in the description task, there were more produced in this task than in the reading and the spontaneous tasks. Of the six cases of produced liaison, there were two types: liaison after long and before haut. Both these cases can be viewed as phonological errors and not as a failure to apply the rules of liaison. The [g] in long may be the result of L1 interference. Haut belongs to the category of h aspiré words, but may be interpreted as beginning with an h muet, and liaison occurs. In fact, the opposite also occurred, in which one speaker said le homme.

To summarize, Group 1 speakers produced forbidden liaisons in only three syntactic contexts: after singular nouns, after singular adjectives, and before an h aspiré.
c) **Group 2**

Results for forbidden liaison according to syntactic categories for Group 2 are found in Table XXXIII. Group 2 speakers produced a total of 26 forbidden liaison contexts, 5 of which produced liaisons. They were:

- \([\text{PRO+PREP}]\) (100%)
- \([\text{NSG+ADV}]\) (50%)
- \([\text{ET+DET}]\) (6%)
- \([\text{NSG+V}]\) (5%)
- \([\text{ET+ADV}]\) (2%)

Comparing the different discourses, in the reading task, there was only one context of forbidden liaison. It was:

(134) et/outre Atlantique

None of the speakers produced a liaison in this case.

The spontaneous task contained a total of 15 forbidden liaison contexts, 3 of which produced liaisons. They were:

- \([\text{NSG+ADV}]\) (100%)
- \([\text{PRO+PREP}]\) (100%)
- \([\text{NSG+V}]\) (6%)

There were only 3 out of 36 forbidden liaisons produced in the spontaneous task. Sixteen speakers did not produce any forbidden liaisons, 11 speakers did not have any forbidden contexts in their discourse, and only two speakers produced the 3 forbidden liaisons which were:

(135) le train_est... (speaker 22)
...chien auprès de vous (speaker 41)
Quand il mord quelqu'un à la jambe (speaker 41)

As was discussed with Group 1 speakers, these cases may be due to the nasal consonant. None of the other forbidden liaisons were produced. There were however, cases of forbidden liaison with words ending in a nasal vowel that did not undergo denasalization:
<table>
<thead>
<tr>
<th>SYNTACTIC CATEGORY</th>
<th>READING</th>
<th>SPONTANEOUS</th>
<th>DESCRIPTION</th>
<th>TOTAL</th>
</tr>
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Table XXXIII
Syntactic categories for forbidden liaison for Group 2
While it is true that not all nasal vowels became denasalized, there seems little doubt that nasals pose difficulties for the language learner.

The description task contained a total of 17 forbidden liaison contexts, 2 of which produced liaisons. They were:

- \([ET+ADV]\) (8%)
- \([ET+DET]\) (6%)

There were 93 occurrences of forbidden contexts, and only two occurrences of liaisons. Two speakers produced one each, which were:

(137) \( et\_aussi \) (speaker 26)
\( et\_une\ soeur \) (speaker 47)

Both these speakers produced a liaison after the conjunction \( et \). No other speaker made any forbidden liaisons.

Thus, it is evident that forbidden liaisons are very rarely produced in all tasks. The description task of Group 2 speakers differs from Group 1 in that there were 6 forbidden liaisons out of 114 occurrences (6%). Group 2 made fewer errors than Group 1.

iii.v. **Summary**

The results for forbidden contexts can be summarized as follows: a) forbidden liaisons occurred very rarely in the FSL data; b) the contexts in which a forbidden liaison occurred were with singular nouns and adjectives, with the conjunction \( et \), before \( h\_aspiré \), and with PRO; c) both groups performed in a similar manner with respect to syntactic contexts; d) the type of task was found to be a factor in that the reading produced the lowest percentage of forbidden liaisons, suggesting that
errors are more frequently produced with spontaneous-type discourses.

Forbidden liaisons were not produced, once again with few exceptions, also confirming the notion that the FSL learners studied here have acquired the concept of liaison. There were only two types of forbidden liaisons produced: the floating nasal consonant in singular nouns (ex. une question intéressante) and the floating consonant of the conjunction et (ex. et une soeur, et aussi). In the case of singular nouns, it seems that nasal vowels cause difficulties for language learners whose first language does not possess them, and so the consonant is temporally anchored. This also indicates that the nasal vowel is analysed as V+N underlyingly. This concept will be developed further in the section on temporally anchored consonants in pre-consonantal and pre-pausal position where there is further evidence that nasal consonants are realized even before consonant-initial words and in pre-pausal position.

2.2.1.1. Summary

From these results, it can be concluded, first of all, that obligatory liaison has been successfully acquired by both groups of speakers. It was produced in over 90% of the cases. It is evident that the initial hypothesis stating that FSL learners produce a lower frequency of liaisons and make more liaison errors than native French speakers is not entirely supported by the data. The data on obligatory liaisons has shown that the majority of these liaisons are in fact realized. As a result, obligatory contexts posed no major difficulty for FSL speakers. There was, however, a distinction among obligatory contexts: those in which 100% liaisons were produced and those in which liaison was variable (such as after c’est). As for the type of task, there was no significant difference between the tasks, so that its production was not affected by the type of discourse. Likewise, no task was too difficult to impede liaison production. These conclusions are further supported by the fact that both
groups of speakers performed in a relatively similar manner with respect to obligatory liaisons (within 2% of each other).

Second, optional liaisons were infrequently produced (14%). The data reveals that, like native speakers, optional liaison is produced less frequently than obligatory liaison (a comparison of native and FSL speakers will be presented in chapter three). However, it is interesting to note that the reading task produced the lowest percentage of optional liaisons, whereas Delattre (1956), Malécot (1975) and all traditional descriptions of liaison state that there is a higher possibility for optional liaisons in this task as opposed to a conversation. The categories that elicited the majority of optional liaisons were verbs, adverbs, plural nouns and conjunctions. More specifically, the verbs were être and devoir, the adverb was the negative pas, and the conjunction was quand. No other optional context elicited a liaison. Thus, there is a distinction among optional contexts in which certain contexts may elicit a liaison, and those in which liaison never occurs (and are forbidden to FSL speakers). In fact, optional liaison depends on various factors (such as word frequency, verb conjugation, etc.). These conclusions are further supported by the fact that the patterns of optional liaisons for both groups were relatively similar.

Third, forbidden liaisons were very rarely produced (less than 4%). This also confirms the notion that liaison was successfully acquired. The main difference between L1 and L2 speakers is the type of error. The forbidden liaisons that were produced were not, however, produced for syntactic reasons, rather, they were the result of phonological errors (i.e. the realization of the nasal consonant /n/, h aspiré words treated as words beginning with an h muet). They occurred in five contexts: after singular nouns, singular adjectives, the conjunction et, a strong pronoun and before h aspiré. Most of these cases are forbidden liaisons that native speakers never make. As with obligatory and optional liaisons, the patterns of forbidden liaisons were also similar in each of the
groups. An important observation is that the reading task produced the lowest number of forbidden liaisons, confirming the notion that more errors occur in spontaneous-type discourses, in which speakers are editing what they're saying as they speak. This does not suggest that the errors were necessarily liaison errors. Rather, they may be performance errors, since the speaker is constructing the constituents of sentences as he speaks. Thus, the reading had the highest percentage of obligatory liaisons, and the lowest percentage of forbidden liaisons in both groups. Optional liaisons in Group 2 were also much less frequent in the reading than in the other two tasks (Group 1 did not conform to this pattern, although this may be due to a high frequency of liaisons produced in *mis_en relief*, which may have been considered a lexicalized expression). This may be due to the nature of the task, in which the liaison consonant is written, and thus pronounced. Spontaneous-type discourses produced fewer frequently-occurring liaisons and more errors.

In summary, we have seen that these language learners do understand the notion of French liaison. They produce obligatory liaisons, and very rarely produce forbidden liaisons, with the exception of certain errors that were able to be phonologically determined.

The results of the realization of liaison for all speakers for all tasks are found in table XXXIV.

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<tr>
<th>TASK</th>
<th>OBL. MADE</th>
<th>TOTAL OBL.</th>
<th>% OBL.</th>
<th>OPT. MADE</th>
<th>TOTAL OPT.</th>
<th>% OPT.</th>
<th>FOR. MADE</th>
<th>TOTAL FOR.</th>
<th>% FOR.</th>
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<td>SPONT.</td>
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<td>136</td>
<td>94.12%</td>
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<td>187</td>
<td>13.37%</td>
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<td>7.14%</td>
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<td>DESC.</td>
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<td>91.61%</td>
<td>39</td>
<td>236</td>
<td>16.52%</td>
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<td>207</td>
<td>3.86%</td>
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<td>TOTAL</td>
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<td>1016</td>
<td>93.99%</td>
<td>81</td>
<td>596</td>
<td>13.59%</td>
<td>13</td>
<td>389</td>
<td>3.34%</td>
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</table>

Table XXXIV
Total number of liaisons for all tasks for all speakers
Overall, it is possible to ascertain that liaison has been acquired by both groups, with a very high frequency of obligatory liaisons being produced and very few forbidden liaisons. While there were some optional liaisons produced, they were very infrequent. As mentioned above, the nature of the tasks did influence the production of liaison, in that speakers made more errors (by producing the forbidden liaisons) in the spontaneous and description tasks, where they had no visual material and had to plan their sentences as they went along.

From the results obtained for both groups, it is possible to rank the occurrences of liaison in the following manner, from contexts that elicit the highest percentage of liaisons to the lowest:

<table>
<thead>
<tr>
<th>OBLIGATORY</th>
<th>OPTIONAL</th>
<th>FORBIDDEN</th>
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<tbody>
<tr>
<td>LEXICALIZED (100%)</td>
<td>V+OTHER (24%)</td>
<td>PREP+ASPH (100%)</td>
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<tr>
<td>V+NCLIT (100%)</td>
<td>CONJ+OTHER (12%)</td>
<td>PRO+OTHER (33%)</td>
</tr>
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<td>CLIT+OTHER (97%)</td>
<td>ADV+OTHER (9%)</td>
<td>NSG+OTHER (4%)</td>
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<td>DET+OTHER (95%)</td>
<td>NPL+OTHER (7%)</td>
<td>ET+OTHER (1%)</td>
</tr>
<tr>
<td>ADJ+N (93%)</td>
<td>ADJPL+OTHER (0%)</td>
<td>NPL+OTHER (0%)</td>
</tr>
<tr>
<td>NCLIT+OTHER (92%)</td>
<td>PRO+OTHER (0%)</td>
<td>ADJPL+OTHER (0%)</td>
</tr>
<tr>
<td>PREP+OTHER (96%)</td>
<td>INF+OTHER (0%)</td>
<td>ADJSG+OTHER (0%)</td>
</tr>
<tr>
<td>C'EST+OTHER (86%)</td>
<td>PREP+OTHER (0%)</td>
<td>V+OTHER (0%)</td>
</tr>
<tr>
<td>ADV+OTHER (80%)</td>
<td></td>
<td>INF+OTHER (0%)</td>
</tr>
</tbody>
</table>

Table XXXV
Syntactic categories from highest percentage of liaisons to lowest for all speakers, for all three tasks

This table reveals that syntactic contexts do play a role in liaison production, in that liaisons that were produced in all three categories are able to be accounted for according to the syntactic context to which they belong. With the exception of individual errors, liaison production in FSL speakers can be categorized according to syntactic contexts in order to reveal certain tendencies. They are:

a) over 80% obligatory liaisons were produced in all contexts;

b) only four contexts produced optional liaisons (after verbs, plural nouns, conjunctions and adverbs;
c) only four contexts produced forbidden liaisons (after a strong pronoun, a singular noun, the conjunction *et*, and before an *h* aspiré.

Results on the three types of liaison also provide evidence that the current terminology of obligatory, optional and forbidden is inadequate to account for these findings, since these speakers do not adhere to the three types of liaison in their speech performance. FSL learners will omit obligatory liaisons, produce forbidden liaisons, and will treat the cases that are traditionally termed "optional" as either frequently occurring (though not as frequent as obligatory liaisons), rare, or forbidden. That is, in the case of language learners, there seems to be a division among optional liaisons, which may be recategorized into two types: those that are more frequently produced (though not as frequently as obligatory liaisons) such as with *être* and *pas*, and those that are rarely, if ever, produced (after infinitives, for example). It is in fact the three-way distinction that is not broad enough to include and account for individual speaker variations as well as the varying degrees of optionality. This observation is also true for native speakers as well. While this is pertinent for a description of FSL speech patterns, it is also true of native French speakers, who also produce variations in their speech performance. In fact, Malécot (1975) interprets his results on the analysis of liaison by middle-class Parisians as follows: "(i)n a general way, we can say that the forbidden liaisons involve word-final consonants that have now completely disappeared before vowels, that optional liaisons involve those that are now in the process of disappearing, and that the required ones involve those that have not yet begun to erode, but where the dividing lines are, no one can say" (Malécot 1975: 173). The same difficulty is also present in this analysis of FSL data: it is impossible to define where the dividing lines are. As was mentioned in a previous section, Malécot establishes 4 categories (instead of the three traditional ones) which are:

1. universally required,
2. optional in conversation but obligatory in elocution,
3. rare in conversation but optional in elocution,
4. universally forbidden (Malécot 1975: 173, 176)

This distinction is still not adequate for FSL data because while the distinction in (2) and (3) in which Malécot divides optional liaisons is present in FSL speech, the division of optional liaisons is not due to elocution. Certain contexts appear to be optional while others are rare, whether in the reading, spontaneous discourse or description. The main factor here is the syntactic categories of the words involved. There are also other factors that may explain why liaison is more common after the third person singular of the verb être than the other conjugations. In fact, it was the reading task that actually produced the fewest number of optional liaisons. The notion of style has traditionally been associated with optional liaison. However, style in FSL speech does not seem to be the determining factor between a produced optional liaison and an omitted one. The verb form est in the phrases il est intelligent, il est allé seems to function like a lexicalized item that elicits a liaison much more frequently than nous sommes intelligents, or vous êtes intelligent.

Finally, the type of discourse does seem to play a role in the production of liaison since speakers produced the lowest percentage of errors (forbidden liaisons) in the reading task. Speakers were able to make fewer errors when provided with sentences, than when they had to plan and produce their own. It is not unusual that more errors would occur in a spontaneous discourse. The observations presented here will be discussed further and analysed in chapter three.
2.2.2. False liaisons

A small number of word-final consonants were found in the speech of both groups of speakers in which some type of error occurred. These consonants were termed false liaisons, and classified into three categories:

a) **consonant insertion**, in which a liaison that has no underlying consonant is phonetically realized (i.e. *quatre-z-enfants*);

b) **liaison consonant error**, in which an underlying consonant exists but another liaison consonant is realized (i.e. *ce n'est pas-t-à moi*);

c) **non-liaison consonant insertion**, in which there is an underlying consonant but a non-liaison consonant is inserted (i.e. *un grand ami* [grâdami]).

False liaisons are part of the speech performance of native French speakers, who may produce both (a) and (b). Non-liaison consonant insertion, on the other hand, was created to account for FSL data. Even though false liaisons appear when both phonological and syntactic conditions are satisfied, they were excluded from the three-way division of obligatory, optional and forbidden liaisons since the realized consonant is an incorrect consonant.

a) All speakers

Results for false liaisons in the speech performance of all 49 speakers are found in table XXXVI.

<table>
<thead>
<tr>
<th>TASK</th>
<th>CONSONANT INSERTION</th>
<th>LIAISON CONSONANT ERROR</th>
<th>NON-LIAISON CONSONANT INSERTION</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>READING</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>SPONTANEOUS</td>
<td>0</td>
<td>3</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>DESCRIPTION</td>
<td>0</td>
<td>6</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>TOTAL</td>
<td>1</td>
<td>9</td>
<td>4</td>
<td>14</td>
</tr>
</tbody>
</table>

Table XXXVI
False liaisons for all speakers
While false liaisons occurred very infrequently, there was one occurrence of a consonant insertion, 9 liaison consonant errors and 4 non-liaison consonant insertions. The only consonant insertion that appeared was *ni additifs* [nizaditif] (speaker 13) in the reading task. This type of false liaison does not seem to be a strategy that these speakers adopt at word boundaries.

Liaison consonant errors were the most frequent of all three types of false liaisons. The nine liaison consonant errors that occurred were the following:

(138) **Spontaneous discourse:**
- a) tout chien doit être [dwaζɛtʀ] (speaker 38)
- b) des petits enfants [təfɛ] (speaker 45)
- c) les petits enfants [təfɛ] (speaker 45)

Description:
- d) ses cheveux sont courts et... [kurtɛ] (speaker 7)
- e) Un grand homme [ɡʁɑ̃ɔm] (speaker 13)
- f) les cheveux courts et bouclés [kurtɛ] (speaker 15)
- g) deux garçons et [ne] (speaker 42)
- h) un des enfants et les... [afatele...] (speaker 42)
- i) ils ont un [ilzɔ̃ɛ] (speaker 42)

Liaison consonant errors only occurred in the spontaneous discourse and in the description. None occurred in the reading. This type of false liaison may be affected by the nature of the discourse: the speaker is editing what he is saying as he is saying it. This causes the incorrect liaison consonant to be produced.

One of the difficulties for FSL speakers pertains to nasal consonants. In fact, three of the examples above involve a nasal consonant. In many cases, nasal vowels seem to cause difficulties for the L2 speaker and as a result the nasal consonant is realized.

The four non-liaison consonant insertions were:

(139) **Spontaneous discourse:**
- a) il doit être [ildwaζɛtʀ] (speaker 45)
- b) las autorités [lasawtɔʁite] (speaker 42)
Description:
c) des yeux grands et [ɡʁād] (speaker 2)
d) neuf ans [nœfɔ] (speaker 43)

As with liaison consonant errors, these false liaisons also occurred in the spontaneous discourse and the description task, and not in the reading. The example in (139d) was included since the final consonant was pronounced [f] and not [v].

Some of these false liaisons may be problematic in other respects. For instance, the false liaisons in (140):

(140) des yeux grands et... [ɡʁād] (non-liaison consonant insertion, speaker 2, description)
     ses cheveux sont courts et... [kœʁt] (liaison consonant error, speaker 7, description)
     les cheveux courts et bouclés (liaison consonant error, speaker 15, description)

may appear to be a liaison consonant, or perhaps a morphological consonant indicating that the speaker made the adjectives feminine. However, as will be evident from other examples in section 2.2.4., the speaker is not making a morphological error of gender; she/he may just be pronouncing final consonants.

An interesting observation concerns the grammatical categories of words producing false liaisons. In general, most of these cases occurred with determiners, adjectives, and nouns. One possibility is that there is a higher frequency of NPs in L2 speech, since learners rarely complete a sentence. As a result, there is a higher probability for errors to occur. Furthermore, since L2 speakers rarely make optional liaisons, this would also account for very few false liaisons with verbs.

Comparing the three tasks, the reading task contained the fewest number of false liaisons. There was only one in the reading (a consonant insertion), five in the spontaneous discourse (3 liaison consonant errors and 2 non-liaison consonant insertions) and eight in the description (6

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38The /v/ in *neuf* is actually a case of *enchainement*. However, the /v/ becomes [v] only before *heures* and *ans*, thus giving [nœvœʁ] and [nœvɔ] (Léon 1966: 118). It was included only to show that the incorrect consonant was produced before *ans*. 
liaison consonant errors and 2 non-liaison consonant insertions). These results reveal that there is a correlation between false liaisons and the nature of the discourse. False liaisons are not prevalent in the reading task, but do appear more frequently in the spontaneous tasks in which the speaker is required to produce his own sentences and therefore search for his own vocabulary. Thus, if the task is of a spontaneous nature, more errors, or false liaisons, occur.

These results suggest that

a) false liaisons were in general not very frequent in FSL speech;

b) consonant insertions were a lot less frequent than liaison consonant errors and non-liaison consonant insertions (liaison consonant errors were the more frequent);

c) the reading produced the fewest number of false liaisons, suggesting that the nature of the discourse plays a role in their production, and confirming the results obtained for forbidden liaisons: spontaneous-type discourses produce more errors;

d) false liaisons occur predominantly within the NP.

b) Group 1

Table XXXVII presents the results of false liaisons for Group 1 speakers.

<table>
<thead>
<tr>
<th>TASK</th>
<th>CONSONANT INSERTION</th>
<th>LIAISON CONSONANT ERROR</th>
<th>NON-LIAISON CONSONANT INSERTION</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>READING</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>SPONTANEOUS</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>DESCRIPTION</td>
<td>0</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>TOTAL</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>5</td>
</tr>
</tbody>
</table>

Table XXXVII
False liaisons for Group 1
Group 1 speakers produced a total of 5 false liaisons: 1 consonant insertion, 3 liaison consonant errors and 1 non-liaison consonant insertion. The reading contained 1 false liaison (a consonant insertion), the spontaneous discourse did not contain any false liaisons, while the description task had the highest number at 4 false liaisons (3 liaison consonant errors and 1 non-liaison consonant insertions). In this group, liaison consonant errors were slightly more frequent than the other two types. False liaisons were not very frequent in general in the speech of Group 1 speakers.

c) Group 2

Table XXXVIII presents results of false liaisons for Group 2 speakers.

<table>
<thead>
<tr>
<th>TASK</th>
<th>CONSONANT INSERTION</th>
<th>LIAISON CONSONANT ERROR</th>
<th>NON-LIAISON CONSONANT INSERTION</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>READING</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>SPONTANEOUS</td>
<td>0</td>
<td>3</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>DESCRIPTION</td>
<td>0</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>TOTAL</td>
<td>0</td>
<td>6</td>
<td>3</td>
<td>9</td>
</tr>
</tbody>
</table>

Table XXXVIII
False liaisons for Group 2

Subjects in Group 2 produced a total of nine false liaisons. The reading did not contain any false liaisons, while the spontaneous task contained five and the description contained four each (3 liaison consonant errors and 2 non-liaison consonant insertions in the spontaneous task and 3 liaison consonant errors and 1 non-liaison consonant insertion in the description). As with Group 1, liaison consonant errors were the most frequently occurring false liaisons, and false liaisons occurred in the spontaneous discourse and the description task. The only difference among the two groups is that
Group 2 speakers produced almost twice the amount of false liaisons than Group 1 speakers. However, there the difference between the two groups is not significant since there were more speakers in the second group. The only conclusion that can be drawn is that false liaisons do not seem to be a major source of error for either group.

2.2.2.1. Summary

To summarize, first of all, there seem to be very few false liaisons in general, which indicates that false liaisons do not cause major difficulties for language learners. This also confirms the notion that they have acquired the concept of French liaison, and produce it appropriately.

Secondly, of the three types of false liaisons studied, liaison consonant error was the most frequent, followed by non-liaison consonant insertion. Consonant insertions do not seem to be a strategy FSL learners adopt. In other words, speakers will rarely, if ever, insert a consonant that is not present underlyingly. Instead, learners will make one of two choices: i) they will produce a consonant that is present in the word but is not the liaison consonant, as in les petits enfants [lepititâfã], or ii) they will produce a consonant that is present in the word but is not phonetically modified to be realized as a liaison consonant, as in des yeux grands et... [gräde]. While this appears to be a feminine marker (from grandes), there is evidence that the realizations are phonological and not morphological. Consonant insertions, however, are present in the speech of native French speakers (as in quat'yeux, cinq zhommes, mal de zyeux, il va-t-et vient, il faudra-t-aller, etc.).

Thirdly, false liaisons depend on the nature of the discourse since the reading task contained fewer number of false liaisons than the other two tasks. False liaisons belong then to spontaneous type discourses in which the speaker does not have visual cues as are available in a reading, but must
produce his own sentences and search for a lexical item as he speaks. While false liaisons also occur among native French speakers, they differ in their nature. That is, certain liaisons may be produced by native speakers (*ni-z-additifs*), while others are particular to L2 speakers, such as *deux garçons et...* [gaʁsõne...]. False liaisons in FSL speech are learning errors.

Finally, false liaisons occurred predominantly within the NP.

### 2.2.3. Resyllabification

When the transcription of the speech samples was carried out, it appeared that in some cases liaisons that were produced remained in coda position, as in *c’est/une question, dans/un secteur, or en/Europe.* While the floating consonant was realized, it was not resyllabified, which is one of the properties of French liaison. As a result, the notion of resyllabification was included in order to determine its absence, and possibly the reasons behind non-resyllabification, which may differ from non-resyllabification in native speakers’ speech patterns.

For the purposes of this section, those liaisons that were phonetically realized were classified depending on whether the consonant was resyllabified to the following onset or whether it remained in coda position.

a) **All speakers**

Table XXXIX presents the results for resyllabification of produced liaisons for all 49 speakers.
The results from all speakers suggest that liaison consonant resyllabification did not prove to be problematic for these learners as most liaisons produced were resyllabified (93%). This confirms the conclusion previously mentioned that FSL speakers in both groups have acquired the notion of liaison.

Comparing tasks, speakers performed in a similar manner in all three tasks, with a slightly lower number in the reading (93% compared to 94% in the other two tasks). Thus, non-resyllabification does not seem to depend on the nature of the task. Other factors must be involved in its production.

b) Group 1

Table XL presents the results for Group 1.

<table>
<thead>
<tr>
<th>TASK</th>
<th>RESYLLABIFICATION</th>
<th>NON-RESYLLABIFICATION</th>
<th>TOTAL</th>
<th>% RESYLLABIFIED</th>
</tr>
</thead>
<tbody>
<tr>
<td>READING</td>
<td>267</td>
<td>13</td>
<td>280</td>
<td>95.36%</td>
</tr>
<tr>
<td>SPONTANEOUS</td>
<td>68</td>
<td>7</td>
<td>75</td>
<td>90.67%</td>
</tr>
<tr>
<td>DESCRIPTION</td>
<td>120</td>
<td>10</td>
<td>130</td>
<td>92.31%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>455</td>
<td>30</td>
<td>485</td>
<td>93.81%</td>
</tr>
</tbody>
</table>

Table XL
Resyllabification for Group 1
Speakers in this group resyllabified almost 94% of liaisons. Generally, liaisons were resyllabified in all three tasks. The reading contained the highest number of resyllabified liaisons (95%), compared to the spontaneous discourse (91%) and the description task (92%).

c) Group 2

The results for Group 2 are found in table XLI.

<table>
<thead>
<tr>
<th>TASK</th>
<th>RESYLLABIFICATION</th>
<th>NON-RESYLLABIFICATION</th>
<th>TOTAL</th>
<th>% RESYLLABIFIED</th>
</tr>
</thead>
<tbody>
<tr>
<td>READING</td>
<td>254</td>
<td>29</td>
<td>283</td>
<td>89.75%</td>
</tr>
<tr>
<td>SPONTANEOUS</td>
<td>96</td>
<td>3</td>
<td>99</td>
<td>96.97%</td>
</tr>
<tr>
<td>DESCRIPTION</td>
<td>214</td>
<td>11</td>
<td>225</td>
<td>95.11%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>564</td>
<td>43</td>
<td>607</td>
<td>92.92%</td>
</tr>
</tbody>
</table>

Table XLI
Resyllabification for Group 2

Speakers in Group 2 resyllabified 93% of all liaisons. It is interesting that both groups were individually tested, were given different sets of tasks, yet produced approximately the same percentage of resyllabified liaisons (with less than 1% difference). As for the tasks in Group 2, the reading task contained the lowest percentage of resyllabification (90%) compared to 97% in the spontaneous discourse and 95% in the description task. This is contrary to the results for Group 1 in which the reading task contained the highest percentage of resyllabified liaisons. The difference in the two groups with respect to the nature of the discourse suggests that it may not be a factor involved in non-resyllabification, and that other factors contribute to a leftward syllabification.

Closer inspection of liaisons that were resyllabified and those that were not reveals certain generalizations among these speakers. While leftward syllabification occurs in native speaker speech
for stylistic purposes, the same is not true of FSL learners. Non-resyllabification occurs for various reasons that are specific to language learners. The following four factors were considered:

1) word length;
2) word familiarity and word frequency;
3) silent pauses;
4) syntactic categories.

1) **Word length**

The length of the following word in a liaison context may have an effect on whether or not the liaison consonant will be resyllabified. This concept is not new. It is mentioned in De Jong (1989) on the realization of liaison, among native French speakers, and to the length of the word containing the liaison consonant (that is, monosyllabicity vs. polysyllabicity). De Jong concludes that liaison realization may be dependent on nonsyntactic factors such as word length. The effects of the length of the following word may also be applied to resyllabification in FSL speech. The following examples are cases of non-resyllabification in both groups of speakers, taken from the reading tasks:

(141) **Group 1**

1. des_/ingrédients (speaker 3)
2. un_/arrangement (speaker 6)
3. les_/aliments (speaker 9)

**Group 2**

1. des_/ambitions (speaker 22)
2. son_/intention (speaker 21)
3. les_/entreprises (speaker 31)

In each of these cases, the floating consonant remained in the coda position.

2) **Word familiarity and word frequency**

Non-resyllabification may also depend on the familiarity or the frequency of the following word. As with word length, word familiarity and word frequency of the liaison word are also mentioned with respect to liaison production by native French speakers. However, it seems that not
only does a following unfamiliar word cause difficulties for liaison production in FSL speech, it may also cause leftward syllabification. When the speaker encounters an unfamiliar word, he has a tendency to pause and not resyllabify the liaison consonant. For example,

(142) des_/al-, (aliments) (speaker 1, reading)
des_/in- (ingrédients) (speaker 36, description)

Words such as aliments and ingrédients may not be frequently used words, causing difficulties for the speaker.

3) Silent pauses

Temporal variables such as silent pauses were not analysed in this study, and may be the subject of a future study. However, it seems that silent pauses between two words may also have an effect on resyllabification. Pausing after the determiner, for example, was not unusual, which caused not only non-resyllabification, but sometimes the deletion of the consonant (as in les_/ ingrédients or les/ingrédients). When a pause occurs within a syntactic phrase, the word-final consonant is not resyllabified to the following word (ex. les ingrédients [lez-œ-gre-dja]). The location of the pause is not for stylistic purposes, as with Encrevé’s French politicians; rather, FSL speakers pause in order to deal with language learning difficulties. Non-resyllabification may occur while searching for a lexical item, or in the case of the reading task, before a difficult or long word. In fact, studies show that while the length of pauses does not differ between L1 and L2 speakers, the number of pauses increases in L2 speech (Raupach 1980, Deschamps 1980).

4) Syntactic categories

The syntactic contexts in which non-resyllabification occurred were examined in order to determine whether the syntactic category of words was involved. The analysis reveals that leftward
syllabification occurred among certain syntactic categories, but not among others. The 30 cases of non-resyllabification in Group 1 and the 43 cases in Group 2 were found to occur in a small number of syntactic contexts. Non-resyllabification in the Group 1 data can be summarized as occurring in five different syntactic contexts, while in Group 2 it occurred in 6 contexts:

<table>
<thead>
<tr>
<th>GROUP 1</th>
<th>TOTAL NUMBER OF NON-RESYLLABIFICATIONS</th>
<th>GROUP 2</th>
<th>TOTAL NUMBER OF NON-RESYLLABIFICATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>DETERMINER+NOUN ADJECTIVE+OTHER</td>
<td>19</td>
<td>DETERMINER+NOUN PREPOSITION+OTHER</td>
<td>32</td>
</tr>
<tr>
<td>PRONOUN+VERB</td>
<td>6</td>
<td>PRONOUN+VERB</td>
<td>5</td>
</tr>
<tr>
<td>ADVERB+ADJECTIVE C’EST+OTHER</td>
<td>3</td>
<td>NOUN-SG+ADVERB</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>DETERMINER+ADJECTIVE</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>CONJUNCTION+DETERMINER</td>
<td>1</td>
</tr>
<tr>
<td>Total cases of non-resyllabification</td>
<td>30</td>
<td>Total cases of non-resyllabification</td>
<td>43</td>
</tr>
</tbody>
</table>

Table XLII
Syntactic contexts of non-resyllabification for Groups 1 and 2

No other context produced any non-resyllabifications. The context that produced the highest frequency of non-resyllabifications in the speech of both groups is [DET+N]. For example,

(143) les _/alimentations (speaker 6, spontaneous)
les _/additifs (speaker 8, spontaneous)
des _/agents (speaker 19, spontaneous)
un _/homme (speaker 16, description)
les _/universités (speaker 48, reading)
son _/intention (speaker 48, reading)
les _/Américains (speaker 40, reading)

However, non-resyllabification may not be the direct result of syntactic factors, but of other factors as well. For instance, leftward syllabification may be due to the large number of [DET+N] that were present in the speech samples. Since non-resyllabification occurred in a very limited number of cases, it may be a strategy used when the speaker is faced with a difficult linguistic situation (as in
searching for a lexical item, or not knowing how to pronounce a word, etc.). Furthermore, since pausing before a lexical item is a strategy the learner adopts in spontaneous speech when searching for a lexical item, a pause before a vowel-initial lexical item in a liaison context will result in a leftward syllabification. Thus, a search for a lexical item may result in the high frequency of leftward syllabifications between a determiner and a noun. Leftward syllabification in this case is not syntactically motivated, but is part of the learning process. It is thus not surprising that non-resyllabification occurs predominantly before nouns. It will also be shown in the section on temporally anchored consonants that one of the main categories that contain a temporally anchored consonant is the determiner.

2.2.3.1. Summary

To summarize, the second language learners in this study have acquired liaison, including the notion that floating consonants must be resyllabified to following empty onsets. Yet non-resyllabification was found in the speech samples of both groups for approximately 7% of the realized liaisons. Non-resyllabification was found to occur in all three tasks with very little difference among the tasks, indicating that this process may not depend on the nature of the discourse. Furthermore, the reading produced the highest frequency of resyllabification in Group 1, and the lowest frequency of resyllabification in Group 2. It is also not the result of syntactic categories that inhibit resyllabification. While there were only nine syntactic contexts in which non-resyllabified consonants occurred in the speech of both groups of speakers, the majority of non-resyllabified consonants occurred in the string [DET+N]. However, this may be due to other non-syntactic factors, such as the fact that [DET+N] is the most frequent category of liaison. Non-resyllabifications that do occur may be due to factors such as word length, word familiarity and word
frequency, silent pauses, etc. Pausing to search for a lexical item in a spontaneous discourse or before an unfamiliar word in a reading also blocks resyllabification. All of these factors may hinder the syllabification process. The main conclusion to be drawn from the results on liaison syllabification is that leftward syllabification in the speech of FSL learners is not a stylistic device as in the speech of native French speakers; rather, it is a result of second language learning difficulties.

2.2.4. Temporally anchored consonants

This section concerns floating consonants that are temporally anchored in a non-liaison context. When the analysis of liaison was being carried out, transcriptions of the speech samples revealed that certain floating consonants that were not in a liaison context were being produced (as in un miroir [œ̃miʁwaʁ], un verre [œ̃vɛʁ], un grand nez [ʊŋɡʁã], etc.). These floating consonants were not included in the categories of obligatory, optional or forbidden liaison since even though the syntactic conditions may be satisfied (as in the case of a determiner followed by a noun), the realization of the latent consonant depends on phonological conditions being satisfied as well. In the case of temporally anchored consonants, phonological conditions for a floating consonant to be temporally anchored are not met (i.e. there is no following vowel-initial word), and so the consonant should not be realized. Yet, word-final consonants were being realized in certain cases. As a result, it was necessary to create a separate category for these consonants, which were termed temporally anchored consonants. Thus, a distinction was made between contexts in which a consonant was temporally anchored in a non-liaison context and contexts in which a liaison consonant occurs (i.e. is temporally anchored within a phrase, where both syntactic and phonological conditions are satisfied).
There were two contexts in which temporally anchored consonants occurred, and for the purposes of this study were divided into two domains:

1. within a Clitic Group (CG) in pre-consonantal position
   (ex. *on doit [ɔ̃dwa]*);

2. in pre-pausal position:
   i) within a prosodic domain
      (ex. *les [lez#]*);
   ii) at the end of a prosodic domain
       (ex. *le nom [lənɔ̃m]*);
   iii) in sentence-final position
        (ex. *il est surpris [i ləsyprris]*)

This distinction was in many cases difficult to determine since the type of boundary involved (phrase-final or sentence-final, for instance) was not always clear. Nonetheless, an analysis was carried out based on De Jong’s (1990, 1991) prosodic domains in order to determine which of the three pre-pausal positions contained more temporally anchored consonants.

Temporally anchored consonants within a CG in pre-consonantal position (domain 1) would be a context \([Y + X]_{xp}\) in which X and Y are in the same prosodic domain, and the final consonant of Y is temporally anchored before X, where X is a consonant-initial word. No pause occurs between Y and X. Syntactic conditions for liaison are satisfied in this context since Y and X belong to the same syntactic phrase (CGs are derived by selecting right edges of each head), but the phonological conditions are not met (X is a consonant-initial word). In the following examples, the temporally anchored consonants are realized in a non-liaison context, which is within a CG, in pre-consonantal position:

(144) *within a CG, pre-consonantally: \([Y + X]_{xp}\)*

- on doit [ɔ̃dwa] [CLIT+V] (speaker 11, description)
- en plein coeur [əplɛ̃kœʁ] [ADJ+N] (speaker 20, reading)
- son dévolu [sɔ̃devly] [DET+N] (speaker 26, reading)
- deux petits garçons [døpɛtɩtɡarsɔ̃] [ADJ+N] (speaker 27, description)
In pre-pausal position (domain 2), temporally anchored consonants occur in a context in which neither syntactic nor phonological conditions for consonant anchoring are satisfied. In the domain of (2i), the string \([Y + X]_{x_p}\) has been interrupted in some manner (by a pause, repetition, false start, or \(X\) may not even follow), so that \(Y\) is followed by a pause and its floating consonant is temporally anchored. For example,

(145) *within a prosodic domain*

elle est [cœt], elle est en train de lire (speaker 1, description)
on voit qu’il y a un [œn], on voit, ... (speaker 2, description)
des [dez], symboles (speaker 36, description)

In the domain of (2ii), floating consonants are temporally anchored before a pause at the end of a syntactic phrase (non-final position), and in (2iii), consonants are anchored at the end of a sentence, as in the following examples:

(146) a. *end of a prosodic domain*

Aujourd’hui, plus de cinquante pour cent des Canadiens [kanadcœn] préfèrent des produits.... (speaker 2, reading)

il est surpris [sympres] parce qu’il rentre tard. (speaker 4, description)

ils ont mis [miz] des jeans et des t-shirts... (speaker 43, description)

b. *sentence-final*

...je fréquente le supermarché Longo qui, qui n’offre que des fruits et des légumes, des produits frais [frœf]. (speaker 1, spontaneous)

Ils sont très contents [kœtœt]. (speaker 34, description)

...le petit garçon de cinq ans est assis [asiz]. (speaker 43, description)

a) All speakers

Table XLIII presents the results for temporally anchored consonants by all speakers, for all tasks.
Results show that speakers produced a total of 325 temporally anchored consonants: 119 occurred in pre-consonantal position and 206 occurred in pre-pausal position. It seems then that these learners have a tendency to realize a consonant in both positions, although mainly in pre-pausal position. Consonant-initial words don’t elicit an anchored consonant as frequently as a pause. The temporally anchored consonants in pre-pausal position were distributed as follows: 64 within a prosodic domain, 119 at the end of a prosodic domain and 23 in sentence-final position. Within these three categories, temporally anchored consonants were found to occur more frequently at the end of a prosodic domain.

When comparing the three tasks, the results are as follows:

a) the reading task produced a total of 113 temporally anchored consonants (54 in pre-consonantal position and 59 in pre-pausal position);

b) the spontaneous task produced a total of 60 (10 in pre-consonantal position and 50 in pre-pausal position);
c) the description task consisted of 152 temporally anchored consonants (55 in pre-consonantal position and 97 in pre-pausal position)\textsuperscript{39}.

In all three tasks, temporally anchored consonants occurred more frequently in pre-pausal position than in pre-consonantal position. In fact, temporally anchored consonants in pre-pausal position were five times more frequent than in pre-consonantal position in the spontaneous task, and almost twice as frequent than in pre-consonantal position in the description task. It seems that overall, the description task produced the highest number of temporally anchored consonants, and the reading produced the lowest number (taking into account the one-minute duration of the spontaneous discourse). While there was no significant difference in temporally anchored consonants in pre-consonantal position among the three tasks, the results for pre-pausal position differ. The reading contained less temporally anchored consonants in pre-pausal position than the other tasks. These results confirms the conclusion given earlier that errors occur in spontaneous-type discourses (like false liaisons and forbidden liaisons).

b) Group 1

Temporally anchored consonants by Group 1 speakers are presented in table XLIV. The results for Group 1 show that these speakers produced a total number of 111 temporally anchored consonants, 37 in pre-consonantal position and 74 in pre-pausal position. This group produced most of its temporally anchored consonants in pre-pausal position. Of the latter cases, 31 consonants occurred within a prosodic domain, 35 at the end of a prosodic domain, and 8 in sentence-final position.

\textsuperscript{39}It is important to remember that the spontaneous task consisted of a one-minute speech sample, while the reading and the description tasks each consisted of two-minute speech samples.
The reading task produced a total of 13 temporally anchored consonants (0 pre-consonantally and 13 pre-pausally), the spontaneous task produced a total of 19 (1 pre-consonantally and 18 pre-pausally), and the description task produced a total of 79 (36 pre-consonantally and 74 pre-pausally). In all three tasks, temporally anchored consonants in pre-pausal position were predominant. Overall, the description task produced by far the highest number of temporally anchored consonants. The reading produced fewer temporally anchored consonants in general.

c) Group 2

The results for Group 2 are presented in table XLV. This table shows that this group produced a total number of 214 temporally anchored consonants, 82 in pre-consonantal position and 132 in pre-pausal position. As with the first group, temporally anchored consonants favoured pre-pausal positions. Among the contexts of pre-pausal positions, 33 consonants occurred within a prosodic domain, 84 at the end of a prosodic domain, and 15 in sentence-final position. Again, as with the first group, temporally anchored consonants appeared more frequently at the end of a prosodic domain.
Comparing all three tasks, the results for temporally anchored consonants are the following:

a) the reading task produced 54 consonants pre-consonantally and 46 pre-pausally;

b) the spontaneous task produced 9 consonants pre-consonantally and 32 pre-pausally;

c) the description task produced 19 pre-consonantally and 54 pre-pausally.

As with the first group, all three tasks revealed the same patterns with respect to the production of temporally anchored consonants, in that anchored consonants favoured the pre-pausal position to the pre-consonantal position (except that the reading in the Group 2 data contained slightly more temporally anchored consonants in pre-consonantal position than in pre-pausal position). The other two tasks contained more than twice the number of pre-pausal temporally anchored consonants than pre-consonantal ones. One difference lies in the variations among the contexts in pre-pausal position. All tasks for both groups revealed that temporally anchored consonants were more frequent at the end of a prosodic domain, except for one deviation from this remark, which is that temporally anchored consonants in the description task in Group 2 were slightly more frequent within a prosodic domain. Another difference is that the reading task in Group 2 contained more temporally anchored
consonants overall than the other tasks. Thus, the reading produced more temporally anchored consonants in pre-consonantal position, and fewer in pre-pausal position than the other two tasks.

The fact that both groups behaved relatively similarly suggests that certain generalizations may be stated:

a) temporally anchored consonants in non-liaison contexts appear in FSL speech;

b) in general, they appear more frequently in pre-pausal position than in pre-consonantal position;

c) in pre-pausal position, they seem to occur more frequently at the end of a prosodic domain than within a prosodic domain or in sentence-final position;

d) there seems to be some variation in the distribution of temporally anchored consonants according to the type of task.

So far, the results have shown the occurrence of temporally anchored consonants in FSL speech and the contexts in which they appear. In order to determine other factors involved in their occurrence, the actual cases of words containing temporally anchored consonants were analysed according to the syntactic context to which they belong. Syntactic contexts were established by providing the grammatical category of the two words involved in the case of anchored consonants in pre-consonantal position, and the grammatical category of the word to which the consonant belongs in pre-pausal position.

The word categories for consonants appearing both in pre-consonantal and in pre-pausal position are found in table XLVI, which presents results for all speakers. This table shows that in pre-consonantal position, temporally anchored consonants occurred most frequently within the context [DET+N] at 76 occurrences, followed by [ADJ+N] at 16 occurrences and [DET+ADJ] at 10 occurrences. All other contexts produced no more than 4 temporally anchored consonants. Thus,
In pre-consonantal position, consonants were temporally anchored in words that are within the NP.

<table>
<thead>
<tr>
<th>PRE-CONSONANTAL POSITION (PCP)</th>
<th>PRE-PAUSAL POSITION (PPP)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>WITHIN A PROSODIC DOMAIN</td>
</tr>
<tr>
<td>DET+ADJ</td>
<td>DET 10</td>
</tr>
<tr>
<td>DET+N</td>
<td>ADJ 76</td>
</tr>
<tr>
<td>ADJ+N</td>
<td>CLIT 16</td>
</tr>
<tr>
<td>CLITN+V</td>
<td>CLITN 3</td>
</tr>
<tr>
<td>PREP+DET</td>
<td>PREP 1</td>
</tr>
<tr>
<td>PREP+N</td>
<td>V 4</td>
</tr>
<tr>
<td>ADV+ADJ</td>
<td>C'EST 3</td>
</tr>
<tr>
<td>ADV+V</td>
<td>ADV 1</td>
</tr>
<tr>
<td>ADV+INF</td>
<td>CONJ 1</td>
</tr>
<tr>
<td>PRO+DET</td>
<td>TOTAL 3</td>
</tr>
<tr>
<td>LEXICALIZED</td>
<td>4</td>
</tr>
</tbody>
</table>

Table XLVI
Temporally anchored consonants according to word category for all speakers

In pre-pausal position, consonants tended to be temporally anchored with nouns (59 occurrences), determiners (44 occurrences) and adjectives (43 occurrences). This distribution of anchored consonants is maintained for each of the three types of pre-pausal position, suggesting that if a consonant is to be temporally anchored, it will occur before any pause. Thus, as with temporally anchored consonants occurring pre-consonantly, words eliciting an anchored consonant in pre-pausal position also belong to the NP.

The following two tables provide the distribution of temporally anchored consonants for both groups individually.
### Table XLVII
Temporally anchored consonants according to word category for Group 1

<table>
<thead>
<tr>
<th>PRE-CONSONANTAL POSITION (PCP)</th>
<th>PRE-PAUSAL POSITION (PPP)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>WITHIN A PROSODIC DOMAIN</td>
</tr>
<tr>
<td>DET+ADJ</td>
<td>8</td>
</tr>
<tr>
<td>DET+N</td>
<td>24</td>
</tr>
<tr>
<td>ADJ+N</td>
<td>4</td>
</tr>
<tr>
<td>CLITN+V</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>37</td>
</tr>
<tr>
<td></td>
<td>TOTAL 31</td>
</tr>
</tbody>
</table>

### Table XLVIII
Temporally anchored consonants according to word category for Group 2

<table>
<thead>
<tr>
<th>PRE-CONSONANTAL POSITION (PCP)</th>
<th>PRE-PAUSAL POSITION (PPP)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>WITHIN A PROSODIC DOMAIN</td>
</tr>
<tr>
<td>DET+ADJ</td>
<td>2</td>
</tr>
<tr>
<td>DET+N</td>
<td>52</td>
</tr>
<tr>
<td>ADJ+N</td>
<td>12</td>
</tr>
<tr>
<td>CLITN+V</td>
<td>2</td>
</tr>
<tr>
<td>PREP+DET</td>
<td>1</td>
</tr>
<tr>
<td>PREP+N</td>
<td>1</td>
</tr>
<tr>
<td>ADV+ADJ</td>
<td>3</td>
</tr>
<tr>
<td>ADV+V</td>
<td>1</td>
</tr>
<tr>
<td>ADV+INF</td>
<td>1</td>
</tr>
<tr>
<td>PRO+DET</td>
<td>3</td>
</tr>
<tr>
<td>LEXICALIZED</td>
<td>4</td>
</tr>
<tr>
<td>TOTAL</td>
<td>82</td>
</tr>
<tr>
<td></td>
<td>TOTAL 33</td>
</tr>
</tbody>
</table>
As it is evident from the tables, both groups performed in a relatively similar manner with respect to the syntactic distribution of temporally anchored consonants. That is, consonants were anchored predominantly in words belonging to the NP.

Tables XLIX, L and LI present results for the syntactic contexts of temporally anchored consonants according to each of the three tasks for all speakers, for Group 1 and for Group 2 respectively. There was some evidence that the nature of the discourse plays a role in the anchoring of consonants in non-liaison contexts.

<table>
<thead>
<tr>
<th>TASK</th>
<th>PRE-CONSONANTAL POSITION (PCP)</th>
<th>PRE-PAUSAL POSITION (PPP)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>WITHIN A PROSODIC DOMAIN</td>
<td>END OF PROSODIC DOMAIN</td>
</tr>
<tr>
<td></td>
<td>DET+ADJ</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>DET+N</td>
<td>41</td>
</tr>
<tr>
<td></td>
<td>ADJ+N</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>CLITN+V</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>PREP+DET</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>ADV+V</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>LEXICALIZED</td>
<td>3</td>
</tr>
<tr>
<td>TOTAL</td>
<td>54</td>
<td>5</td>
</tr>
<tr>
<td>DET+ADJ</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>DET+N</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>ADJ+N</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>PREP+N</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>LEXICALIZED</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>DET+ADJ</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>DET+N</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>ADJ+N</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>CLITN+V</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>ADV+ADJ</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ADV+INF</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>PRO+DET</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>55</td>
<td>49</td>
</tr>
</tbody>
</table>

Table XLIX
Temporally anchored consonants according to word category for all speakers, by task.
<table>
<thead>
<tr>
<th>TASK</th>
<th>PRE-CONSONANTAL POSITION (PCP)</th>
<th>PRE-PAUSAL POSITION (PPP)</th>
<th>TOTAL PPP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>WITHIN A PROSODIC DOMAIN</td>
<td>END OF PROSODIC DOMAIN</td>
<td>SENTENCE-FINAL</td>
</tr>
<tr>
<td></td>
<td>CLIT</td>
<td>2</td>
<td>N</td>
</tr>
<tr>
<td></td>
<td>CLITN</td>
<td>1</td>
<td>ADV</td>
</tr>
<tr>
<td>TOTAL</td>
<td>0</td>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td>SPONT.</td>
<td>DET+N</td>
<td>1</td>
<td>DET</td>
</tr>
<tr>
<td></td>
<td>ADJ</td>
<td>1</td>
<td>N</td>
</tr>
<tr>
<td></td>
<td>PREP</td>
<td>1</td>
<td>ADV</td>
</tr>
<tr>
<td></td>
<td>ADV</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CONJ</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>1</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td>DESC.</td>
<td>DET+ADJ</td>
<td>8</td>
<td>DET</td>
</tr>
<tr>
<td></td>
<td>DET+N</td>
<td>23</td>
<td>CLITN</td>
</tr>
<tr>
<td></td>
<td>ADJ+N</td>
<td>4</td>
<td>V</td>
</tr>
<tr>
<td></td>
<td>CLITN+V</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>36</td>
<td>22</td>
<td>15</td>
</tr>
</tbody>
</table>

Table L
Temporal anchored consonants according to word category for Group 1, by task
An examination of the data for temporally anchored consonants reveals certain tendencies. First of all, as already stated, that the syntactic contexts in which consonants were temporally anchored most frequently in pre-consonantal position was [DETERMINER+NOUN], followed by [ADJECTIVE+NOUN] and [DETERMINER+ADJECTIVE]. A closer look at determiners whose floating consonants were temporally anchored shows that one of the difficulties may involve the nasal floating consonant. In contexts involving the determiners *un* or *son*, as in the following examples, the floating */n/* is temporally anchored in a non-liaison context:

![Table LI](image-url)

**Table LI**

Temporally anchored consonants according to word category for Group 2, by task
The nasal consonant tends to be pronounced, which also causes difficulties in identifying the noun’s gender. There are also vowel variations ([œ] or [u]) which contribute to a difficulty in determining gender. Thus, a temporally anchored /n/ is the result of a difficulty with the production of nasal vowels in French.

Secondly, in pre-pausal position, the word categories in which temporally anchored consonants occurred predominantly were [DETERMINER], followed by [NOUN], and [ADJECTIVE]. As with temporally anchored nasal consonants in the case of determiners, adjectives and nouns also seemed to cause difficulties with respect to gender identification. For instance,

(148) adjectives:
(ils) peuvent être très dangereux [dāʒɔʁʁez] (speaker 32, spontaneous)
des visages souriants [surjät] (speaker 24, description)
ils ont l’air très contents [kõtät] (speaker 39, description)
ils semblent très heureux [œʁez] (speaker 39, description)
des vêtements lourds [lərd] (speaker 43, description)
il essaie d’être, ou de sembler innocent [inɔsät] (speaker 39, description)
les cheveux courts [kurt] (speaker 39, description)
un nez très grand [ɡʁad] (speaker 8, description)
ses cheveux sont...un peu étroits [etʁwat] (speaker 7, description)
il est surpris [syʁpʁiz] (speaker 4, description)
un chandelier chinois [ʃinwaz] (speaker 6, description)
il a l’air nerveux [nɛʁvœz] (speaker 10, description)
un regarde un peu anxieux [ɑksjøz] (speaker 16, description)
le homme est un peu anxieux [ɑksjøz] (speaker 16, description)
un livre qui est ouvert [uβɛʁt] (speaker 13, description)

(149) nouns:
des Canadiens [dékanaːdjen] (speaker 2, reading)
le nom [lɔm] (speaker 16, spontaneous)
les Américains [lesameʁikɛn] (speaker 26, reading)
les Japonais [leʒapɔnež] (speaker 29, reading)
une très lucrative maison [mezɔn] (speaker 40, reading)
However, while it is difficult for the listener to interpret the noun’s gender, the production of these floating consonants is not a morphological error; these are cases of final consonants that become temporally anchored in a non-liaison context. In fact, there is evidence that the speaker is aware of the gender of the noun since in some cases masculine determiners were used: *un nez très grand* [gräd], *un chandelier chinois* [swaz], *un regardé un peu anxieux* [aksjôz], *le homme est un peu anxieux* [aksjôz], *un livre qui est ouvert* [uvert]. In these examples, the correct determiner is used, yet word-final consonants are realized. It is as if the adjective contains the word-final consonant in the underlying representation. Thus, for example, *grand* and *grande* may both be realized as [gräd]. An important factor to consider is interference from English, in which word-final consonants are anchored and thus pronounced. Furthermore, FSL learners are taught from the written form, so that even conversational French is affected by written French. As such, speakers pronounce words following the phonological properties of English. This concept will be outlined in detail in chapter 3.

### 2.2.4.1. Summary

The observations on temporally anchored consonants may be summarized in the following manner: a) temporally anchored consonants seem to be a strategy these students use much more frequently than false liaisons; b) these consonants occur more frequently in pre-pausal position than in pre-consonantal position. That is, speakers tend to realize word-final consonants before any type of pause; c) of the three types of pre-pausal positions, consonants occur more frequently at the end of a prosodic domain than within a prosodic domain or in sentence-final position; d) temporally anchored consonants occurred frequently in certain categories and not in others: in pre-consonantal
position they occurred mainly within the NP: between [DETERMINER+NOUN] followed by [ADJECTIVE+NOUN] and [DETERMINER +ADJECTIVE] (therefore, in NPs). In pre-pausal position, these consonants occurred mainly with nouns, determiners, and adjectives (thus, also in the NP); c) the distribution of anchored consonants by both groups was relatively similar.

Temporally anchored consonants cause difficulties for the identification of liaison in language learners with respect to gender consonants. Not only does this cause confusion for the listener, but also for the language teacher. Treating these floating consonants as gender errors will not identify or correct the problem. The speaker is aware of the gender; it is the notion that floating consonants are only realized before vowel-initial words in non-liaison contexts that must be identified. This concept will also be developed further in the next chapter.

2.2.5. Creations and interferences

These two categories were included in order to account for words in a possible liaison context (that is, a floating consonant before a following vowel-initial word) that are not lexical items belonging to the French language, and have been either created or taken directly from the speaker's native language (code-switching). Creations may be of various types: they may be lexical items that have been created, syntactic errors, or errors due to an inappropriate grammatical structure. Interferences could be lexical in nature, such as those items taken directly from L1 due to the lack of L2 vocabulary, or phonological. The following examples illustrate the categories of creations and interferences:

(150) \textit{a. creations}

\begin{itemize}
\item je vous amenez (\textit{je vous amène}) (speaker 25, spontaneous)
\item ils aussi (\textit{eux aussi}) (speaker 22, description)
\end{itemize}
b. *interferences*
un hiccups (*un hoquet*) (speaker 8, description)
léger un livre (*lire un livre*) (speaker 16, description)

In (150a), the creations consist of an incorrect verb conjugation and an incorrect pronoun. In (150b), the interferences consist of two borrowed words: the first one taken directly from English, and the second one from Italian (*leggere*), with a French verb ending.

In (151) below, the first sentence consists of a reading error in which the verb and the object pronoun were inverted, thereby producing a liaison context, and the second sentence consists of a number error (plural noun+singular verb):

(151) a. elle est en fière (*elle en est fière*) (speaker 7, reading)

b. beaucoup de gens/a les allergies (*beaucoup de gens ont des allergies*) (speaker 6, spontaneous)

Thus, any deviation from what is considered acceptable that was not included in the traditional descriptions, were included in these two categories. The purpose of these categories is to determine whether or not floating consonants were realized before vowel-initial word in non-French contexts.

a) **All speakers**

Results of creations and interferences are presented in table LII for all speakers.

<table>
<thead>
<tr>
<th>TASK</th>
<th>CREATIONS</th>
<th>INTERFERENCES</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>READING</td>
<td>5</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>SPONTANEOUS</td>
<td>12</td>
<td>9</td>
<td>21</td>
</tr>
<tr>
<td>DESCRIPTION</td>
<td>9</td>
<td>11</td>
<td>20</td>
</tr>
<tr>
<td>TOTAL</td>
<td>26</td>
<td>20</td>
<td>46</td>
</tr>
</tbody>
</table>

Table LII
Creations and Interferences for all speakers
Overall, creations and interferences in liaison contexts were not very numerous in the FSL speech samples. Of these two categories, a slightly higher number of errors were creations (26 compared to 20 interferences). The reading contained 5 creations and no interferences, the spontaneous task contained 12 creations and 9 interferences, while the description task contained 9 creations and 11 interferences. The reading and the spontaneous tasks contained more creations than interferences. The reading produced a significantly lower number of both creations and interferences than the two other tasks, suggesting that the nature of the discourse is pertinent to the number of errors, as well as the type of error. As with other types of errors (forbidden liaisons, false liaisons, temporally anchored consonants), the reading contains fewer errors than the spontaneous-types discourses. The spontaneous and description tasks, being of a spontaneous nature in which the speaker is required to produce sentences on his own, without any help from visual material, elicit more errors of this nature. This is understandable since one would expect errors of this nature to be part of a spontaneous discourse, where speakers have no visual material and must rely on their own knowledge of vocabulary and grammatical structure. Creations and interferences then increase as the type of discourse becomes spontaneous.

b) **Groups 1 and 2 individually**

Results for Group 1 and Group 2 individually are found in table LIII. The first group produced a total of 18 creations and interferences, 7 were creations and 11 were interferences. Most of this group’s creations and interferences occurred in the spontaneous and the description tasks (3 creations and 4 interferences in the spontaneous task and 3 creations and 7 interferences in the description task), while only one creation and no interferences were found in the reading. Of the two types of errors, interferences were slightly more frequent than creations.
The second group produced a total of 28 errors: 19 creations and 9 interferences. As with the first group, creations and interferences in Group 2 occurred mainly in the spontaneous and description tasks (9 creations and 5 interferences in the spontaneous task and 6 creations and 4 interferences in the description), while only 4 creations and no interferences occurred in the reading task. These errors occurred while the speaker was trying to either search for a word or a syntactic construction, and instead substitutes the word or construction, as in the following examples:

(152) ...c’est mieux pour notre santé d’avoir des produits qui ne pas_a-, qui ne pas avoir des additifs chimiques... (des produits qui n’ont pas des additifs chimiques) (speaker 10, spontaneous)

...à le bout de le lit, à la bout du lit, um, y en_a, y on_ y va, y on_est, pardon. on, on doit, on peut voir un, un chat... (il y a) (speaker 11, description)

In the first example, the speaker was attempting to say des produits qui n’ont pas d’additifs chimiques, but the verb was replaced by the infinitive avoir. In the second example, the speaker was trying to use the construction il y a (il y a un chat), but was not able to produce it, and there were various attempts before abandoning this construction in favour of on peut voir un chat.

However, unlike the first group, the second group produced twice as many creations as interferences. The one conclusion that can be drawn from the results on errors in liaison contexts

<table>
<thead>
<tr>
<th>TASK</th>
<th>GROUP 1 CREATIONS</th>
<th>GROUP 1 INTERFERENCE</th>
<th>GROUP 1 TOTAL</th>
<th>GROUP 2 CREATIONS</th>
<th>GROUP 2 INTERFERENCE</th>
<th>GROUP 2 TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>READING</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>4</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>SPONTANEOUS</td>
<td>3</td>
<td>4</td>
<td>7</td>
<td>9</td>
<td>5</td>
<td>14</td>
</tr>
<tr>
<td>DESCRIPTION</td>
<td>3</td>
<td>7</td>
<td>10</td>
<td>6</td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td>TOTAL</td>
<td>7</td>
<td>11</td>
<td>18</td>
<td>19</td>
<td>9</td>
<td>28</td>
</tr>
</tbody>
</table>

Table LIII
Creations and Interferences for Groups 1 and 2
is that the number of errors varies according to the type of discourse: overall, there were less errors in the reading than in the other two tasks for both groups.

Since the only errors that were analysed in this section were those creations and interferences in a possible liaison context, floating consonants were examined in order to determine their realization before vowel-initial words. As the data in (153) reveals, words that have been created also seem to follow the rules of liaison, so that liaison occurs in the appropriate context, and not where none is required. The following examples illustrate this pattern:

(153)  

a. floating consonant realized  

des œufs [desə] (speaker 4, spontaneous)  
elle est en fière (elle en est fière) (speaker 7, reading)  
des boucles_oreilles (des boucles d'oreilles) (speaker 14, description)  
je vous amenez [amne] (je vous amènerez) (speaker 25, spontaneous)  
quelqu’un autre (quelqu’un d’autre) (speaker 49, spontaneous)  
très_agitile (très agile) (speaker 35, spontaneous)  
ils_allés venus (ils sont venus) (speaker 48, description)  
ce n’est pas ils (ce n’est pas eux) (speaker 35, description)

b. floating consonant not realized  
beaucoup de gens/a les allergies (beaucoup de gens ont des allergies) (speaker 6, spontaneous)  
l’industrie de l’alimentation/en Canada (l’industrie de l’alimentation au Canada) (speaker 13, spontaneous)  
léger/un livre (lire un livre) (speaker 16, description)  
les garçons/en droit (les garçons à droite) (speaker 41, description)  
tenir/en laisse (mener en laisse) (speaker 30, spontaneous)  
il est/important (il est important) (speaker 40, spontaneous)

In (a), a liaison was realized after items such as determiners, verbs, monosyllabic adverbs, and subject and object clitics that normally require a liaison. For example, in des boucles_oreilles, the noun became a lexicalized expression which allowed for a liaison, as in les Champs-Elysées, pot-au-feu, etc., except that in the FSL example a liaison occurred between two nouns. In (b), the floating consonant of plural and singular nouns, verbs and infinitives was not realized. These types of errors did not interfere with liaison production. Thus, even though an error occurs, FSL speakers respect
the rules for realization of floating consonants. The fact that a liaison occurred with the third person singular of the verb être and with the monosyllabic adverb très, but did not occur between the noun and verb in beaucoup de gens/a les allergies or after the infinitive léger, provides further evidence of that the concept of French liaison has been acquired by the speakers in both groups, since the rules of liaison were respected in these cases.

2.2.5.1. Summary

In summary, the following observations may be made on creations and interferences. First of all, both creations and interferences in possible liaison contexts occurred very infrequently. The rules of liaison are respected despite language learning errors. Of the two types of errors, creations were slightly more prevalent than interferences. Secondly, the number of creations and interferences is dependent on the type of discourse, since in both groups errors appeared mainly in the spontaneous and description tasks. Both types of errors were not as frequent in the reading task, where the speaker has visual material available, and does not have to plan his vocabulary or sentence structure. This concurs with results for forbidden liaisons, false liaisons, and temporally anchored consonants which also occur more frequently in spontaneous speech.

Creations and interferences are thus elements of a spontaneous discourse. The type of error does not seem to be dependent on the type of task, and both groups performed differently with respect to the number of creations and interferences per task. However, the numbers were too insignificant to draw any conclusions of this nature, and the focus of this study was not on speech errors in general, merely the realization of floating consonants in FSL speech. Thirdly, the most important observation on these errors is that liaison realization in structures that contained a creation or an interference was consistent with rules of French liaison. Words that were created also followed
the rules of liaison, confirming the notion that these speakers have acquired the phenomenon of French liaison. There was evidence that liaison occurred after verbs, clitics and monosyllabic adverbs, but did not occur after infinitives or between a noun and the following verb, even though the words or the grammatical gender were incorrect.

2.2.6. Voiced hesitations

Temporal variables have been compared both within and between languages, as well as between L1 and L2 (Deschamps 1980, Grosjean 1980, Raupach, 1980, Bhatt and Mastromonaco to appear). Hesitation phenomena can be filled pauses, repeats, or false starts. Grosjean (1980) remarks on the importance of data on temporal variables in different linguistic tasks:

Within-language comparisons of temporal variables can be very informative concerning the encoding operations that take place when a speaker is faced with various linguistic tasks: speaking to another person, taking part in a discussion, describing a scene or event, making a speech, etc. The ease with which the speaker can encode his utterances is related (among other things) to the amount of constraint imposed on him by the linguistic task. This in turn is reflected by such variables as speaking rate, number of pauses, amount of hesitation, etc... (Grosjean 1980: 42)

This section concerns a within-language comparison, in L2. Since liaison is a right-edge phenomenon whose realization is subject to many variables, temporal variables may also be included among factors affecting liaison production. While unvoiced hesitations or silent pauses were not analysed in this study, there is no doubt that they play a significant role in the production of liaison in FSL learners. In fact, the data on rightward syllabification has shown that liaison resyllabification may be blocked if preceded by an unvoiced pause. The liaisons that were omitted may also be due to unvoiced pauses. Thus, unvoiced pauses may either block liaison production or its resyllabification. This section concerns voiced hesitations (such as uh, um, etc.) following a floating consonant and their effect on the realization of floating consonants. The grammatical category of
the word preceding the voiced hesitation was also noted in order to determine whether this played a role in liaison production.

a) Groups 1 and 2

Table LIV presents the results for the number of lexical items followed by a voiced hesitation for Groups 1 and 2.

<table>
<thead>
<tr>
<th>TASK</th>
<th>GROUP 1</th>
<th>GROUP 2</th>
<th>GROUPS 1 AND 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>READING</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>SPONTANEOUS</td>
<td>17</td>
<td>5</td>
<td>22</td>
</tr>
<tr>
<td>DESCRIPTION</td>
<td>14</td>
<td>22</td>
<td>36</td>
</tr>
<tr>
<td>TOTAL</td>
<td>32</td>
<td>27</td>
<td>59</td>
</tr>
</tbody>
</table>

Table LIV
Voiced hesitations for Groups 1 and 2

There were a total of 59 voiced hesitations following a word with a floating consonant. As can be expected, most voiced hesitations occurred in the spontaneous and description tasks (22 in the spontaneous task and 36 in the description), while only one hesitation occurred in the reading task. This confirms the notion that hesitations depend on the nature of the linguistic task. As for liaison production, however, there were only two liaisons that appeared with voiced hesitations:

(154)  et_um (speaker 26, description)
       un_/um (speaker 34, description)

Liaisons occurred between a conjunction and a hesitation, as well as between and a determiner and a hesitation. In the first example, liaison is forbidden after the conjunction et. In the second example, the realized /n/ may not be a liaison at all. In fact, it may once again be due to the nasal
consonant which was realized. There were no other cases of liaison occurring before a hesitation. These results suggest that voiced hesitations block liaison so that speakers are not anchoring the floating consonant in these contexts.

Table LV presents results for grammatical categories and voiced hesitations for all speakers, and all tasks.

<table>
<thead>
<tr>
<th>READING</th>
<th>SPONTANEOUS</th>
<th>DESCRIPTION</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONJ+HES</td>
<td>1</td>
<td>15</td>
<td>26</td>
</tr>
<tr>
<td>DET+HES</td>
<td>2</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>NPL+HES</td>
<td>2</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>V+HES</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>ADV+HES</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

Table LV
Grammatical categories of words preceding voiced hesitations for all speakers and all tasks

An analysis of the grammatical categories of the words involved reveal that voiced hesitations appeared most frequently after conjunctions *et* and *mais*.

(155) *et/uh* (speaker 9, spontaneous)
*et/um* (speaker 6, spontaneous)
*et/euh* (speaker 7, spontaneous)
*mais/uh* (speaker 10, reading)
*mais/um* (speaker 17, spontaneous)

Forty-two out of fifty-nine cases were conjunctions followed by voiced hesitations. It appears that in these cases the speaker is searching for the following item or idea (as Fathman (1980) notes).

Another frequent grammatical category is the determiner (8 cases). In these examples, learners seem to be searching for lexical items, as in the following:

(156) *nous sommes une société plus conscient, et, uh, plus concernée des/uh, des additifs...* (speaker 6, spontaneous)
ils aiment les/uh, les/uh, qu’est-ce que c’est le mot pour glove?
(speaker 22, description)

ils ont l’air de, d’un/uh, d’un, automatique machine de washing.
(speaker 27, description)

Thus, voiced hesitations were most likely to follow conjunctions and determiners.

b) Group 1

In Group 1, speakers produced only one voiced hesitation in the reading, while producing 17 in the spontaneous and 14 in the description task. There is a significant difference between the first task and the second and third tasks. In this group, there were no liaisons produced with hesitations.

The grammatical categories of words preceding voiced hesitations in Group 1 are found in table LVI.

<table>
<thead>
<tr>
<th>READING</th>
<th>SPONTANEOUS</th>
<th>DESCRIPTION</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONJ+HES</td>
<td>1</td>
<td>CONJ+HES</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>CONJ+HES</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>DET+HES</td>
<td>2</td>
<td>V+HES</td>
<td>2</td>
</tr>
<tr>
<td>NPL+HES</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>V+HES</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ADV+HES</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>17</td>
<td>14</td>
<td></td>
</tr>
</tbody>
</table>

Table LVI
Grammatical categories for words preceding voiced hesitations in Group 1

Conjunctions were followed by the highest number of voiced hesitations (24 out of 32). No other grammatical category was followed by as many voiced hesitations.
c) **Group 2**

As in the first group, most voiced hesitations in Group 2 occurred in the second and third tasks (5 in the spontaneous task and 22 in the description task), while there were none in the reading. The two liaisons that occurred (example 154) were from the second group.

The grammatical categories of words preceding voiced hesitations in Group 2 are found in table LVII.

<table>
<thead>
<tr>
<th>READING</th>
<th>SPONTANEOUS</th>
<th>DESCRIPTION</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONJ+HES</td>
<td>4</td>
<td>CONJ+HES</td>
<td>14</td>
</tr>
<tr>
<td>V+HES</td>
<td>1</td>
<td>DET+HES</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NPL+HES</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>INF+HES</td>
<td>1</td>
</tr>
</tbody>
</table>

|            | 0 | 5 | 22 | 27 |

Table LVII
Grammatical categories for words preceding voiced hesitations for Group 2

Again as with the first group, voiced hesitations were found predominantly after conjunctions (18 out of 27).

**2.2.6.1. Summary**

In summary, the patterns of both groups with respect to floating consonants preceding voiced hesitations were similar, in that voiced hesitations occurred predominantly in the spontaneous and descriptions tasks, and rarely in the reading task. Voiced hesitations are thus a part of spontaneous discourse. Furthermore, liaison occurred rarely with voiced hesitations. In fact, there were only two liaisons out of 49 possibilities. Thus, the application of the rules of liaison realization is not disrupted by voiced hesitations.
With respect to the grammatical category involved, it seems that most voiced hesitations appeared after conjunctions *et* and *mais*, and after determiners. This shows once again that the speaker is searching for ideas or lexical items, and hesitations are a strategy adopted for searching. This also accounts for the fact that most voiced hesitations occurred in both spontaneous discourses, whereas in the reading there was no need to search for the following idea, word, expression, or grammatical construction.

2.3. Conclusion

Before proceeding to an analysis of the data, certain conclusions may be drawn from the results obtained for both groups of FSL learners for liaison realization, false liaisons, resyllabification, temporally anchored consonants, creations and interferences, and voiced hesitations:

First of all, there was no significant difference between Groups 1 and 2 with respect to liaison production. That is, both groups produced over 90% obligatory liaisons, less than 20% optional ones, and less than 4% forbidden ones. This fact may at first seem trivial, however, it is important to recall that both groups were taught by different instructors, had totally different contents for each of the three tasks, and were tested in separate years. The only similarities between both groups was that both consisted of students having completed a second-year university French course, and both had three tasks to complete. Yet, in spite of these differences, they performed similarly.

Second, these two groups have shown that second language learners do acquire the concept of French liaison. They behave in ways that reflect native French speakers in that they are aware that certain liaisons must be produced while others are not. As for optional liaisons, L2 speakers seem to make a distinction among them, dividing optional liaisons into those that are frequently produced
(though not as frequently as obligatory liaisons) and those that are rarely, if ever, produced. This is not unlike native speaker liaison patterns. There are, however, differences which result from various factors (L2 errors, for instance). That is, L2 speakers make errors that a native speaker would not make, such as certain false liaisons.

Third, the nature of the discourse plays a significant role in liaison production. In fact, liaison errors are more likely in a spontaneous discourse than in a reading. As the results revealed, the reading task had less liaison errors than the other two tasks. Forbidden liaisons, false liaisons, creations, interferences and voiced hesitations also seem to appear rarely in the readings, yet they appear more frequently in the other discourses. These three elements occur as a result of the speakers' planning and processing strategies. As learners search for words or ideas they require in a spontaneous discourse, they will create them, or borrow them from their first language. As a result, sentence-internal pausing is also more frequent than in native speech. Furthermore, more forbidden liaisons and false liaisons were produced in the spontaneous discourses. All of these results illustrate that the type of discourse plays a role in the liaison production of second language learners: it is the quantity of errors that are dependent on the type of task. The number of errors increases with spontaneous tasks.

Fourth, the traditional division between obligatory and optional liaison does not seem to account for second language learners’ behaviour patterns. While the obligatory and forbidden cases posed little difficulties for these speakers, it was the optional cases that proved to be interesting since they were not produced very frequently. In fact, most optional liaisons seemed to be considered forbidden liaisons by the speakers, as they were never produced. Other optional liaisons were more frequently produced, although not as frequently as obligatory liaisons.
Fifth, syntactic contexts seem to play a role in liaison production. That is, liaison occurred most frequently within the noun phrase. In the case of optional liaisons, it occurred most frequently after the verbs être and devoir, the negative pas, the conjunction quand and plural nouns. Optional liaisons did not occur in any other context. However, these results confirm that syntax alone cannot account for the conditions on liaison production since, for example, not all verbs produce a liaison. Even with être, it is with the third person singular that liaison occurred most frequently. Reasons for certain contexts producing a higher frequency of liaisons may not be syntactically determined at all. It may be due to a higher frequency of occurrences of a certain context (as in NPs), or more specifically, of certain words (as in être).

Sixth, the notion of resyllabification was also acquired. The lack of resyllabification seems to be due to factors affecting language learning such as the length of the word, the familiarity of the word, individual variation, L1 interference, etc. Thus, resyllabification in L2 speech is not blocked for stylistic purposes, nor is it blocked as a result of failure to learn the rules of liaison, but rather as a result of language learning difficulties.

Seventh, temporally anchored consonants appeared in all tasks, and seem to be problematic for language learners. It seems to be due to certain factors such as nasals, in which the nasal consonant tends to be pronounced. This causes difficulties in the comprehension of gender since the word appears to be feminine. However, temporally anchored consonants are not the result of gender difficulties since there is evidence that the speaker is aware of the gender (ex. le livre est ouvert [uVERT]). It seems that FSL learners have a tendency to pronounce final consonants.

Eighth, creations and interferences depended on the nature of the discourse, and so were mainly found in the spontaneous discourses. These types of errors are also part of planning strategies
of language learners. It is important to remember that creations and interferences are particular to L2 speech, yet language errors also follow rules of liaison.

Ninth, voiced hesitations also depended on the nature of the discourse as they occurred mainly in the spontaneous discourses. Once again, hesitations are part of a learner’s planning strategies (Fathman 1980, Dechert 1980). Learners pause before a word or idea they are searching for. Voiced hesitations appear predominantly after conjunctions and determiners.

As the data on liaison in the speech of native French speakers suggests, not all studies have presented the same results. Morin (1987) examines the disagreement among the data found in some of the theoretical analyses on French, and attempts to identify the causes for this disagreement:

1. variability of usage, even within what is known as standard French;
2. heterogeneity of the analysed data;
3. insufficient control of monitored speech;
4. unwarranted extrapolation of marginal data;
5. use of what appears to be mere fiction. (Morin 1987: 815)

He adds that it “is important to realize that sound theories can only be based on sound data” (Morin 1987: 815). This study encountered certain difficulties in which a decision had to be made for the purpose of classification. First of all, the classification into obligatory, optional and forbidden liaison was accomplished according to traditional descriptions (Delattre 1951). However, there is no data on native speakers in which obligatory liaisons have been 100% realized. Optional liaison traditionally suggests rare in conversation but possible in a formal style, whereas the FSL data has shown that those liaisons considered optional were either less frequent than the obligatory liaisons but used more frequently than other optional liaisons, or not used at all. Forbidden liaisons are also not 100% absent in actual speech samples, whether it’s a native speaker or a second language learners. Certain forbidden liaisons are in fact produced (such as liaison with *h* aspiré words). Thus,
it would be more appropriate to analyse liaison in terms of frequency of usage, according to the domains in which it occurs. The following chapter will discuss this further.

Second, it was in certain cases difficult to determine the exact nature of word-final consonants since the errors were due to language learning difficulties. For instance, *un oiseau* pronounced [unwazo] may be a feminine form (thus, a gender error), a realized nasal consonant (a phonological error), or a liaison consonant with a denasalized vowel. However, this difficulty in determining the nature of certain word-final consonants reveals the importance of learning not only the two types of word-final consonants in French, but also the French vowel system, the syllabification process with liaison and fixed final consonants. In spite of the difficulties, this classification of liaison patterns in the speech of FSL speakers is a necessary step towards understanding word-final consonant production by FSL speakers and providing adequate learning techniques.
Chapter 3. Discussion

In this chapter, an analysis of the results presented in chapter 2 will be examined. There are four major components that will be considered:

1. liaison based on two frameworks;
2. resyllabification;
3. temporally anchored consonants;
4. pedagogical implications of the results of the data.

In (1), I will represent the patterns of liaison in the speech of FSL learners based on a phonological framework and a prosodic phonology framework. These models will also account for resyllabification and temporally anchored consonants. In (2), resyllabification of liaison consonants in FSL learners is discussed, and in (3), temporally anchored consonants are discussed. Non-resyllabification and floating consonants that become temporally anchored are two phenomena that occurred in the speech of FSL learners. While non-resyllabification may occur in the speech of native speakers, it is for stylistic purposes. For FSL speakers, both phenomena are strategies speakers adopt in order to deal with floating consonants. In fact, I will propose that it is the notion of floating consonants that pose difficulties for second language learners. Finally, in (4), I will discuss the importance of this study for language learning and for the teaching of French as a second language.

3.1. Liaison in FSL speech

The results of this study revealed that both groups of FSL learners had in fact acquired the concept of French liaison. Speakers generally produced the liaison consonant before a vowel-initial word, and not before consonant-initial words or in phrase-final position, with few exceptions.
Floating consonants were also produced in appropriate syntactic contexts, since results showed that obligatory liaisons were very frequently produced (94%) while forbidden liaisons were almost never produced (less than 4%). The fact that not all obligatory liaisons were produced is not unusual compared to native speakers since despite the variation in the classification of the data, no results have demonstrated 100% obligatory liaisons.

Optional or variable liaison, as in the speech of native speakers, was dependent on individual variations and other factors. However, very few optional liaisons were produced (14%). As with obligatory liaisons, the realization of optional liaisons is comparable to that of native speakers, since data on native French liaison production also reflects a small percentage of optional liaisons. Of those optional liaisons that were produced, some occurred more frequently (ex. after verbs, the negative *pas*, and plural nouns), while others were either rare or never produced at all (ex. after infinitives). It is not surprising that L2 speakers produce few optional liaisons since learners only function at a conversational level of French. Since FSL speakers are not confronted with different linguistic situations, they do not produce the stylistic variations of native speakers, and as a result do not use optional liaisons as a means of distinguishing between styles of discourse (for instance, conversational versus formal). A comparison of tasks to native speaker data is difficult to accomplish since most of the data available was gathered from interviews.

The data has also shown that liaison is a phenomenon of oral French involving two processes that the speaker must go through: a phonological process and a syntactic one. Omitted obligatory liaisons, as well as optional and forbidden liaisons that were produced were easily identified according to the syntactic context to which the words involved belong. However, liaison cannot be adequately described by phonology or syntax alone. A complete account of liaison must include a) a phonological component that portrays liaison as a floating consonant occurring before a following
word that has an empty onset and not a filled one, and b) another component to account for morphosyntactic constraints on liaison. Most importantly, a model of liaison must allow for variations among speakers as well as in the speech of an individual since liaison is a phenomenon of oral discourse and variations exist even in the speech of native French speakers. Variations within the individual himself must also be included since factors such as fatigue, stress, type of discourse, etc., may cause a speaker to not be consistent with respect to liaison production. A model of liaison must also be able to allow for false liaisons, for both rightward and leftward syllabification, and for floating consonants that become temporally anchored. If we propose a model of liaison that accounts for the speech patterns of second language learners, it will be possible to identify learners’ errors and establish teaching strategies to deal with these errors. Not only must a model of liaison be able to represent FSL data, it must also be able to account for the speech patterns of native French speakers.

3.1.1. A phonological model of liaison

A phonological framework must be able to account for various phonological aspects of the liaison patterns of language learners. While their liaison patterns are predominantly similar to those of French adults, there exist some variations which are specific to FSL learners and must be accounted for. Thus, a phonological theory must first of all show that liaison only occurs before words having an empty onset, so as to exclude its realization before consonant-initial words and in phrase-final position (or even in pre-pausal position). It must also be able to account for both leftward and rightward resyllabification, and for temporally anchored consonants in the speech of second language learners. Non-resyllabification (that is not used for stylistic purposes) and temporally anchored consonants are two factors specific to the speech of FSL learners.
The phonological framework adopted for this study is based on Encrevé’s (1983, 1988) model of a multi-tiered system of underlying representations. As stated in section 1.3., syllable structure contains an onset and a rhyme (containing a nucleus and may contain a coda) associated to a skeleton which is itself associated to a segmental tier. The important contribution of this model to French syllable structure is the status of word-final consonants. Encrevé’s representation of word-final consonants in French is a distinction between two types of consonants: floating and fixed. Floating consonants are unassociated segments which may attach to an empty onset of the following word under appropriate syntactic conditions (Selkirk 1972, 1977), and so are realized only before vowel-initial words (ex. *le petit enfant* [lɛptitəfɑ̃]) and not before consonant-initial words (ex. *le petit livre* [lɛptilivʁ]) or in phrase-final position (ex. *il est petit* [ilɛpti]). Fixed consonants, on the other hand, are attached to the coda position, and so are realized both before vowel- and consonant-initial words, and in phrase-final position (as in *avec eux* [aвечu], *avec Marie* [aвечmaʁi], *c’est le chef* [sɛlʃɛf]). However, both types of word-final consonants share one factor in common: before vowel-initial words, both floating and fixed consonants resyllabify to the following empty onset (ex. *le petit enfant* [lɛ-pti-tɑ̃-fɑ̃], *avec eux* [a-ve-kɔ]). Words with floating consonants such as *petit* and *les* have the following syllabic representations:

\[(157) \quad \begin{array}{c|cc|c|cc|c|cc|c|cc|c|cc|c|cc|c|}
\hline
& O & R & O & R & O & R & O & R \\
N & | & | & | & | & | & | \\
| & | & | & | & | & | \\
| & | & | & | & | & | \\
| & | & | & | & | & | \\
| & | & | & | & | & | \\
p & e & t & i & t & l & e & z \\
| & | & | & | & | & | \\
\end{array} \]

Words with fixed final consonants such as *chef* and *avec* have the following representations:
(158) a. *chef*  

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<td>ε</td>
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</table>

[[ɛf] [av esk]]

The final /t/ of *petit* and the /z/ of *les* are unassociated and so are unrealized, while the final /h/ of *chef* and the /k/ of *avec* are anchored to the coda position and are always realized. Thus, in *les enfants*, resyllabification occurs when the floating /z/ attaches to the following empty onset of *enfants*. In *avec eux*, the fixed /k/ resyllabifies to the following empty onset of *eux*. The syllabic representations for *les enfants* and *avec eux* are the following:

(159) *les enfants*

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[ležǎfā]

(160) *avec eux*

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<td>ε</td>
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</table>

[av eskø]
This model also accounts for word-final consonants with respect to other French phenomena such as elision, words beginning with *h aspiré*, and glides (demonstrated in section 1.3.).

Encrevé’s model has until now been presented in order to interpret native speaker data. It will be shown that a multi-tiered representation of word-final consonants in French adequately describes all the patterns of the speech of both groups of FSL speakers. It accounts for their liaison patterns, for non-resyllabification and temporally anchored consonants (which will be discussed subsequently), as well as for false liaisons, creations, interferences and for floating consonants before voiced hesitations.

a) **Phonological model**

One of the main reasons for adopting Encrevé’s model of syllable structure for French is precisely due to his representation of word-final consonants. Since this study deals with the concept of word-final consonants in French, it is essential to propose a model that is able to provide a structural difference between floating and fixed consonants. In fact, it is precisely the difference between the two types of word-final consonants which may in some cases become confusing to the L2 speaker. This confusion not only results in erroneous consonants, it also causes comprehension difficulties on the part of the listener, as well as a mistaken diagnosis by the language instructor. Thus, while L2 liaison production is generally similar to native speaker production, it is the errors that differ and need to be characterized in order to evaluate and correct them. Encrevé’s model is superior to other models of liaison for this reason, and as a result will be referred to for the purposes of this study on second language learners.

The results from chapter 2 can now be analysed based on Encrevé’s model.
i) Liaison production

FSL liaison production can be summarized by the notion that speakers generally produced a liaison before following empty onsets. In those cases in which a liaison was omitted (as in *les/avertissements*, *les/additifs*, *les/universités*, etc.), the floating consonant was never attached to a position on the skeletal tier and so was not realized. Some other factor blocked its attachment to the skeletal tier, for instance, the length of the following word, the unfamiliarity of the following words (Booij and De Jong 1987, De Jong 1989).

In other cases, the floating consonant is temporally anchored to the skeletal tier in a non-liaison construction (as in *il a les cheveux courts* [kurt], *le livre est ouvert* [uvërt]). Unvoiced pauses within sentences may be a factor contributing to floating consonant anchoring⁴⁰. It has already been shown that second language speakers pause more frequently within sentences than first language speakers (Raupach 1980). This is a planning strategy used by language learners to search for a lexical item. In Fathman’s (1980) study on repetitions and self-initiated corrections in FSL speech, she states that repetitions probably allow the speaker time to plan for the next utterance. Repetitions occur most often after the first or second function word and before a content word. This suggests that semantic and syntactic planning may take place before the precise lexical items have been selected. Fathman notes that the “location of these repetitions would suggest then that second language learners frequently begin to speak without having planned in detail the make-up of the

⁴⁰A quantitative analysis was not carried out on floating consonants before unvoiced pauses in order to determine the number of occurrences of temporally anchored consonants out of the total possible floating consonants. Examples in (155) were taken from the data on temporally anchored consonants within a syntactic phrase (i.e. only those consonants that were realized before a pause) in which only non-native realizations were being considered. As such, this data excludes unvoiced pauses that occurred within a syntactic phrase and the floating consonant did not get realized, as in the following examples:

- des, des produits chimiques [de# depROdu[kimik] (speaker 5, spontaneous)
- des, des problèmes [de# depROblem] (speaker 6, spontaneous)
- très, très important [tre# treSÉpɔʁt̥] (speaker 6, spontaneous)
- les, les_agents [le# lezaʒa] (speaker 21, description)
constituents” (Fathman 1980: 78).

The same notion of utterance planning may be applied to phrase-internal pauses. It appears that when the speaker is searching for a lexical item, there is a pause before resuming with the selected item. Phrase-internal pauses will exhibit the same effect on liaison production by FSL speakers. That is, the floating consonant is temporally anchored to the coda position before a phrase-internal pause (although floating consonants may also be temporally anchored in phrase-final position in L2 speech, as in *il a les cheveux courts* /ilalʃəvɔkɔʁt/). The following examples contain words within a syntactic phrase that are followed by an unvoiced pause:

(161) elle est [ɛt], elle est en train de lire (speaker 1, description)  
on voit qu'il y a un [en], on voit,... (speaker 2, description)  
Quand vous [vuz], quand vous achetez de la nourriture en conserve...  
(speaker 5, reading)

Examples in (161) are particular to FSL learners, since native French speakers may pause between words, even within a phrase, and still insert a liaison where it is required. In cases of obligatory liaison such as *les enfants*, for instance, a pause between *les* and *enfants* will produce *[le-zəfã]* in native French speech. Non-resyllabification may occur in optional cases of liaison, as in De Gaulle’s *j’avais un rêve* [ʒa vr ə vã] (Encrevé 1988). French speakers’ processing strategies are different than FSL learners, who are processing word for word. According to Harris and Coltheart (1986), “(s)entence production must be a process of constructing, rather than selecting, sentences” (p. 207). If this is the case, language learners who are constructing sentences as they speak may not produce *[le-zəfã]*, but rather *[lez-əfã]*, even in cases of obligatory liaison. It may be that unvoiced hesitations are not the reason for consonant anchoring, but other factors may contribute to this phenomenon.

The quantitative analysis of the effect of temporal variables on liaison presented above has only been analysed for liaison before voiced hesitations. The results reveal that liaison is very rarely
produced before voiced hesitations (as in *les/um, les/uh, et/uh, et/um*, etc.). Voiced hesitations, as with unvoiced hesitations, are also a planning strategy the speaker is using to search for a lexical item. These hesitations only occurred in the speech samples after the determiner *les* and the conjunction *et*. It may be possible that learners did not have any difficulties with these items and thus did not produce the floating consonant.

ii) Glides

Encrevé’s multi-tiered representation of syllable structure accounts for glide-initial words as well. It makes the distinction between glides in words such as *oiseau* and those of the type in *whisky* (as described in section 1.3.). In the speech of FSL learners, there is a confusion with the two types of glides, in that consonant-type glides may be replaced by vowel-like glides, as in the case of *whisky*. There were two examples of *whisky* in the corpus, in which elision occurred with one of them and not with the other:

(162) une bouteille d’*whisky* (speaker 3, description)  
  du whisky (speaker 12, description)

The */w/* is part of the rhyme, thereby allowing elision. The structural representation of *whisky* in *d’whisky* is as follows:

(163) whisky

```
       O   R  
      / \  |  |  
     N   C  |  N  
    /   \  |  |  
   w   i   s   k   i  
[whiski]  
```

This confusion with the nature of glides indicates that the knowledge of the lexical item’s underlying
representation is crucial. The same confusion occurred with vowel-like glides that were replaced by consonant-like glides. There were examples in the corpus of oiseau in which the glide was interpreted by some speakers as belonging to the whisky group. The glide /w/ occupies the onset position, so that liaison does not occur. The examples with oiseau are the following:

(164) a. un_oiseau (speaker 14, description)
    un petit_oiseau (speaker 1, description)

    b. un/oiseau (speakers 2, 5, 7, 8, description)
    un petit/oiseau (speakers 11, 13, description)

    c. une oiseau (speaker 6, 9, 15, description)
    une petite oiseau (speaker 17, description)

    d. du oiseau (speaker 2, description)

Of the twelve occurrences of oiseau (from 164a-c), there were only two cases of liaison, but six cases of no liaison. Four cases became feminine. However, one of the difficulties in determining gender in FSL speech pertains to the vowel quality. It is difficult to determine whether these examples were really feminine, or whether there was a liaison, but the vowel was denasalized, so that it resembled a feminine form. The example in (d) is a case of no elision. The glide in oiseau in the FSL data can be represented by the following structure:

(165) oiseau

```
O   R   O   R
|   |   |   |
| N | N |
|   |   |
| . | . | . |
| . | . | . |
| w | a | z | o |
[ wazo ]
```

Thus, evidence from whisky and oiseau in both liaison and elision contexts suggest that FSL speakers may have difficulties in determining with which glide-initial words liaison and elision
occur. The confusion among glide-initial words also suggests that speakers are aware of the two different structures, and the difficulty arises in determining to which category the lexical item belongs.

iii) $H$ aspiré

Words beginning with $h$ aspiré in FSL speech can also be explained by the multi-tiered representation. The same type of confusion that occurred with glide-initial words also occurred with $h$ aspiré words. That is, $h$ aspiré words were reanalysed as vowel-initial, and the vowel-initial words ($h$ muet) were reanalysed as containing an $h$ aspiré. For example,

(166) a. de Haiti (speakers 1, 2, 3, 4, 7, 8, 10, 12, 13, 14, 15, 17, 18, 19, reading)
   b. d'Haiti (speakers 5, 6, 9, 11, 16, reading)
   c. le homme (speaker 16, description)
   d. en_haut (speaker 17, description)
   e. très_honnête (speakers 2, 3, 4, 5, 6, 7, 10, 11, 13, 14, 15, 16, 17, 18, 19, reading)
   f. très/honnête (speakers 1, 8, 9, 12, reading)

In (166a and b), out of 19 speakers, 5 speakers made an elision with Haiti. It is interesting to note that the elision occurred in spite of the fact that the sentence Elle vient de Haiti... was part of the reading task, so that the students saw de Haiti but said d'Haiti. In (166c), no elision occurred, while in (166d), a liaison occurred. In (166 e and f), 4 speakers produced très honnête with no liaison.

The representation for cases such as homme (or honnête, in 166 c and f) is as follows:

(167) homme

\[\begin{array}{c|c}
O & R \\
| & \\
| & N \\
| & C \\
| & \\
| & m \\
| & [om]
\end{array}\]
The onset is filled, thereby prohibiting liaison or elision.

Cases such as *en haut* [äno] (or *d'Haiti* from 166 b and d) are represented as follows:

(168) *en haut*

\[
\begin{array}{c|c|c|c|c|}
O & R & O & R \\
\hline
N & \mathcal{C} & N \\
\hline
\cdot & \cdot & \cdot \\
\hline
\tilde{\text{a}} & n & o \\
\end{array}
\]

[äno]

The onset of *haut* was analysed as being empty so that a liaison may be produced.

Thus, this model is able to account for FSL data by allowing occurrences that do not correspond to prescriptive French grammar. First of all, a multi-tiered level of representation of syllable structure allows for variations from native speaker speech samples by providing a representation that can account for liaison in non-liaison cases (such as before *h* aspiré words), or the absence of liaison in liaison cases (such as before glide-initial words like *oiseau*). Variations from native speaker data are not exceptions to the model; they are explained as all other liaison phenomena are explained, by referring to the nature of word-final consonants in French as well as the nature of the following empty onset (null or non-null). This also allows for colloquial trends, false liaisons, and other occurrences that are not part of traditional descriptions of French.

Secondly, a multi-tiered model of liaison can describe FSL data that is not explicable by other linear accounts. Encrevé's distinction between fixed and floating consonants is one of the major contributions to liaison theory. This distinction is not found in linear accounts, where fixed consonants are either exceptions to a deletion rule, or are present underlingly and so do not need to be inserted, as liaison consonants do.
b) False liaisons

False liaisons can also be accounted for by a multi-tiered model. The only element that liaisons and false liaisons have in common is a following empty onset to which a floating consonant may associate. However, in the case of false liaisons, three variations may occur: either a consonant is inserted before an empty onset although it is not present underlyingly, or it is underlying but is replaced by another liaison consonant or surfaces as a non-liaison consonant. Regardless of the three options selected by the speaker, an onset must be empty in order for the consonant to be anchored.

In the case of consonant insertion, there was only one example: ni-z-additifs [nizaditif]. There is no consonant present underlyingly. While this is not a false liaison in FSL speech, it is present in native French speech (i.e. quatre-z-enfants, mal de z-yeux, etc.).

In the case of non-liaison consonant insertions (of which there were a total of four in the corpus), the consonant was always present underlyingly, however the speaker failed to select the correct consonant, or failed to make the appropriate phonetic changes. For example,

\begin{enumerate}
\item des yeux grands et... \quad [dezjøgräde] (speaker 2, description)
\item las autorités \quad [lasawɔʁite] (hispanophone) (speaker, 42, spontaneous)
\item il doit être \quad [ildwavɛʁ] (speaker 45, spontaneous)
\item neuf ans \quad [nœfã] (speaker 43, description)
\end{enumerate}

Examples in (169a) are considered non-liaison consonant insertions because non-liaison consonants /d/ and /s/ were selected instead of /z/. In examples (169b) the speaker failed to make the phonetic changes to /z/ and /v/. The /f/ in neuf ans is not actually a false liaison, but an incorrect consonant (one of the cases in which the /f/ is pronounced /v/). In il doit être, the consonant for the plural verb form (ils doivent [ilsdwav]) was realized instead of the one for the singular form.

As for liaison consonant error (of which there were a total of nine in both groups), this consonant was present underlyingly, yet speakers chose the incorrect consonant. For example,
Liaison consonant errors are distinguished from non-liaison consonant insertions in that liaison consonant errors are liaison consonants while non-liaison consonant insertions are not.

Whatever the false liaison may be, it appears that word-final consonants are temporally anchored, and as a result are realized before vowel-initial words. Consonants that are temporally anchored are either inserted as in the case of ni-z-additifs, incorrectly selected as in (169), or present underlingly as in (170), with the exception of tout chien doit être... [tuji̱dwaζetër], in which the consonant was not present underlingly, and was inserted.

It is interesting to note that many false liaisons involve nasal vowels in which the speaker produced the nasal consonant. In (170), 3 out of 9 cases involve the nasal /n/. Difficulties with nasal vowels will also be found in other cases as well (in temporally anchored consonants, for instance).

Thus, false liaisons also demonstrate that FSL learners have acquired the notion of liaison since all these cases are floating consonants that are being realized before vowel-initial words. Yet an incorrect consonant is chosen. Most of these cases are plural words in which the previous consonant was realized instead of the final floating consonant (since false liaisons were found to occur predominantly within the NP). Memory may play a role in these errors, in which, for example, des petits enfants [deptizafà] is pronounced [deptitafà] from having learned un petit enfant. Non-liaison consonant error is particular to FSL learners, while the other two types of false liaisons may be heard in the speech of native French speakers (for example, donnez-moi-z-en, moi-z-aussi, il va-t-
et vient, il faudra-t-aller, etc.). However, consonant insertions were not common in FSL speech since there was only one example in the data. In the case of non-liaison consonant error, the problem lies not with liaison, but with making the appropriate phonetic changes of /d/ → /t/, /s/ → /z/. These are phonetic rules of liaison that have to be learned, so that a failure to apply these rules will result in incorrect liaison consonants.

In section 1.6., the processes involved in the realization of word-final consonants were presented. Speakers need to acquire certain concepts in order to determine in which contexts to insert a liaison. The processes for word-final consonants in French is the following:

1. determine the status of the word-final consonant (fixed or floating);
2. determine the phonetic nature of word-final consonants;
3. floating consonants must be anchored to a skeletal position and resyllabified to a following empty onset.
4. fixed consonants must be resyllabified to a following empty onset.

In liaison consonant insertion, all the processes for word-final consonants were applied, except that the consonant not present underlyingly was inserted. In non-liaison consonant insertion, a failure to apply the second rule resulted in incorrect consonants. In liaison consonant error, many cases occurred as a result of having selected the previous floating consonant instead of the final floating consonant (for instance, the /t/ instead of the /z/ in des petits enfants [depətitəfɑ̃]. False liaisons are produced as a result of a failure to apply one of these processes, which causes an anchoring of an incorrect liaison consonant.

c) Creations and interferences

Creations and interferences can also be described by this model. These two phenomena are also particular to FSL learners. That is, liaison occurred before empty onsets provided that the syntactic constraints were satisfied, and not before filled onsets. These instances of non-native
behaviour reveal that even in cases in which speakers created words or in which there was some interference from their first language, they still incorporated the rules of liaison. In *elle est en fière* (for *elle en est fière*), for example, the speaker merely inverted the clitic *en* and the verb *est*, yet liaison occurred after the verb *être*. In the case of *léger/un livre* [*leʒeʁœ̃livʁ*] (for *lire un livre*), the verb (from the Italian verb *leggere*), became an -er infinitive with no liaison. Thus, even with errors that are particular to language learners, rules for liaison production are still followed. These occurrences confirm the fact that somehow language learners will adhere to the phonological and syntactic constraints on liaison even in constructions that are speech errors of some sort.

d) Voiced hesitations

Words occurring before a voiced hesitation were also examined. However, unlike words occurring in pre-pausal position (such as *elle est* [ɛt], *elle est en train de lire*) in which the floating consonant is realized in some cases, floating consonants are not in general realized before a voiced hesitation. In fact, out of 59 floating consonants before a voiced hesitation, only two consonants were realized. For example, *les/um*, *les/uh*, *et/um*, *et/uh*, etc., were not realized as *les_ um*, *les_uh*, *et_ um*, *et_uh*, etc. Thus, liaison does not occur with voiced hesitations. It seems that the speaker is aware of that. However, floating consonants that were realized before unvoiced hesitations (in pre-pausal position) are not liaisons. They are in fact the realization of the final consonant.

Voiced hesitations are, like unvoiced hesitations, a planning strategy in which L2 learners are searching for a lexical item. This is confirmed by the fact that they occurred predominantly in both spontaneous discourses, and not in the reading (there was only one voiced hesitation before a floating consonant in the reading task, compared to 22 in the spontaneous task and 36 in the description task). Speakers are processing word for word, instead of entire phrases. Although
hesitations also occur in L1 speech, they are more prevalent in L2 speech (especially phrase-internally) since the lack of vocabulary is one of the main reasons for pausing. This also confirms Fathman's (1980) hypothesis mentioned previously, concerning repetitions and self-initiated corrections, that FSL speakers "begin to speak without having planned in detail the make-up of the constituents" (p. 78). The location of voiced hesitations in this study was found to be after a determiner or a conjunction, indicating that the missing item is a content word. Lexical retrieval is therefore one of the main reasons for pausing. Repetitions in Fathman's study also occur most often after function words and before content words. Fathman also notes that there is almost always a pause made between an utterance and a repeat. Thus, while hesitations occur in L1 and in L2 speech, the reasons for their occurrence may be different.

In summary, a multi-tiered model of liaison is able to account for liaison in general, as well as for variations in the speech of second language learners. Floating consonants are blocked not only by syntactic constraints, but by other factors such as voiced and unvoiced hesitations, word unfamiliarity and length of word. In cases in which liaison is blocked, words seem to function as if they were in phrase-final position, and so floating consonants are not realized. False liaisons, creations and interferences also show that the rules of liaison are respected, even in these cases. The general rule for FSL learners is: floating consonants are inserted before empty onsets within certain syntactic phrases, except in pre-pausal position. This allows for the absence of liaison between a determiner and a noun, for instance, when the determiner is followed by a pause (ex. les/avertissements).

3.1.2. The domain of liaison

The phonological constraints on liaison have been accounted for by Encrevé's multi-tiered
Although phonological conditions are satisfied (there is a following empty onset), liaison may not be produced for syntactic reasons (i.e. *les enfants/arrivent* [lezãfãariv]). Thus, syntactic constraints must also be acknowledged. However, a purely syntactic theory of liaison based on syntactic categories is inadequate as it encounters many difficulties including many exceptions and contradictions (discussed in section 1.4.). Furthermore, syntactic theories exclude many individual variations such as liaison after uninflected items, which is forbidden in any style according to Selkirk’s (1972) X-Comp rule.

One of the difficulties for a syntactic theory of liaison concerns, first of all, optional liaison. While obligatory and forbidden liaisons are somewhat identified syntactically (i.e. the context for obligatory liaison is within a phrase and for forbidden liaison it is between phrases or after uninflected heads in formal speech, according to Selkirk’s X-Comp rule). Optional liaison, on the other hand, is not always produced in the same manner. For instance, as the results of this study have shown, optional liaisons are in general infrequently produced (14%). However, there is a distinction to be made among the grammatical categories within the domain of optional liaison. That is, some grammatical categories may elicit a liaison (such as verbs), while others will never elicit a liaison, and will behave like a forbidden case (as after infinitives and polysyllabic prepositions and adverbs). Then, even within a grammatical category, there may be a distinction to be made as well. For instance, certain optional liaisons occur more frequently with some verbs than with others, while some verbs never elicit a liaison. Among verbs themselves, there is a great deal of variation with respect to liaison production. Not only do certain verbs make a liaison more frequently than others (ex. *être*), certain conjugations are also more commonly found to produce a liaison (third person singular and plural, ex. *il est intelligent, ils sont intelligents*). In FSL data, results reveal that the majority of optional liaisons occurred with the verb *être*. This notion of variation among optional liaisons...
liaisons cannot be accounted for by a syntactic model of liaison. Yet verbs are all classified as being optional cases of liaison.

Second, a syntactic model must also make the distinction between pre- and postnominal adjectives, and mono- and polysyllabic adverbs and prepositions. These categories cannot be grouped into one category, since studies show that liaison is favoured after monosyllabic items, and that the effect of word length is strong for prepositions and modifying adverbs (De Jong 1989). As a result, liaison frequency is highly dependent on the position of adjectives as well as on word length with respect to prepositions and adverbs.

Third, to state that optional liaison occurs between an inflected head and its complement is too restrictive a rule since although liaison may occur between a plural noun and the following adjective (as in les enfants_intelligents). As Morin and Kaye (1982) point out, liaison may also occur between an infinitive and the following word (as in pourquoi emprunter_ailleurs). To state that all liaisons that are not obligatory are optional liaisons is too general an assumption. This statement does not explain, for instance, the fact that certain optional liaisons occur more frequently than others which are rarely, if ever, produced. Thus, certain inflected items with which liaison should be optional according to Selkirk's rule, never produced a liaison for FSL speakers, and were considered forbidden cases by these speakers.

Fourth, there are many other factors involved in liaison production. Optional liaisons may vary from one individual to another, and may depend on style. There are two types of optional cases of liaison: cases in which liaison is optional in all styles of speech, and those in which liaison is dependent on speech style. The first type of optional liaison is a context such as il n'est pas encore venu, in which the speaker has the option of producing a liaison after the adverb pas, even in conversational French. Thus, in conversational speech, liaison after pas may or may not be produced.
It is not the case that liaison after *pas*, for instance, is forbidden in conversational discourse and optional in formal discourse. The second type of optional liaison is a context such as a plural noun and a following adjective. For instance, a speaker will generally not choose between *les enfants intelligents* or *les enfants/intelligents* in conversational French. In other words, this case is not really optional for all speech styles. In fact, we can say that liaison in this example is forbidden in conversational French, and optional in a formal style of French. Thus, the use of the word "optional" is not precise. Liaison is so complex and depends on so many other factors that it is difficult to impose upon it strict categories of obligatory, optional and forbidden.

Fifth, it is also necessary to account for those speakers who would say *les haricots*, and other colloquial trends that were not considered to be "le bon usage". This is true of both FSL and native French speakers. As a result, a model of syntactic contraints on liaison production must be flexible enough to allow for individual variations that cannot be accounted for by the traditional descriptions. However, as it was mentioned with *les haricots*, L1 liaison patterns are also inadequately accounted for by the traditional descriptions.

The approach that best accounts for language learners' patterns of liaison is a model based on Selkirk's and De Jong's notion of phrase phonology. As was discussed in section 1.5, the frequency of liaison depends on a hierarchy of prosodic domains. In the clitic group (CG), liaison has the highest level of realization; in the small phonological phrase (SPP), liaison is less frequent, and in the maximum phonological phrase (MPP) liaison is rare. Obligatory liaisons would then be found in the CG, while optional liaisons are found in the SPP and in the MPP. This prosodic representation of liaison allows for an adequate representation of FSL data by permitting a scale of frequency as opposed to the traditional terminology which was too restrictive and could not account for variations from its rules. By referring to liaison frequency, an analysis of actual speaker data can
be facilitated. While the term "optional" allows for variation, it does not differentiate between the different degrees of optionality that is accounted for by the SPP and the MPP.

Thus, the production of liaison by language learners can be explained in the same manner as liaison production by native French speakers: liaison is very frequent in the clitic group, it is less frequent in the small phonological phrase, and it is rare in the maximal phonological phrase. The notion of frequency is more adequate than the three-way distinction since a frequency hierarchy accounts for actual speaker variation instead of describing what one should say. This model allows for the absence of liaison in the clitic group in the following example:

(171) [les/avertissements]

While the absence of liaison in the clitic group is an infrequent occurrence in FSL data, the results revealed that it did in fact occur. The notion of frequency also allows for forbidden liaisons that may be produced, although very infrequently (as in *en haut de* [en hotfaithdə]).

This model of prosodic structures accounts for obligatory liaison, or frequently-occurring liaison, and makes the distinction among the occurrences of optional liaisons that is not represented by the traditional three-way terminology. It eliminates the difficulties that other theories encounter in grouping all optional liaisons into one category.

The notion of frequency of liaison is more flexible in that it allows for omissions, so that all speakers' liaison patterns may be accounted for. While the distinction among optional liaisons may not be categorically determined, the frequency of liaisons depends on other factors such as word familiarity, word frequency, style, etc. Verbs, for instance, do not all elicit liaisons. Some verbs, like *être*, occur more frequently than others.

This hierarchy of prosodic domains also allows for false liaisons, creations and interferences and voiced hesitations. It accounts for variations among speakers as well as individual variations.
By referring to a hierarchy of frequencies, it becomes easier to explain actual speaker data. Speakers do not conform to rules which state that liaison is obligatory, optional and forbidden. Individuals omit obligatory liaisons and produce forbidden liaisons. These “deviations” from traditional rules of liaison must be accounted for. A hierarchical structure of frequency allows for omissions and productions of liaisons.

A multi-tiered model that makes a distinction between floating and fixed consonants and a model of prosodic phonology are also capable of accounting for the speech of native French speakers. The original list of factors from chapter 1 that must be accounted for in a theory of liaison is the following:

a) the phonetic realization of the liaison consonant;
b) nasalization;
c) $h$ aspiré words;
d) glides;
e) syllabification;
f) number of syllables;
g) syntactic relationship;
h) false liaisons;
i) lexicalized expressions;
j) interjections;
k) phonostylistics.

Section (a) was not included in this study, although studies have shown that for native French speakers, /t/-liaison is significantly more frequent than /z/-liaison (De Jong 1989). However, non-liaison consonant error is an example that the /d/-/t/ rule was not applied. A multi-tiered model accounts for the following factors affecting liaison production:

a) nasalization, which is an important factor to consider for liaison theory, especially in the case of L2 speakers for whom nasalization is problematic;
b) $h$ aspiré words, including those cases in which liaison occurs with an $h$ aspiré word: the word is reanalysed as a word having an empty onset, so that the floating consonant may be anchored to that position;
c) glide-initial words, including errors in determining the type of glide (vowel-like or consonant-like), which affects liaison realization;

d) resyllabification, as well as its absence;

e) false liaisons;

f) lexicalized expressions.

Prosodic phonology accounts for the syntactic relationship of words with respect to liaison, and allows for variation among speakers and even individual variations. The smaller the domain, the more frequent the liaisons. The larger the group, the rarer are the liaisons. Thus, speakers will very frequently produce a liaison in *un arrangement, les entreprises, les universités*, etc., will less frequently produce a liaison in *c'est en plein air, elle est en train..., il doit être*, etc., and will rarely, if ever, produce a liaison in *les deux garçons/intelligents, aller/au médecin*, etc.

3.2. Resyllabification

Chapter 1 mentioned that in *La liaison avec et sans enchaînement*, one of Encrevé's (1988) major contributions to liaison theory is providing an account of resyllabified and non-resyllabified liaisons in the speech of French politicians. He notes that in the speech of politicians, the liaison consonant undergoes leftward syllabification only in optional cases (*j'avais un rêve*), and never in obligatory cases (*les autres*). In other words, leftward syllabification occurs only within the small phonological phrase and the maximum phonological phrase, and never within the clitic group (De Jong 1991b). The technique of non-resyllabification is adopted by politicians for stylistic purposes, and is thus intentional. It is not an error that occurs as a result of failing to resyllabify the floating consonant.

On the other hand, while most liaisons are resyllabified, non-resyllabification does occur
in the speech of language learners as well, but in smaller domains than those that Encrevé proposed for French politicians. That is, non-resyllabification occurred both among obligatory liaisons as well as among optional liaisons in FSL speech. However, the significant difference between FSL speakers and Encrevé’s politicians is that in fact, most of the non-resyllabified liaisons were found within the clitic group in FSL data. The majority of leftward syllabifications (70%) occurred within the string [DET+N]. Therefore, unlike Encrevé’s native speakers, language learners may choose to not resyllabify within the clitic group. Results of the FSL data may be due to the fact the learners’ sentences were not very complex, and so most groups were CGs. This is where the majority of their liaisons were found. It would not be surprising then to find that the majority of non-resyllabified liaisons occurred in this domain. Furthermore, there were a small number of optional liaisons in the FSL speech samples, which would also explain the low frequency of non-resyllabified optional liaisons. Since there are generally more internal pauses in L2 discourse, speech samples consisted of shorter strings rather than longer ones consisting of SPPs and MPPs. Learners in this study did not produce complex sentences. The following examples illustrate the structure of sentences and use of vocabulary in the FSL speech samples:

(172) Sur l’homme on regarde qu’il y a une lampe, et près de ça, aussi à côté, un, une fenêtre. Sur la porte, on trouve des fleurs, et ah, et près du lit, à, à gauche, on remarque qu’il y a une table où, où est située des fleurs sur la table, et des bouteilles. (speaker 2, description)

Dans cette scène on peut voir une femme qui est dans son lit. Elle est dans sa chambre, et dans ce moment, son mari est entré, mais son mari est vraiment nerveux parce que il a bu, et sa femme lui parlait et elle dit pourquoi elle a, il est, il est si tard, et pourquoi il a bu. (speaker 17, description)

If, as Fathman (1980) states, language learners are making up the details of the constituents as they speak, then they would only construct strings of clitic groups. As a result, liaison would occur within the CG, and not within the SPP or the MPP. This is in fact the case.

Another difference between the native group and the FSL group is that while the politicians in Encrevé’s study use leftward syllabification for stylistic purposes, language learners use leftward syllabification for other reasons. Liaison in the speech of FSL learners is influenced by other variables. First of all, word length is a factor that seems to be involved. When confronted with a difficult word or an unfamiliar word in the reading, speakers paused and attached the floating consonant to the coda position (ex. des_/ingrédients, un_/arrangement, les_/entreprises, des_/ambitions, etc.). Secondly, silent pauses seem to also be involved in non-resyllabification. For instance, pausing between a determiner and a noun may produce les_/ingrédients. Thirdly, lack of vocabulary in the case of spontaneous discourse may be another factor contributing to an absence of resyllabification. That is, pausing may be caused by the speaker searching for a lexical item.

As a result, in all of these cases of non-resyllabification, FSL learners are phonetically realizing the lexical representation of words. In fact, learners attach the floating consonant to the coda of the lexical item to which the consonant associates, as is the case for words containing fixed final consonants (i.e. rêve, lac, chef). While native French speakers are able to differentiate between floating and fixed consonants, FSL speakers must learn to make this distinction. The four processes that native French speakers follow for the production of word-final consonants are the following:

1. determine the status of the consonant (i.e. fixed or floating);
2. determine the phonetic nature of the consonant (/d/ or /t/, /s/ or /z/, etc.);
3. anchor floating consonants to a skeletal position before a following empty onset;
4. resyllabify both fixed and floating consonants to a following empty onset.
A failure to follow one of these stages will result in a liaison error. In step 1, for instance, an error may result in determining the status of the consonant. A floating consonant that is analysed as fixed will be anchored to the coda position and thus be pronounced. An error in step 2 may result in a non-liaison consonant. For example, *mon grand ami* will give [mõgrādami]. A failure to follow step 3 will result in an absence of liaison (i.e. *mon grand/ami*). Finally, an error in the fourth step will produce non-resyllabification. That is, the speaker determines the phonetic nature of the consonant, and anchors it to the word's coda position, as with fixed final consonants. Thus, anchoring the final consonant to the coda position in a word such as the determiner *les* will yield /lez/. The underlying representation of *les* would then be:

```
(173) O R
    | N C
    | . .
  l e z
```

where the final /z/ is anchored to the coda position. A vowel-initial word following /lez/ will still remain with an empty onset (*les_ ingrédients*).

Thus, FSL learners do not intentionally use non-resyllabification in order to produce a desired effect; rather, it is a communication strategy used when dealing with word-final consonants. When confronted with a difficult linguistic situation such as a difficult or long word, or a missing lexical item, floating consonants are anchored to a skeletal position, and leftward syllabification may occur.

In summary, non-resyllabification occurred very infrequently in the speech of FSL speakers; it was present in less than 7% of the cases. However, contrary to Encrevé's results, non-
resyllabification in FSL speech did not occur only in cases of optional liaison (within the SPP and the MPP), but rather it occurred predominantly within the clitic group (i.e. with obligatory liaisons). Floating consonants that are not resyllabified are attached to the coda position (see below). Another difference between Encrevé’s native speakers and FSL learners is the reasons for non-resyllabification. Politicians’ failure to resyllabify is intentional, done for stylistic purposes, while FSL speakers’ non-resyllabification is caused by: lack of vocabulary, silent pauses, unfamiliarity with words, length of following word, etc. Non-resyllabification is, for FSL speakers, a strategy used for dealing with floating consonants when faced with second language difficulties that include word-final consonants and following empty onset.

3.3. Temporally anchored consonants

This section concerns a communication strategy that pertains only to the speech of second language learners, as temporally anchored floating consonants within a phrase pre-consonantally as well as in pre-pausal position (within a prosodic domain, phrase-final and sentence-final) are not present in the speech of native French speakers. As already mentioned, Encrevé makes the distinction between floating consonants which must be attached to an empty onset of the following word (and so are realized only before vowel-initial words and not before consonant-initial words), and fixed consonants in words such as sec, chef, etc., which are attached to the coda position (and so are realized both before vowel- and consonant-initial words, and phrase-finally). FSL learners must first determine the status of the consonant (fixed or floating), based on the rule that in French word-final consonants are not pronounced unless followed by an e (as well as consonants c, f, l and r which are pronounced in final position). In the case of a fixed consonant, it must be resyllabified if there is a following empty onset. In the case of a floating consonant, FSL learners must determine
the phonetic nature of the consonant (ex. [t] or [d]), and then anchor the consonant to a skeletal position, and finally they must resyllabify the consonant to the following empty onset.

It seems that floating consonants appear to cause more difficulties than fixed consonants for FSL speakers. Since fixed consonants are always realized, the only decision the speaker must make is to resyllabify the consonant before a following empty onset (as in *avec eux* [a-ve-kɔ]). Before consonant-initial words and in final position, fixed consonants remain attached to the coda (as in *avec lui* [a-vek-lij], *rêve* [ʁeːv]). Floating consonants, on the other hand, require more decisions to be made. Before vowel-initial words, the speaker must decide whether or not to anchor the floating consonant, and then to resyllabify it once the consonant is anchored (it is an error in these decisions that cause an absence of liaison as well as non-resyllabification). In pre-consonantal position and in pre-pausal position in which the floating consonant is not associated to a skeletal position (and is thus not phonetically realized), difficulties arise. The decision to not anchor the consonant to a skeletal position is not made, and the consonant is realized. In fact, it seems that FSL learners reanalyse floating consonants as fixed consonants, perhaps as a result of L1 interference. That is, final consonants are realized even if the phonological context does not allow it (i.e. the following word has a filled onset or in phrase-final position). The floating consonant is anchored to the coda position, producing phrases such as *le petit garçon* [lεpitisɡaʁsɔ̃], *un laboratoire* [œnlaboratwɔʁ] within a phrase pre-consonantally, and *ils sont très lourds* [ilsɔ̃troːlœʁ], *le chien* [løʃjen] phrase-finally. The structure of floating consonants in FSL speech is the following:

```
(174)  C
       .
      |  x
```
For example, the adjective *grand* in *un nez très grand* would have the following representation:

(175)  \[
\begin{array}{c}
\text{grand} \\
\text{O} \\
\text{R} \\
\text{N} \\
\text{C} \\
\text{g} \ 	ext{R} \ 	ext{ä} \ 	ext{d} \\
\text{[grād]}
\end{array}
\]

This will allow the final consonant to be realized so that the adjective is pronounced [grād] even in the masculine form, as in the case of words with fixed final consonants.

Language learners are not following the four processes involved in word-final consonant realization. Instead of anchoring the final consonant only in those cases that require the consonant to be realized as with native speakers (i.e. fixed consonants, liaison consonants), non-native speakers’ underlying representation contains all segments anchored to a skeletal position, including word-final consonants. In fact, the underlying representations of both groups of speakers is different. Native speakers have default underlying representations in which floating consonants are anchored only in liaison contexts, whereas non-native speakers seem to have default underlying representations in which final consonants are fixed and are dissociated in non-liaison contexts. This is due to L1 interference, in which English word-final consonants are fixed consonants. Failure to dissociate the final consonant results in a temporally anchored consonant. Also, dissociating the consonant in a liaison context results in an absence of liaison. Thus, the process of word-final consonant realization is reversed for FSL speakers.

From the temporally anchored consonants that were produced by the FSL groups but which do not occur in native speech performance, it seems then, that floating consonants are more difficult to learn for L2 speakers whose first language does not have them. For FSL learners, all segments
are anchored, and it is the dissociation of word-final consonants that occurs in non-liaison contexts. Since word-final consonants are fixed consonants for second language learners, they have to learn to delete them. The result is that anchored word-final consonants become the underlying form, as in _anxieuse, heureuse, courte_, etc. This may in fact not be an inserted consonant at all, but a consonant that is present in the underlying form, and is not deleted in the surface representation. If this is the case, it accounts for floating consonants that are not unassociated and are thus realized in non-liaison contexts, as in _il a les cheveux courts_ [ilalеʃovɔkur], _le livre est ouvert_ [lɛlivɾeystuvɛʁ], etc.

The syntactic categories that elicit temporally anchored consonants show that the word-final consonants that are reanalysed as fixed consonants appear predominantly in the NP with determiners and prenominal adjectives, and in pre-pausal position with adjectives and nouns. In the case of determiners, the definite article _un_ produces the final /n/ (as in the case of possessive adjectives). This seems to be due to the nasal vowel, which will produce the nasal consonant in phrases such as:

(176)  
un grand lit [ʊnɡʁali] (speaker 16, description)  
un couple [œnkupl] (speaker 11, description)  
son dévolu [sɔndɛvolly] (speaker 27, reading)

Adjectives can elicit a consonant insertion both in prenominal position and in pre-pausal position, as in the following cases:

(177)  
a.  pre-consonantal  
en plein coeur [æpleŋkœʁ] (speaker 22, reading)  
deux petits garçons [dœpœtigarsœ] (speaker 27, description)

b.  pre-pausal  
un nez très grand [ɡʁad] (speaker 8, description)  
il a les cheveux courts [kœʁt] (speaker 7, description)  
un livre qui est ouvert [uvɛʁt] (speaker 13, description)  
ils ont l’air très contents [kɔtœt] (speaker 39, description)

The following examples illustrate nouns with temporally anchored consonants:
I propose that FSL learners realize the underlying representation of a word, which prompts the word-final consonant to be anchored to the coda position. This is not unlike English word-final consonants, as in the English determiner *an*, which has the following structure:

(179)  *an*  

\[
\begin{array}{ccc}
\text{O} & \text{R} \\
\text{N} & \text{C} \\
\text{æ} & \text{n} \\
\end{array}
\]

This accounts for phonetically realized consonants in pre-consonantal and in pre-pausal position, as well as for non-resyllabification. The underlying structure in all these cases is the same.

The data on floating consonants has revealed that second language learners' underlying representation contains all segments anchored to a skeletal position, so that final consonants must be dissociated in non-liaison contexts. When this rule is not applied, it causes floating consonants to be realized within a phrase pre-consonantally and in pre-pausal position. This is the reverse strategy of native speakers, whose underlying representations contain floating consonants that must be anchored to a position only in liaison contexts.

3.4. Pedagogical implications

Research in the field of language errors is crucial not only to language learning, but to language teaching as well. This section reviews strategies that the speakers in this corpus have
adopted to deal with word-final consonants. As Corder states, “it is part of good language teaching to encourage resource expansion strategies and, (...), successful strategies of communication may eventually lead to language learning”. (Corder 1983: 17).

It has been mentioned previously that liaison is a phenomenon requiring two processes for its production: a phonological and a syntactic process. While native French speakers perform these two processes, FSL learners must learn both the phonological and syntactic aspects of liaison. In the learning of French as a second language, errors occur that are not produced by native speakers. In order for liaison to occur, both the phonological and syntactic conditions on liaison must be satisfied. If only one of these two conditions is satisfied, liaison will either not occur where it should, or will occur where it should not. For example, if only the syntactic conditions for liaison are respected, the floating consonant will be realized between the determiner and noun as in *les garçons* [lezgaɾsõ], even though the phonological context does not allow it. Another example of this is a floating consonant that is realized before *h-aspiré* words, as in *les haricots* [lezàɾiko].

If only the phonological conditions are respected, liaison will occur in *ils veulent aller à la plage*, or *l’enfant adorable*, despite the fact that the syntactic context does not allow it (with an infinitive or singular noun).

Table LVIII summarizes the different types of floating consonants according to both phonological and syntactic contexts considered in this study. For phonological conditions to be satisfied, floating consonants must be realized before a vowel-initial word. For syntactic conditions to be satisfied, floating consonants must occur within a syntactic phrase, or between an inflected head and its complement.
TYPE OF LIAISON | PHONOLOGICAL CONTEXT (i.e. empty onset) | SYNTACTIC CONTEXT (i.e. within a syntactic phrase)
--- | --- | ---
a. obligatory and optional liaison | + | +
b. i. forbidden liaison (i.e. after sing. nouns) | + | -
ii. forbidden liaison (i.e. h-aspiré words) | - | +
c. i. temporally anchored consonants: within a prosodic domain in pre-consonantal position | - | +
ii. temporally anchored consonants: pre-pausai position | - | -
d. false liaison | + | +

Table LVIII
Occurrence of floating consonants according to phonological and syntactic contexts

Certain considerations may be made based on the data on floating consonants and second language learners. Elements having an effect on word-final consonants in French are discussed in this section

(a) word-based strategy in FSL learning
(b) nasal consonants
(c) glide-initial words
(d) resyllabification
(e) temporally anchored consonants
(f) universal grammar
(g) role of the instructor
(h) L1 interference in FSL

a) **Word-based strategy in FSL learning**

There are certain strategies that L2 learners use when faced with difficulties concerning
word-final consonants. Speakers may:

1. omit a liaison before unfamiliar words, long words, a hesitation, etc.
2. not resyllabify when faced with a long word, an unfamiliar word, or after a hesitation, etc.;
3. produce floating consonants in non-liaison contexts.

These are difficulties that must be considered when teaching French as a second language. While these strategies are typical of L2 speakers, they are not L1 strategies, although De Jong (1989) has shown that in native speech a liaison may be omitted due to certain variables such as word length, word familiarity, etc. However, temporally anchored consonants in a non-liaison context, for instance, is not a typical native speaker strategy.

The nature of the errors produced by FSL learners suggest that one of the communication strategies learners are using is word-based, in that they are analysing word by word instead of phrase by phrase. In other words, the learners’ lack of vocabulary requires them to search for lexical items as they proceed with their discourse, confirming Fathman’s (1980) conclusions. This is an important consideration since it accounts for the errors mentioned above. Furthermore, since L2 strategy is word-based, the phonetic realization of words is based on the lexical, underlying representation. This implies that all segments are temporally anchored. The process of producing word-final consonants is not similar to the process that native speakers follow; that of anchoring floating consonants in liaison consonants. Rather, L2 speakers’ representation of words consists of fixed final consonants that must be deleted, or dissociated in non-liaison contexts. If this is the case, it accounts for final consonants that are not resyllabified to the following onset and remain in coda position, as well as final consonants that are produced in non-liaison contexts.
b) **Nasal consonants**

Final nasal vowels and nasal consonants are another aspect of liaison that must be considered with language learners. It was shown that nasal consonants were realized in cases of false liaison as in *un grand homme* [œ̃grânom], *deux garçons* et ...[dɔŋgarsõ̃], and *ils ont un* [ilsõ̃nõ̃], as well as in non-liaison environments as in *un grand lit* [uŋgrâli], *un couple* [œ̃kupl], *son dévolu* [sɔ̃devõly], *les Américains* [lezameriken] and *des ambitions* [dezäbisjon]. Two elements of nasalization prove to be challenging for language learners. One difficulty pertains to the production of the nasal vowel [œ̃] and the vowel [y] which, if not properly pronounced, may cause a problem in comprehension. It is difficult, for instance, to determine whether the speaker meant to say *un ami* or *une amie* if the vowels are not properly realized. Both the masculin and the feminin form may have some kind of an oral open vowel and sound like [œ̃ami]. This complicated the analysis of the speech samples since it was difficult at times to determine the gender of the noun. However, this is clearly not a gender error. The error lies with the realization of the vowel. A distinction must be made between [œ̃] or [ɛ] and [y]. Thus, although the speaker is aware of the proper gender of the noun, comprehension of the noun’s gender is not as clear. As a result, correction of this type of error should not be to correct the gender of the noun, but rather to correct the nature of the vowel.

Another difficulty is that final nasal vowels also seem to provoke the anchoring of an [n] as in *les Américains* [lezameriken], *son dévolu* [sɔ̃devõly], le chien [lœʃjen], etc. In some cases, the anchored /n/ was realized in a non-liaison context (*son dévolu* [sɔ̃devõly]); in other cases, it was realized in phrase-final position (*les Américains* [lezameriken]). A realized /n/ in a non-liaison context may also appear to be a feminine marker, although there is evidence that the speaker is aware of the gender of the noun (as in *le livre est ouvert* [uvert]). Once again, nasal vowels seem to be difficult to master for speakers whose language does not have them.
c) Glide-initial words

FSL speakers seemed to confuse the two types of glides, which resulted in liaison errors (as well as elision errors). Although consonant-type glides were not analysed in this study, there was evidence in the corpus of d'whisky pronounced [dwiski]. There were, however, examples with oiseau, as in un/oiseau. The glide in oiseau was analysed as having consonantal features, and a liaison was omitted. Thus the final consonant in the determiner /n/ was dissociated, as before consonant-initial words. This confusion among glides has implications not only for liaison production, but for French in general. The two types of glides are part of the French language that must be learned. Instructors must be aware of the phonological difference between glide-initial words, in order to point them out to their students.

d) Resyllabification

The concept of liaison is distinguished from enchaînement in French language teaching. Liaison is described as a consonant that is only pronounced before a vowel-initial word, and enchaînement is described as a consonant that is always pronounced (i.e. before a consonant- and a vowel-initial word). This is what distinguishes un grand ami [œ-grâ-tami] from une grande amie [yn-grâdami]. However, the two terms are not exclusive. That is, liaison also includes enchaînement so that in the case of un grand ami, both liaison and enchaînement take place ([œ-grâ-ta-mi]). In the case of une grande amie, there is no liaison, only enchaînement of the final consonant that is always pronounced ([yn-grâ-da-mi]). Perhaps instead of making a distinction between liaison and enchaînement (which are really two different things; the first is a consonant anchoring and a resyllabification process and the other is only a resyllabification process), a distinction should be made for the two types of word-final consonants: those consonants that are only pronounced before
a vowel-initial word and are resyllabified and those that are always pronounced, and are also resyllabified before vowel-initial words. Thus, resyllabification always occurs before vowel-initial words, for all word-final consonants (within the appropriate context).

Non-resyllabification in L2 speech reveals that liaison does occur, but the consonant is not associated to the following empty onset. Speakers have an underlying representation which contains final consonants that are associated to the coda position of the word to which the final consonant belongs, and resyllabification does not take place. The final consonant remains in coda position, so that the phonetic realization of words is the lexical representation, which produces words such as *les* [lez], *un* [œ̃], etc.

Although fixed consonants were not analysed in this study, it is highly probable that non-resyllabification may also occur with fixed final consonants before a following empty onset. Thus, resyllabification errors should be corrected not only for floating consonants, but for fixed consonants as well.

e) Temporally anchored consonants

Temporally anchored consonants in non-liaison contexts is particular to FSL speech. While native speakers make a distinction between fixed and floating consonants, where floating consonants become associated to a skeletal position in liaison contexts, FSL speakers don’t make quite the same distinction. All segments seem to be anchored to a skeletal position, such that word-final consonants must be dissociated in non-liaison contexts. This is evident in cases in which word-final consonants are temporally anchored in non-liaison contexts, as in pre-consonantal position (ex. *son dévolu* [sɔ̃devɔ̃ly]), in pre-pausal position (ex. *les* [lez#]) as well as in phrase-final position (ex. *les Américains* [lezameʁikœ̃]).
One of the contexts in which a speaker may temporally anchor consonants is within a phrase in pre-consonantal position, as in *les vêtements* [lezvɛtˈmɑ̃], *ils vont* [ilvɔ̃], *en plein coeur* [ɑ̃plɛŋkœʁ], *son dévolu* [sɔ̃devœly], *un laboratoire* [œnlorebatoʁ]. As with the other non-liaison contexts, these final consonants are not liaison consonants or gender errors. Since the communication strategy the learner is using is based on the lexical item, sentences are produced word by word and not phrase by phrase. In this case, the speaker may produce temporally anchored consonants even within a phrase such as *les vêtements* [lezvɛtˈmɑ̃]. Awareness of this word-based strategy is crucial for teaching FSL in order to identify and correct anchored consonants in non-liaison contexts.

This phenomenon also occurs predominantly with adjectives and nouns in phrase-final position. Considering, for instance, adjectives, learners seem to have two representations for an adjective: a long form and a short form. Both forms have been acquired, but speakers do not know which form to use in a given phonological context, which results in inappropriate phonetic realizations. There are two problems with temporally anchored consonants in non-liaison contexts: one is that the speaker is producing word-final consonants that should not be produced, realizing words such as *les Japonais* [leʒapɔ̃ne̝z], or *en plein coeur* [ɑ̃plɛŋkœʁ]; the other is that temporally anchored consonants with adjectives and nouns cause comprehension errors in which anchored consonants in non-liaison contexts may be interpreted as being morphological in nature. That is, *il a les cheveux courts* [kœʁ], *les Américains* [lezameʁikan], and other similar errors seem at first to indicate that the speaker is committing an error with respect to the gender of the noun. However, a closer look at the L2 speech samples reveals that this is not the case. In fact, the anchoring of a

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41 In some cases it is difficult to determine the actual error, as in *un livre*, pronounced [ulivʁ], in which the vowel [u] may be an attempt at producing [y] of the feminin article *une* [yn], or the nasal [ʁ], a very difficult sound to acquire.
final consonant is not a feminine marker, nor is this final consonant a liaison consonant. It appears to be a temporally anchored consonant that has failed to become dissociated in non-liaison contexts. It should not be surprising to encounter anchored word-final consonants in FSL since floating consonants are a property of French that differs from English, and as a result must be learned. Furthermore, there is evidence from the data that speakers are aware of the gender of the nouns in question. In the following examples, determiners reveal the masculin gender of the nouns:

(180) au premier [prɔmjeʁ] plan (speaker 2, description)  
le homme est un peu anxieux [aksjoz] (speaker 16, description)  
un livre qui est ouvert [uβɛʁt] (speaker 13, description)  
ils sont très contents [kɔtɛt] (speaker 34, description)  
il essaye d’être, ou de sembler innocent [inɔsɛt] (speaker 39, description)  
ils sont très lourds [ilsɔtʁelud] (speaker 43, spontaneous)

These adjectives cannot be feminine adjectives since the articles and the pronouns are masculin forms. If this is the case, then, it is of no use to the learner to correct these errors by referring to the final consonant as a feminin marker and correcting the sentences with au premier plan, l’homme est un peu anxieux, etc. in the masculin form. The errors in adjectives in the examples above are phonological in nature, in that the learner is anchoring the final consonant of the adjectives, and it is the anchoring of the final consonant that must be corrected, not the adjective’s gender. As a result, L2 learners should be instructed to not pronounce word-final consonants. The structural difference between French and English concerning word-final consonants is of vital importance to acquiring the phonological properties of French with respect to liaison, resyllabification, and word-final consonants in non-liaison contexts.

If the underlying representation of FSL students’ words is based on the lexical item (including the final consonant as an anchored segment), then French as a second language teaching should reflect this learning process. There is a rule that must be learned: word-final consonants in
French are not pronounced, unless followed by $e$.

Temporally anchored consonants may also be considered in terms of the communication strategies the FSL learners employed to produce French sentences. That is, consonants that are temporally anchored before a filled or an unfilled pause may be due to an interruption of some sort. Interruptions in the flow of speech may be followed by a search for a lexical item, a correction, a repetition, or even a continuation of the sentence. For example,

(181) a. *search for a lexical item*

Il y a un [œn], uh, une petite cho-, uh, une cage avec une oiseau.  
(speaker 6, description)

les enfants sont [sōt], qu’est-ce que c’est, oh, devant une fenêtre (speaker 22 description)

il y a un [œn], comment s’appelle, le bois pour frapper la balle. (speaker 30, description)

b. *correction*

on vit plus long [lɔ̃g], pour un plus long temps (speaker 11, spontaneous)

mon [mɔ̃], ma, mon mari (speaker 11, description)

Le chien, ce chien, ton chien...[løʃjɛ̃sʃjɛ̃tøʃjɛ̃] (speaker 22, spontaneous)

c. *repetition*

Quand vous [vuz], quand vous achetez de la nourriture en conserve,... (speaker 5, reading)

Il y a un [œn], un autre petit enfant... (speaker 30, description)

Il ne sort [sɔʁt], il ne sort [sɔʁt] déjà depuis deux semaines,... (speaker 35, spontaneous)

e. *continuation*

c’est un [œn], samedi,... (speaker 35, description)

il y a un [œn], grand panier plein de vêtements... (speaker 35, description)
All of these different types of interruptions in the flow of the speaker’s speech caused a consonant anchoring.

f) Universal Grammar

The notion of universal grammar and its availability to L2 learners may also be addressed with respect to word-final consonants. First of all, the distinction among obligatory and optional liaisons was very clearly revealed in the speech of FSL learners. The data has shown that liaison was acquired. Somehow, learners know in which contexts to produce the floating consonant. The difference between English and French is that word-final (floating) consonants are pronounced in English and not in French (excluding certain consonants), unless they are in a liaison context. The learner’s task is to determine which parameter setting is correct for each language. Temporally anchored consonants in non-liaison contexts occurred as a result of failure to select the correct parameter setting.

g) Role of the instructor

Since language learning in a classroom relies mainly on the instructor’s speech, the role that the instructor plays must not be ignored. The students’ liaison patterns are influenced by the instructor’s, and can be imitated, or memorized. Furthermore, since the classroom is a learning environment, the instructor’s liaison patterns are limited to frequently occurring liaisons, which is also reflected in L2 speech. Thus, learners may imitate or memorize liaisons they’ve heard. Since they are not in a French-speaking environment, they will not come across certain tendencies of native speakers. This explains why liaison consonant insertions (quatre-z-enfants) are rare in L2
(h) L1 interference in FSL

Interference from English is not to be ignored in liaison production. It was shown that in many cases, errors resulted from the differences in the phonological structures of English and French. This accounts for errors such as certain omissions, produced forbidden liaisons, non-resyllabification, as well as temporally anchored consonants in non-liaison contexts. Floating word-final consonants are part of the structure of French, and must be learned. Other phonological components of French that must be learned are nasal vowels, glides, and h aspiré words.

It is also important to remember that adult L2 learning takes place with the use of written material. As a result, word-final consonants that are written are pronounced, as they would in English. It would be interesting to examine whether students who are learning only oral French (i.e. no written form) also realize word-final consonants in non-liaison contexts.

In summary, errors that occur in FSL speech with respect to word-final consonants tend to be a question of anchoring. Floating consonants are in some cases reanalysed as fixed consonants, which causes a temporal anchoring of the consonant both within a phrase in pre-consonantal position, and predominantly in pre-pausal position. This phenomenon contributes to nasal consonant realization, non-resyllabification and errors that appear to be morphological in nature. Language teaching must acknowledge the real reason behind word-final consonants that are produced: word-final consonants are temporally anchored based on the written form of the lexical item. FSL learners must be taught a) to unassociate the final consonant in a non-liaison context, and b) when final consonants must remain anchored, learners must learn to resyllabify the consonant to the following onset. The most efficient method of carrying this out is by teaching the rule previously mentioned:
word-final consonants in French are not pronounced unless followed by e. For those consonants that are pronounced in word-final position, they must be taught to be resyllabified to the following vowel-initial word. This is true of all consonants (fixed and floating). By acknowledging the occurrence of temporally anchored consonants in the teaching and correction of final consonants in the speech of the L2 speaker, the learner’s needs are addressed. By addressing the needs of the individual, “we may learn to adapt ourselves to his needs rather than impose upon him our preconceptions of how he ought to learn, what he ought to learn and when he ought to learn it” (Corder 1967: 169).
Chapter 4. Conclusion

French liaison has been the object of many studies, from grammatical descriptions to linguistic theories. However, there has not been much work based on the acquisition of liaison in French as a second language.

This study has attempted to show that liaison in the speech of FSL learners is in fact acquired, and that speakers’ errors are actually fewer than one would expect. This is also supported by the fact that FSL learners make a liaison even with words that have been created. However, L2 speakers make errors that do not occur in native French speech, such as certain false liaisons, non-resyllabification for non-stylistic purposes, and temporally anchored consonants in non-liaison contexts. Thus, while liaisons are not as frequent as in native speech, the main difference between learners and native speakers is not the number of errors, but the type of error. As a result, my initial hypothesis that FSL learners produce fewer liaisons and make more errors than native speakers was somewhat invalidated by the empirical results. However, the incorrect prediction of my hypothesis reveals the importance that perception plays in judging L2 errors. In fact, L2 errors are perceived as students performing poorly, whereas the results of this study showed that there were a small percentage of errors and a high frequency of obligatory liaisons produced.

The results of the data are also of significant importance for the language instructor, who may perceive many word-final consonant errors as liaison errors, whereas in fact these errors are not the outcome of a failure to apply rules of liaison, but of a failure to dissociate word-final consonants in non-liaison environments. If the instructor interprets these errors as liaison errors, the source of the problem remains unassessed and therefore uncorrected.

A multi-tiered level of representation was found to account for the learners’ liaison patterns
adequately by proposing that the underlying representation of L2 speakers’ final consonants are anchored to a skeletal position, and must be dissociated in non-liaison contexts. This is contrary to what Encrevé proposed for native speaker representation, in which a distinction is made between fixed and floating consonants. According to this proposal, non-resyllabification occurs because word-final consonants are anchored to the coda position and are not resyllabified to the following empty onset. This may also apply to fixed consonants, although fixed consonants were not the subject of this study. The rule for FSL speakers seems to be to unassociate final consonants in non-liaison contexts. Failure to apply this rule results in the phonetic realization of the final consonant.

The distribution of liaison consonants in L2 speech is accounted for in phrase phonology by proposing that liaison depends on the domains CG, SPP, MPP, which allows for variations among speakers as well as individual variations, yet still maintains the distinction between obligatory liaisons and optional liaisons which vary in frequency. The results of the quantitative analyses confirm that the liaison patterns of FSL learners conform to the three domains of liaison. That is, obligatory liaisons were very frequently produced (although not 100%), optional liaisons were much less frequently produced (although some optional liaisons were more frequently produced than others, while most were never produced), and forbidden liaisons were very infrequently produced. This model of domains of liaison is flexible enough to allow for learners to omit obligatory liaisons, produce very few optional liaisons, and the occasional forbidden liaison.

The models of liaison used in this study also shed some light on the speech of native speakers of French, since a multi-linear model and the three domains of liaison were originally proposed for native speaker data. Thus, these models can account for their variation in native French speech as well as in French as a second language. While native speakers know the distinction between floating and fixed consonants, FSL speakers must learn this to make this difference.
As for the pedagogical implications of this study, it has shown that basing the representation of words on the lexical item (that is, temporally anchoring consonants) causes certain errors such as non-resyllabification, temporally anchored consonants in non-liaison contexts, especially nasal consonants. In many cases errors consisting of temporally anchored consonants in non-liaison contexts may seem to be morphological in nature when they are actually phonological. In the case of glide-initial words such as *oiseaux*, the glide is interpreted as having consonant-like properties, such that a consonant preceding the glide-initial word is dissociated from its skeletal position and liaison does not occur (*les/oiseaux*). Teaching must identify the source of the error and provide proper correction. The notion that word-final consonants in French are not pronounced in certain contexts must be taught in the language classroom. It is essential to include phonetic activities since errors may cause comprehension difficulties, as in the case of [unami] which may be *un ami* or *une amie*.

While much research has been carried out on native speakers of French, this study is a first step towards describing and analysing liaison patterns of learners of French as a second language. It was based on a linguistic analysis, and did not take into account sociological factors involved in FSL learning. The only relevant factor that was essential to this study was the students’ level of French. All students were at the same level of French and spoke at least English. Sociological factors which were not included here are those in which certain variables are controlled, such as age, sex, first language, etc. However, a sociolinguistic approach may be the object of a future study.

Further studies still remain to be carried out on liaison in the speech of FSL learners, including the effect of temporal variables on liaison (both voiced and unvoiced hesitations). For instance, is liaison omitted after a voiced hesitation, an unvoiced hesitation, or both? If liaison is not omitted, does resyllabification occur after a hesitation?
Another analysis that would be useful to carry out is a comparison of fixed and floating consonants in FSL speech. For example, the data on floating consonants revealed that they were temporally anchored to the coda position and in certain cases did not resyllabify to the following empty onset. It was assumed that this would be the case for fixed consonants as well, however, there is no statistical analysis to confirm such an assumption.

Floating consonants before glide-initial words of both types were discussed briefly here, but no statistical analysis was carried out to compare the two. This study revealed that glides in glide-initial words were confused with one another, so that those glides having vowel-like properties were considered consonant-like, and those glides having consonant-like properties were considered vowel-like. This confusion caused liaison omissions (un/oiseau) and elisions (l'whisky). However, further research on the comparison of both types of glide-initial words is required before any conclusions may be drawn.

Another comparison that still remains to be carried out is a comparison of two groups of FSL learners at different levels: beginners and advanced groups in order to determine stages of liaison learning.

Another area of research to be carried out concerns the perception of L2 errors in liaison. As I have shown in this study, the perception of liaison errors inaccurately predicts liaison patterns in L2 speakers. However, research on perception would have to involve native French speakers listening to FSL speakers.

The object of this study was to a) describe and analyse the data of two groups of learners of French as a second language, b) to provide a theoretical framework for the data, c) to determine what the data on FSL learners can contribute to linguistic theories on liaison, and d) to determine pedagogical implications of the results. The description and analysis revealed that second language
learners have acquired French liaison, and while they do make errors, our perception of these errors is misleading (which causes difficulties for the language instructor, who may perceive certain temporally anchored consonants as gender errors, and correct them as such). It is thus the type of error that differs (such as certain false liaisons, non-resyllabifications in clitic groups and temporally anchored consonants, all particular to FSL speech) and not the number of errors. The theoretical framework adopted for this study confirmed the notion that liaison is best accounted for in terms of domain of liaison and of frequency. The contribution that the results of the FSL data make to linguistic theories of liaison is that it confirms the notion that first of all, individual speaker variation, from native to FSL speakers, can be accounted for, and second, a multi-linear representation of the syllable in which a distinction is made between the two types of word-final consonants in French is able to account for colloquial trends as well as speaker errors. Finally, the pedagogical implications of this study are pertinent for the correction and learning of word-final consonants in French. This is a first step in providing an analysis of liaison acquisition in French as a second language.
APPENDIX

TRANSCRIPTIONS

Tasks: 1. Reading
2. Spontaneous discourse
3. Description of a picture

Group 1: Speakers 1-19
Group 2: Speakers 20-49

Codes: 1: obligatory liaison
2: optional liaison
3: forbidden liaison
4i: false liaison: consonant epenthesis
4ii: false liaison: liaison consonant error
4iii: false liaison: non-liaison consonant insertion
5i: resyllabification
5ii: non-resyllabification
6i: temporally anchored consonant: within a group in pre-consonantal position
6ii: temporally anchored consonant: pre-pausal position:
   a) within a prosodic domain
   b) at end of a prosodic domain
   c) sentence-final
7i: creation
7ii: interference
8: voiced hesitation
SPEAKER 1: READING

1. C'est en (1 C'EST+PREP, 5i) plein air (1 ADJ+N, 5i). Il y a tant de choses à faire.
2. On en (1 NCLIT+CLIT, 5i) a (1 CLIT+V, 5i) eu beaucoup, à mon avis (1 DET+N, 5i).
3. C'est une (1 C'EST+DET, 5i) question/ intéressante (3 NSG+ADJ). J'y penserai certainement.
4. Elle vient de Haiti et/ elle (3 ET+NCLIT) en est (1 CLIT+V, 5i) fière.
5. Tout est (1 NCLIT+V, 5i) terminé.
6. Voilà un arrangement (1 DET+N, 5) aèsl honnête (1 ADV+ADJ).
7. Quand vous achetez (1 NCLIT+V, 5i) de la nourriture en conserve, examinez-vous la liste des ingrédients (1 DET+N, 5i)?
8. Aujourd'hui, plus de cinquante pour cent des Canadiens préfèrent des produits qui ne contiennent ni colorants ni additifs chimiques. Aussi, les commerçants qui veulent/ augmenter (2 V+INF) leurs chiffres d'affaire exploitent le goût des consommateurs/ en (3 N+PREP) leur présentant des emballages (1 DET+N, 5i) où (3 NPL+ADV) le mot «naturel» est mis en (2 V+PREP, 5i) relief. Pourtant/ à (3 ADV+PREP) notre époque, il est rare de trouver dans les supermarchés des aliments (1 DET+N, 5i) naturels/ en (2 ADJPL+PREP) conserve qui ne contiennent pas d'agent de conservation.

SPEAKER 1: SPONTANEOUS

Bonjour Monsieur, uh, François, ici Dimitra à l'appareil. Je vous appele (1 CLIT+V, 5i) de Toronto. Je suis une (2 V+DET, 5i) étudiante de, de vingt (3 DET#, 5ii), vingt ans (1 DET+N, 5i), et je voudrais dire que à mon avis (1 DET+N, 5i), les compagnies/ emploient (2 NPL+V) beaucoup trop de trucs/ et (2 NPL+ET) de stratagèmes pour, euh, pour convaincre les consommateurs d'acheter leurs produits, même s'ils ne sont pas naturels. J'en ai (1 CLIT+V, 5i) assez de lire vraiment sur les emballages (1 DET+N, 5i), euh, le mot «naturel», quand enfin (2 CONJ+ADV, 5i), quand (kat) (6ii CONJ#), euh, quand enfin (2 CONJ+ADV, 5i) je peux lire la liste des ingrédients (1 DET+N, 5i), et trouver que, euh, le produit est rempli de produits chimiques, d'agent de conservation, de colorants, d'additifs.... Moi, personnellement, j'achète beaucoup de fruits/et (2 NPL+ET) de légumes fraîches (6iib ADJPL#), euh, je cherche les produits qui ont le moins d'emballage possible, et je fréquente le supermarché «Longo» qui, qui n'offre que des fruits/et (2 NPL+ET) des légumes, des produits fraîches (6iic ADJPL#).

SPEAKER 1: PICTURE (DESCRIPTION)

Nous nous trouvons dans une (1 PREP+DET, 5i) salle à coucher. Au milieu de la salle il y a un grand, un très grand lit, avec une couverture blanche, et des draps/avec (3 NPL+PREP) des petits pois blancs, euh, pois noirs, pardon. Euh, dans le lit, il y a une femme d'à peu près/une (3 LOC+DET) trentaine d'année. Elle, elle a des cheveux courts, un peu, un peu bouclés devant. Elle a un nez long/et (3 ADJSG+ET) très pointu. Elle porte des boucles d'oreille. Elle est ([et]) (6iiia V#), elle est en (2 V+PREP, 5i) train de lire, elle a un livre à la main, et/elle (3 ET+NCLIT) tient/à (2 V+PREP) la main gauche un verre rempli de quelque chose. Euh, sur le plancher, il y a une bouteille, et/aussi (3 ET+ADV) sur le plancher près du lit, il y a un chat, un chat, un petit chat noir avec des petites oreilles (katits3~ejl) (1 ADJ+N, 5i). La femme
est en train de parler à monsieur qui vient d'entrer par la porte, à droite. Ce monsieur porte un costume et une cravate. La cravate est dénuée. À la main, il porte un manteau. Il a des cheveux courts, il a un très grand nez qui semble être rougi au bout, et, il a l'air très embarrassé. L'homme est sans doute le mari de la femme qui rentre aux petites heures de la journée, et la femme est là, train de lui demander où il a été tout, toute la nuit. Dans la scène, au-dessus du lit, il y a un petit pot de fleurs et deux bouteilles dessus. Euh, juste à côté de cela, il y a une lampe qui pend du plafond.

SPEAKER 2: READING
1. C'est en plein air. Il y a tant de choses à faire.
2. On en eu beaucoup, à mon avis.
4. Elle vient de Haiti et elle est fière.
5. Tout est terminé.
6. Voilà un arrangement très honnête. Aussi, les commerçants qui veulent augmenter leurs chiffres d'affaire exploitent le goût des consommateurs en leur présentant des emballages où le mot naturel est mis en relief.
7. Quand vous achetez de la nourriture en conserve, examinez-vous la liste des ingrédients?
8. Aujourd'hui, plus de cinquante pour cent des Canadiens préfèrent des produits qui ne contiennent ni colorants ni additifs chimiques. Aussi, les commerçants qui veulent augmenter leurs chiffres d'affaire exploitent le goût des consommateurs en leur présentant des emballages où le mot naturel est mis en relief.

SPEAKER 2: SPONTANEOUS
À mon avis, on devait manger beaucoup de légumes car ça c'est bon pour la santé. Aussi, on devait suivre un régime, euh, un régime avec des légumes et d'autres nourritures qui c'est bon pour la santé, et, pas beaucoup de sucre, et des matières grasses. La nourriture dite naturelle, ce n'est pas toujours comme ça. Les compagnies vont trouver dans les supermarchés des aliments naturels en conserve qui ne contiennent pas d'agent de conservation.
avoir de la conscience.

SPEAKER 2: PICTURE (DESCRIPTION)
Au première ([přemjeɾ]) plan (6i ADJ+N), on voit/une (2 V+DET) plante qui est près d'un ([fun]) lit (6i DET+N)/ (3 NSG+CONJ) où est située une femme. Ah, ça, la femme a des yeux (1 DET+N, 5i) grandes/et (3 4ii ADJ+ET, 5ii)/un (3 ET+DET) noix pointu. Elle a dans la main/un (3 NSG+DET), un verre avec liquide dedans. On voit près du, du, du lit, un bouteille et/un (3 ET+DET) chat. La femme est couvert par des couvertures. Uh, au milieu, on voit que un_homme (1 DET+N, 5i) entre par la porte dans la chambre. Ah, il est, il a un nez grand (6ii ADJ#)/et/aussi (3 ET+ADV) pointu, des yeux (1 DET+N, 5i) grands, et/il (3 ET+NCLIT) dit «Hic» ([hik]). Il pore, il porte un costume. Ah, sur le lit. on voit près du, du, du lit, un doiseau (1 DET+N) dans une cage, et la cage devient une peinture sur le mur. Sur l'homme on remarque qu'il y a un/oiseau (1 DET+N) dans une cage, et à côté du oiseau il y a une lampe, et près de ça, aussi à côté, un, une fenêtre. Sur la porte, on trouve des fleurs, et/ah (8 ET+HES), et près du lit, à, à gauche, on remarque qu'il y a une table où, où est située des fleurs sur la table, et des bouteilles. À droite, de la table, on voit/une (2 V+DET) miroir (6i DET+N). Uh, l'homme et la femme ont l'apparence d'être malade. La femme a dans sa main, un livre. Finalement, sur la fin, la femme, on voit que un autres (1 DET+N) dans une scène intérieure dans une (1 PREP+DET, 5i) chambre à durmir, dormir.

SPEAKER 3: READING
1. C'est en (1 C'EST+PREP, 5i) plein air (1 DET+N, 5i). Il y a tant de choses à faire.
2. On en (1 NCLIT+CLIT, 5i) _a (1 CLIT+V) eu beaucoup, à mon avis (1 DET+N, 5i).
3. C'est une (1 C'EST+DET, 5i) question/intéressante (3 NSG+ADJ). J'y penserai certainement.
4. Elle vient de Haiti et/elle (3 ET+NCLIT) en est (1 CLIT+V, 5i) fière.
5. Tout est (1 NCLIT+V, 5i) terminé.
6. Voilà un arrangement (1 DET+N, 5i) très honnête (1 ADV+ADJ, 5i).
7. Quand vous achetez (1 NCLIT+V, 5i) de la nourriture en conserve, examinez-vous la liste des ingrédients (1 DET+N, 5ii)?
8. Aujourd'hui, plus de cinquante pour cent des Canadiens préfèrent des produits qui ne contiennent ni colorants ni additifs chimiques. Aussi, les commerçants qui veulent/augmenter (2 V+INF) leurs chiffres d'affaire exploitent le goût des consommateurs/en (3 NPL+PREP) leur présentant des embalages (1 DET+N, 5i)/ou (3 NPL+ADV) le mot «naturel» est mis en relief (2 V+PREP, 5i). Pourtant à (3 ADV+PREP) notre époque, il est rare de trouver dans les supermarchés des aliments (1 DET+N, 5i) naturels/en (2 ADJPL+PREP) conserve qui ne contiennent pas d'agent de conservation.

SPEAKER 3: SPONTANEOUS
Bonjour. Bonjour, je m'appelle ---. À propos de l'alimentation naturelle, je pense que les Canadiens ne savent plus ce qui est vraiment naturel parce que on voit dans le supermarché, le mot «naturel» apparaît partout. Euh, moi, je mange tout ce que je veux, sans tenir compte de,
euh, ce qui est naturel. Euh, je prends pas le petit déjeuner, ce qui n'est pas très bien, um, je mange beaucoup de fruits, je mange un, surtout des, des pâtes, je mange surtout des pâtes, euh, je crois pas qu'il faut vraiment faire attention à (3 NSG+PREP) ce qui est naturel. Je crois qu'il faut/uh (8 V+HES), avoir une sorte d'alimentation modérée, uh, sans s'inquiéter tout le temps de ce qu'on mange.

SPEAKER 3: PICTURE (DESCRIPTION)
C'est une (1 C'EST+PREP, 5i) scène d'intérieur qui se situe dans une (1 PREP+DET, 5i) chambre, évidemment. Um, on distingue deux personnes, une femme allongée sur un lit, et/et un (3 ET+DET) homme (1 DET+N, 5i) qui se trouve devant la porte, devant/une (2 PREP+DET) porte. Euh, la femme est en (2 V+PREP, 5i) train de lire, elle tient/un (2 V+DET) livre dans sa main. Elle a les cheveux bien coiffés, un nez proéminent et (3 ADJSWET) des yeux (1 DET+N, 5i) grands. Uh, elle porte une chemise de nuit. Uh, le monsieur qui se trouve devant la porte tient dans sa veste, il a l'air d'être fatigué. À propos de son apparence (1 DET+N, 5i), il a un nez proéminent, des yeux (1 DET+N, 5i) /exhorbités (2 NPL+ADJ), um, et, je crois qu'il est en (2 V+PREP, 5i) train de perspirer. Il porte un, une cravate, une chemise, et des pantalons. À côté, à la gauche, on voit une plante, um, rangée directement sur le parquet. Uh, au-dessus de la plante on voit/un (2 V+DET) tableau et/une (3 ET+DET) petite cage avec un, un, un perroquet dedans. À côté du lit se voit/un (2 V+DET) uh, une bouteille de whisky ([dwiski]), je crois, et/un (3 ET+DET) chien. Uh, devant la, le lit, au dernier plan, on distingue une table, et/une (3 ET+DET) miroir (6i DET+N). Sur la table on voit/un (2 V+DET) petite vasque, et deux, deux bouteilles. Um, un peu plus loin, au dernier plan, on voit/un (2 V+DET) fenêtre.

SPEAKER 4: READING
1. C'est en (1 C'EST+PREP, 5i) plein air (1 DET+N, 5i). Il y a tant de choses à faire.
2. On a (1 CLIT+V, 5i) eu beaucoup, à mon avis (1 DET+N, 5i).
3. C'est une (1 C'EST+DET, 5i) question/intéressante (3 NSG+ADJ). J'y penserai certainement.
4. Elle vient de Haiti et/elle (3 ET+NCLIT) est (1 CLIT+V, 5i) fière.
5. Tout est (1 NCLIT+V, 5i) terminé.
6. Voilà un arrangement (1 DET+N, 5i) très honnête (1 ADV+ADJ, 5i).
7. Quand vous achetez (1 DET+N, 5i) de la nourriture en conserve, examinez-vous la liste des ingrédients (1 DET+N, 5i)?
8. Aujourd'hui, plus de cinquante pour cent des Canadiens préfèrent des produits qui ne contiennent ni colorants ni additifs chimiques. Aussi, les commerçants qui veulent/augmenter (2 V+INF) leurs chiffres d'affaire exploitent le goût des consommateurs/en (3 NPL+PREP) leur présentant des emballages (1 DET+N, 5i)/ou (3 NPL+ADV) le mot «naturel» est mis/en (2 V+PREP) relief. Pourtant/à (3 ADV+PREP) notre époque, il est rare de trouver dans les supermarchés des aliments (1 DET+N, 5i) naturels/en (2 ADJPL+PREP) conserve qui ne contiennent pas d'agent de conservation.
SPEAKER4: SPONTANEOUS
Salut, tout le monde. À mon avis (1 DET+N, 5i), il faut que nous ayons (nusejô) (1, 7ii NCLIT+V, 5i) beaucoup de nourriture naturelle dans notre régime. Par exemple, des œufs ([desô]) (1, 7ii DET+N, 5i), du pain au (3 NSG+PREP, 5i) blé, beaucoup de fruits, de l'eau minérale. Ces nourritures-ci sont très bons pour la santé. Et/en (3 ET+PREP) plus, on peut/obtenir (2 V+N) des vitamines/et (2 NPL+ET) des minérales. Comme ça, si nous avons ([nusavô]) (1, 7ii NCLIT+V, 5i) beaucoup de ces nourritures dans notre régime, on peut rester/en (3 INF+PREP) bonne forme. C'est pourquoi tout le monde doit/acheter (2 V+INF) ces nourritures.

SPEAKER 4: PICTURE (DESCRIPTION)
Cette scène a lieu à l'intérieur dans une (dâsyn) (1, 7ii PREP+DET, 5i) chambre. Au premier plan, on peut remarquer (2 INF+DET) grande ch-. un grand lit. Um, une femme. um qui a de grands yeux (g~iisj~) (1, 7ii ADJ+N, ji), un long nez, um, et qui est dans son chemise de nuit/est (3 NSG+V) mis, est déjà mis/au (2 V+PREP) lit. Dans sa, dans la main droite, elle a une tasse d'alcool, et dans la main droite, on peut trouver/un (2 INF+DET) livre. Um, à côté du lit, on peut remarquer/un (2 INF+DET) chat. Et juste après le lit, on peut trouver/ un (2 INF+DET) plante, um, et/un (3 ET+DET) miroir. Um, à l'arrière-plan on peut remarquer/un (2 INF+DET)_homme (1 DET+N, 5i) avec un, avec un grand nez/et (3 NSG+ET) de grands yeux ([grâsjo]) (1, 7ii ADJ+N, 5i). Il a peur, et/il (3 ET+NCLIT) est surprise (6iib ADJS#) parce qu'il rentre tard. Um, la femme lui dit: «c'est_à (1 C'EST+PREP, 5i) cette heure-ci que tu rentres?».

SPEAKER 5: READING
1. C'est en (1 C'EST+PREP, 5i) plein air (1 ADJ+N, 5i). Il y a tant de choses à faire.
2. On en (1 NCLIT+CLIT, 5i) a (1 CLIT+V, 5i) eu beaucoup, à mon avis (1 ADJ+N, 5i).
3. C'est une (1 C'EST+DET, 5i) question/intéressante (3 NSG+ADJ). J'y penserai certainement.
4. Elle vient d'Haiti et/elle (3 ET+NCLIT) en est (1 CLIT+V, 5i) fière.
5. Tout est (1 NCLIT+V, 5i) terminé.
6. Voilà un arrangement (1 DET+N, 5i) très honnête (1 ADV+ADJ, 5i).
7. Quand vous ([vuz]) (6iia NCLIT#), quand vous achetez (1 NCLIT+V, 5i) de la nourriture en conserve, examinez-vous la liste des ingrédients (1 DET+N, 5i)?
8. Aujourd'hui, plus de cinquante pour cent des Canadiens préfèrent des produits qui ne contiennent ni colorants ni additifs chimiques. Aussi, les commerçants qui veulent/augmenter (2 V+INF) leurs chiffres d'affaire exploient le goût des consommateurs/en (3 NPL+PREP) leur présentant des emballages (1 DET+N, 5i) où (3 NPL+ADV) le mot «naturel» est mis/en relief (2 V+PREP). Pourtant/à (3 ADV+PREP) notre époque, il est rare de trouver dans les supermarchés des aliments (1 DET+N, 5i) naturels/en (2 ADJPL+PREP) conserve qui ne contiennent pas d'agent de conservation.
SPEAKER 5: SPONTANEOUS
Allo, uh, en ce qui concerne l'alimentation naturelle, les produits naturels au Canada, je crois qu'il est rare de trouver des produits naturels dans, dans les supermarchés, um, parce que les ferm-, aujourd'hui, les fermiers utilisent du fertilisant, des pesticides, des agents de, de conservation, et des produits chimiques, um, dans les produits, um, alors, les produits n'est pas, n'est pas naturels. Um, okay, n'est pas naturels, um, okay, les produits qui est naturel, c'est les produits qui n'ont pas transformés, comme les fruits, les légumes, um, en somme, il est très rare de trouver des produits naturels au Canada.

SPEAKER 5: PICTURE (DESCRIPTION)
Cette situation se trouve dans la chambre. Um, une femme, une femme d'une, d'une trentaine d'année, um, est, est, s'allonge sur, sur un lit. Um, elle, elle a la taille mince, um, elle a une grande tête, avec des cheveux courts, elle a un nez long et pointu, des yeux /écarquillés train de, de, de lire, de lire une livre et boire du jus. Um, um, près de la femme, on peut voir une grande plante, un tableau accroché au haut, une cage qui contient un oiseau, un homme, um, on peut voir près de la porte, on peut voir son mari, um, il est, il est très beau, il a une grande nez, um, des cheveux courts, il porte une costume, il est, il est, um, il a bu beaucoup. Il a bu beaucoup, um okay. Près, près de la, près du mari, um, le miroir pose, un miroir est posé, um est posé. La, la femme...

SPEAKER 6: READING
1. C'est en plein air. Il y a tant de choses à faire.
2. On en a eu beaucoup, à mon avis.
3. C'est une question intéressante.
4. Elle vient d'Haiti et elle est fière.
5. Tout est terminé.
6. Voilà un arrangement très honnête.
7. Quand vous achetez de la nourriture en conserve, examinez-vous la liste des ingrédients?
8. Aujourd'hui, plus de cinquante pour cent des Canadiens préfèrent des produits qui ne contiennent ni colorants ni additifs chimiques. Aussi, les commerçants qui veulent augmenter leurs chiffres d'affaire exploitent le goût des consommateurs en leur présentant des emballages où le mot «naturel» est mis en relief. Pourtant à notre époque, il est rare de trouver dans les supermarchés des produits naturels qui ne contiennent pas d'agent de conservation.
SPEAKER6: SPONTANEOUS
Bonjour, je m'appelle ---. J'ai une opinion très, très spécifique sur les _ alimentations (1 DET+N, 5i) naturelles. Um, j'ai la diabète maintenant, euh, et comme beaucoup des Canadiens, je suis heureuse (2 V+ADJ, 5i) que les compagnies sont/un (2 V+DET) peu plus conscients. Ils mettent de plus en plus (1 FIXED, 5i) chaque jour, uh, des _ ingrédients (1 DET+N, 5i) sur l'emballage, et c'est très important (1 ADV+ADJ, 5i). Uh, la, nous sommes/une (2 V+DET) société plus conscient, et/uh (8 ET+HES), plus concernée des/uh (8 DET+HES), des additifs (1 DET+N, 5i) et (3 NPL+ET) des agents (1 DET+N, 5i) de conservation, et/uh (8 ET+HES), dans l'environnement, nous avons (1 NCLIT+V, 5i) beaucoup/uh (8 ADV+HES), des, des problèmes/et (3 NPL+ET) / un (8 E T+HES), beaucoup des gens a les allergies (1, 7i DET+N, 5i), um, et c'est très, très important (1 ADV+ADJ, 5i) d'être conscient, um, et c'est mon opinion (1 DET+N, 5i).

SPEAKER 6: PICTURE (DESCRIPTION)
Uh, cette scène se trouve dans une (1 PREP+DET, 5i) chambre de lit. Uh, au milieu de la, de la scène, uh, il y a le lit. À l'arrière-fond de, de la scène il y a une plante. À la côté droite de la lit, um, à l'arrière-plan, il y a un ([œn]) (6iia DET#), un ([œn]) miroir (6i DET+N) et/une (3 ET+DET) petite table avec des bouteilles de parfum, et/uh (8 ET+HES), une petite plante. Dans le lit, um, il y a une femme d'une uh, trente, trentaine d'année. Elle a un ([œn]) (6iia DET#), un nez longue ([lœg]) (3 ADJS+ET, 5i) et mince, et les cheveux courts. Elle a des boucles d'oreilles. Um, elle reste dans le lit. Elle tire un, un, [li]. Elle a un ([œn]) verre (6i DET+N) de l'eau dans la main. Um, à l'arrière-plan de la scène, il y a aussi une. une porte, et/ihn (3 ET+DET) _ autre (1 DET+N, 5i), un _ homme (1 DET+N, 5i) entre dans la scène. Um, uh, il semble, semble qu'elle a boire un peu trop d'alcool, um elle fait [jlk], uh, et/uh (8 ET+HES), elle y a les grands yeux (1 ADJ+N, 5i) /et (3 NPL+ET) / uh (8 ET+HES), un grand nez gros qui, qui est rouge, je pense. La femme et le chat, um, il y a aussi un chat dans la scène, regarde l'homme avec un peu de distinct, um, il y a quelques _ autres (1 DET+ADJ, 5i) choses, uh, dans la scène. Il y a un ([œn]) (6iia DET#), uh, une petite cho-, uh, une cage avec une oiseau. Il y a une peinture à la côté gauche, gauche de la um, de la scène. Il y a un grand (6i DET+ADJ) chandelier, uh, rond, peut- être (1 FIXED, 5i) chinois, chi-, chinoise (6iib ADJS#), peut- être (1 FIXED, 5i) la femme demande à...

SPEAKER 7: READING
1. C'est en (1 C'EST+PREP, 5i) plein air (1 ADJ+N, 5i). Il y a tant de choses à faire.
2. On en (1 NCLIT+CLIT, 5i) _a (1 CLIT+V, 5i) eu beaucoup à mon avis (1 DET+N, 5i).
3a.C'est une (1 C'EST+DET, 5i) question/intéressante (3 NSG+ADJ). J'y penserai certainement.
4. Elle vient de Haiti et/elle (3 ET+NCLIT) est en (2, 7i V+CLIT, 5i) fière.
5. Tout est (1 NCLIT+V, 5i) terminé.
6. Voilà un arrangement (1 DET+N, 5i) très honnête (1 ADV+ADJ, 5i).
7. Quand vous achetez (1 NCLIT+V, 5i) de la nourriture en conserve, examinez-vous la liste des ingrédients (1 DET+N, 5i)?
8. Aujourd'hui, plus de cinquante pour cent des Canadiens préfèrent des produits qui ne contiennent ni colorants ni additifs chimiques. Aussi, les commerçants qui
veulent/augmenter (2 V+INF) leurs chiffres d'affaire exploitent le goût des
consommateurs/en (3 NPL+PREP) leur présentant des emballages (1 DET+N, 5i) /ou
(3 NPL+ADV) le mot «naturel» est mis en relief (2 V+PREP, 5i). Pourtant/à (3 ADV+PREP)
notre époque, il est rare de trouver dans les supermarchés des aliments (1 DET+N, 5i)
naturels/en (2 ADJPL+PREP) conserve qui ne contiennent pas d'agent de conservation.

SPEAKER 7: SPONTANEOUS
Oui, bonjour, euh, j'écoute votre émission, et je voudrais seulement vous dire que, que ce que je mange, ça n'a rien à (2 ADV+PREP) voir avec «naturel», le mot «naturel» qui se trouve sur l'emballage. Je trouve que les industries (1 DET+N, 5i), i utilisent ce mot pour euh, seulement pour vendre l'alimentation, leur nourriture, et/euh (8 ET+HES), ce que, ce que, j'achète, c'est seulement ce que j'aime. Mais s'y a des produits chimiques/ou (3 ADJPL+CONJ) non, on peut rien/y (2 ADV+CLIT), on peut rien/y (2 ADV+CLIT) faire, puisque dans tout ce que nous mangeons, i(ls) se trouvent des produits chimiques. Par exemple, l'eau que l'on boit, même si on n'achète pas (on achète pas?), on ne peut pas, on se trouve toujours des, des produits. Donc, merci pour m'avoir euh, écouter, et/euh (8 ET+HES), je voudrais seulement vous dire que j'aime bien votre émission/et (3 NSG+ET) que je l'écoute, que je l'écoute toujours, et/um (8 ET+HES), à, à bientôt.

SPEAKER 7: PICTURE (DESCRIPTION)
Cette scène se prend, se situe à l'intérieur dans une (1 PREP+DET, 5i), dans un
(1 PREP+DET, 5i) chambre à coucher. Euh, nous avons (1 NCLIT+V, 5i), c'est plutôt un caricature, ce que, au centre de l'image, euh, je peux voir une femme qui est ([et]) (6iia V#), qui est allongée (2 V+ADJ, 5i) dans son lit, couvert de son, d'un drap/et (3 NSG+ET) d'un couverture. Son dos/est ([et]) (3 NSG+V) sur (6iib V+PREP) un oreiller (1 DET+N, 5i). Uh, ce qui sort du corps de cette femme, qui est ([et]) (6iia V#), qui, qui ressemble plus (plys)
(6iib ADV#) de cette femme, c'est son nez pointu, qui ressemble à celui de Cyrano de Bergerac. Elle a les yeux (1 DET+N, 5i) très gros, qu'on dirait comme des poissons. Euh, ses cheveux sont courtes (klezr) et (4ii ADJPL+ET, 5ii) /un (3 ET+DET) peu étranges (letrwaat)
(6iib ADJPL#), épuisés/a (3 ADJPL+PREP) la même fois. Ah, elle lit/un (2 V+DET) livre, et dans sa main dr-, gauche, elle a un verre, et près du lit, sur la plancher/en (3 NSG+PREP) bois se trouve un bouteille, on dirait c'est/un (1 C'EST+DET) bouteille d'alcool puisque son nez pointu est/un (2 V+DET) peu um, coloré, on dirait si c'était/un (2 V+DET) couleur, on dirait rouge. Euh, aussi à côté du bouteille se trouve un chat. Euh, le chat, puis la femme regarde à gauche de l'image dont on (1 ADV+NCLIT, 5i) voit/un (2 V+DET) l'homme (1 DET+N, 5i) qui rentre dans la porte, qui rentre dans la chambre dans la porte, qui dit «Hic». Donc, on voit qu'il est soûl, soule (6iib ADVSG#), on dirait qu'il est rentré tard. Um, ce qui, qui sort de son corps, c'est son nez qui est aussi (2 V+ADV, 5i) long ([loog])et (3 ADJS+ET, 5ii) gros, qui ressemble à une baguette de pain. Ses yeux (1 DET+N, 5i) sont ronds comme des poissons. Il a des cheveux courtes (6iic ADJPL#). Il porte un costume. Nous voyons/a (3 V+PREP) côté à sa droite un miroir. Euh, y a aussi au-dessus de la porte qui est derrière lui, des fleurs, on dirait dans un
(1 PREP+DET, 5i) panier. Euh, à côté des fleurs s-, qui est sur le plafond, on voit/une
(2 V+DET) fenêtre, aussi à côté de la femme, sur l'autre côté de l'image, à la gauche, y a un très grand plante. Au-dessus du plante y a un/oiseau (1 DET+N) dans une (1 PREP+DET, 5i) cage,
SPEAKER 8: READING
1. C'est_ en (1 C'EST+PREP, 5i) plein_air (1 ADJ+N, 5i). Il y a tant de choses à faire.
2. On_ en (1 NCLIT+CLIT, 5i) _a (1 CLIT+V, 5i) eu beaucoup, à mon_ avis (1 DET+N, 5i).
3. C'est_ une (1 C'EST+DET, 5i) question/intéressante (3 NSWADJ). J'y penserai certainement.
4. Elle vient de Haiti et/elle (3 ET+NCLIT) en_West (1 CLIT+V, Si) fière.
5. Tout_/ est (1 NCLIT+V, 5ii) terminé.
6. Voilà un_/ arrangement (1 DET+N, Sii) très/honnête (1 ADV+ADJ).
7. Quand vous achetez (1 NCLIT+V, 5i) de la nourriture en conserve, examinez-vous la liste des_/ ingrédients (1 DET+N, 5ii)?
8. Aujourd'hui, plus de cinquante pour cent des Canadiens préfèrent des produits qui ne contiennent ni colorants ni additifs chimiques. Aussi, les commerçants qui veulent/augmenter (2 V+JNF) leurs chiffres d'affaire exploitent le _goiit (3 NPL+PREP) des_ consommateurs/en (3 NPL+PREP) leur présentant des emballages (1 DET+N, 5i)/où (3 NPL+ADV) le mot «naturel» est mis/en relief (2 V+PREP). Pourtant/à (3 ADV+PREP) notre époque, il est rare de trouver dans les supermarchés des_ aliments (1 DET+N, 5i) naturels/en (2 ADJPL+PREP) conserve qui ne contiennent pas d'agent de conservation.

SPEAKER 8: SPONTANEOUS
Bonjour, je m'appelle ----. Je téléphone de l'Ontario, à Toronto. Euh, premièremen, je veux dire que je préfère manger la nourriture naturelle. Ah, dans les, à l'été, j'ai un jardin, et/um (8 ET+HES), j'ai les, légumes/et (3 NPL+ET) les fruits la-dedans. Um, je ne dois, je, je n'aime pas, um, acheter trop dans la supermarché parce que, um, je n'aime pas les conservateurs/et (3 NPL+ET) les_/additifs (1 DET+N, 5ii) dans les produits. Quand je suis/à (2 V+PREP) la supermarché, je toujours lis les_in- (1 DET+N, 5i), ingrédients sur l'emballage du produit, um, parce que je n'aime, je, je veux manger les, la nourriture naturelle. Ah, à mon_avis (1 DET+N, 5i), le jardin/est (3 NSG+V) le, le, le meilleur source de, de nourriture, et pas la supermarché.

SPEAKER 8: PICTURE (DESCRIPTION)
La scène se passe dans_un (1 PREP+DET, 5i) chambre. Il y a un lit/et (3 NSG+ET)/il (3 ET+NCLIT) y a une femme et son mari. Le mari entre dans la chambre et la femme est dans son lit. Le ch-, il y a un chat/au (3 NSG+PREP) pied du lit qui regarde l'homme, le mari. Um, il y a une boule, uh, et peut_être (1 FIXED, 5i) la femme dit quelque chose comme: «regarde le temps, vous n'avez pas/honte (3 ADV+H ASPIRE) de rentrer si tard (tardï) (6iic ADV#)?». L'homme fait/un (2 V+DET), un, un_/hiccups ([ik²]) (1, 7ii DET+N, 5ii), comme un_/hiccups ([ik²]) (1, 7ii DET+N, 5ii), peut_être (1 FIXED, 5i) il était/um (8 V+HES), il boit du l'al-, alcool, ou quelque chose comme ça. Um, il a un_/ (6iia DET#), un nez très grande (6iib ADJ#), et c'est p-, c'est/1 (1 C'EST+DET) peu rouge, alors peut_être (1 FIXED, 5i) il avait/un (2 V+DET) bouteille quelque ch-, quelque part. Mais la, la femme est peut_être (1 FIXED, 5i) un_/hypocrite/1 DET+N, 5ii) parce qu'elle a aussi un ([œn]) bouteille qui reste...
sur le plancher/à (3 NSG+PREP) côté du lit. Elle a un ([œn]) verre (6i DET+N) plein de quelque chose qui est dans la bouteille. Il y a aussi au coin du chambre un/oiseau (1 DET+N) et/un (3 ET+DET) petit_arbre (1 ADJ+N, 5ii). Um, il y a, um, on ne sait pas quelle heure il est. mais/ou (2 CONJ+NCLIT) doit devenir que c'est très tard parce que la femme est dans son lit, et c'est peut-être (1 FIXED, 5i) le soir. L'homme regarde un peu comme il ne doit, il ne doit...

SPEAKER 9: READING
1. C'est_en (1 C'EST+PREP, 5i) plein_air (1 ADJ+N, 5i). Il y a tant de choses à faire.
2. On_en (1 NCLIT+CLIT, 5i) a (1 CLIT+V, 5i) eu beaucoup, à mon_avis (1 DET+N, 5i).
3. C'est_une (1 C'EST+DET, 5i) question/intéressante (3 NSG+ADJ). J'y penserai certainement.
4. Elle vient_d'Haiti et/elle (3 ET+NCLIT), elle en_/ (6iia CLIT#), elle en_est (1 CLIT+V, 5i) fière.
5. Tout_est (1 NCLIT+V, 5i) terminé.
6. Voilà_un/arrangement (1 DET+N, 5i) très/honnête (1 ADV+ADJ).
7. Quand vous_achetez (1 NCLIT+V, 5i) de la nourriture en conserve, examinez-vous la liste des_ingrédients (1 DET+N, 5i)?
8. Aujourd'hui, plus de cinquante pour cent des Canadiens ([kanadjen]) (6iib NPL#) préfèrent des produits qui ne contiennent ni colorants ni additifs chimiques. Aussi, les commerçants qui veulent/augmenter (2 V+INF) leurs chiffres d'affaire exploitent le goût des consommateurs/en (3 NPL+PREP) leur présentant des_emballages (1 DET+N, 5i) /où (3 NPL+ADV) le mot «naturel» est mis_en relief (2 V+PREP, 5i). Pourtant/à (3 ADV+PREP) notre époque. il est rare de trouver dans les supermarchés des_/aliments (1 DET+N, 5ii) naturels/en (2 ADJPL+PREP) conserve qui ne contiennent pas d'agent de conservation.

SPEAKER 9: SPONTANEOUS
Je suis_une (2 V+DET, 5i) étudiante ici. J'ai pas_assez (2 ADV+ADV, 5i) d'argent. Um, quand, quand je, quand je suis_allée (2 AUX+V, 5i) au, au supermarché, uh, um, je veux, je veux/acheter (2 V+INF) les, uh, beaucoup de nourritures pour uh, pour moins d'argent. Et/uh (8 ET+HES), les produits naturels/ uh (8 ADJPL+HES), uh souvent coûtent plus mais. uh, quoi suis-je faire, parce que je veux, je veux les plus bien nourritures parce que, uh, je, je cherche, uh, beaucoup de, beaucoup de vitamines, et beaucoup de, uh, de produits qui est bien pour moi, et les produits naturels, uh, doit/être (2 V+INF) plus bien pour moi, um, mais...

SPEAKER 9: PICTURE (DESCRIPTION)
Ce scène se passe dans_une (1 PREP+DET, 5i) chambre à coucher. Il y a beaucoup des_articles (1 DET+N, 5i) pour décorer la salle. Uh, comme uh, au gauche, à la gauche, il y a une plante et/uh (8 ET+HES), et/une (3 ET+DET) picture dans_une (1 PREP+DET, 5i) frame, il y a une, en_haute (3 PREP+H ASPIRÉ) (6iib N#) de la plante, il y a une, une, pardon, en_haute (3 PREP+H ASPIRÉ) (6iib N#) de la plante on trouve une oiseau dans, dans son maison. Um, uh, au milieu de la scène on trouve une verre (6i DET+N) pour, pour se regarder. Um, et/uh (8 ET+HES), et/uh (8 ET+HES), à côté de la verre il y a une, on trouve, pardon, on trouve une table avec les ([lez]) (6iia DET#), les_effets (1 DET+N, 5i) personnels, um, les
bouteilles/et (3 NPL+ET) choses comme ça. Um, à droit, on trouve la porte, et/on (3 CONJ+NCLIT) trouve un_homme (1 DET+N, 5i), uh, qui uh, qui uh, qui semble d'avoir beaucoup de boire. Uh, il y a un grand nez, uh, peut-être (1 FIXED, 5i) son nez/est (3 NSG+V) rouge. Uh, il, il semble peur de sa femme. Uh, sa femme est dans la lit, uh, au milieu de la chambre. Uh, il semble que, uh, elle, elle boit/aussi (3 NSGtADV), uh, il y a un grand nez, uh, peut-être (1 FIXED, Si) son nez/est rouge. Uh, il, il semble peur de sa femme. Uh, sa femme est dans la lit, uh, au milieu de la chambre. Uh, il semble que, uh, elle, elle boit/aussi (3 NSG+ADV), et/uh (8 ET+HES), et/uh (8 ET+HES), um, elle dit quelque chose à sa, à la, à l'homme.

SPEAKER 10: READING
1. C'est_en (1 C'EST+PREP, 5i) plein_air (1 ADJ+N, 5i). Il y a tant de choses à faire.
2. On_en (1 NCLIT+CLIT, 5i) _a (1 CLIT+V, 5i), on_en (1 NCLIT+CLIT, 5i) _a (1 CLIT+V, 5i) eu beaucoup, à mon_avis (1 DET+N, 5i).
3. C'est_une (1 C'EST+DET, 5i) question/intéressant (3 NSG+ADS), intéressante. J'y penserai certainement.
4. Elle vient de Haiti et/elle (3 ET+NCLIT) en_est (1 CLIT+V, 5i) fière.
5. Tout_est (1 NCLIT+V, 5i) terminé.
6. Voilà un_arrangement (1 DET+N, 5i) très_honnête (1 ADV+ADJ, 5i).
7. Quand vous_achetez (1 NCLIT+V, 5i) de la nourriture en conserve, examinez-vous la liste des_ingrédients (1 DET+N, 5i)?
8. Aujourd'hui, plus de cinquante pour cent des Canadiens préfèrent des produits qui ne contiennent ni colorants ni additifs chimiques. Aussi, les commerçants ([kɔmersät]) (6iib NPL#) qui veulent/augmenter (2 V+INF) leurs chiffres d'affaire exploitent le goût des consommateurs/en (3 NPL+PREP) leur présentant des_emballages (1 DET+N, 5i) / où (3 NPL+ADV) le mot «naturel» est mis_en (2 V+PREP, 5i) relief. Pourtant/à (3 ADV+PREP) notre époque, il est rare de trouver dans les supermarchés des_aliments (1 DET+N, 5i) naturels/en (2 ADJPL+PREP) conserve qui ne contiennent pas d'agent de conservation.

SPEAKER 10: SPONTANEOUS
Je pense que c'est mieux d'acheter des produits naturels/et (2 ADJPL+ET)/organiques (3 ET+N) parce que c'est mieux pour notre santé d'avoir des produits qui ne pas_a- (2, 7i ADV+INF, 5i), qui ne pas_avoir (2, 7i ADV+INF, 5i) des_additifs (1 DET+N, 5i) chimiques/et (3 ADJPL+ET) des_agents (1 DET+N, 5i) de conservation, mais, uh, c'est difficile à trouver ces produits/et (3 NPL+ET) /aussi (3 ET+ADV), uh, les produits, les produits sans([säz]) (6iia PREP#), sans_additifs (1 PREP+N, 5i) chimiques peuvent [waziR] plutôt que les_autres (1 DET+PRO, 5i), et, et/on (3 ET+NCLIT) peut les mettre dans le frigidaire, mais, euh, ce n'est pas, ce n'est pas/aussi (2 ADV+ADV) bien que...
Cette image se place dans une chambre. Une femme qui porte un chemise de nuit se couche dans un lit. Elle, elle lit un livre, et/elle a un bouteille sur le planche à côté d'elle. Um, elle a un nez pointu qui a rougi. À la planche, aussi à côté du lit, il y a un chat. Euh, un lampe est attaché sur le dos du lit, pour, et, um, l'homme a un grand nez qui a rougi aussi et, il, il a l'air nerveuse.

Il croit que l'aliment naturel est meilleur pour le corps/et la santé parce que si tu, si on mange des choses, si on mange des nourritures qui est pleine des vitamines, pour un long temps, pour un plus long temps. On trouve trop d'agents chimiques dans la nourriture et/um des, l'autre, chose chimique autour les choses comme les fruits. Um, les prix de la nourriture naturelle est aussi très cher, et les compagnies des peuples sur le, les avertissements.
SPEAKER 11: PICTURE (DESCRIPTION)

Ce sc è ne situe dans une (1 PREP+DET, 5i), dans une (1 PREP+DET, 5i) chambre d'un / (6iia DET#), d'un / couple (6i DET+N), peut - être (1 FIXED, 5i). Um, dans la chambre il y a, on trouve, un _ petit (6i DET+ADJ) oiseau (1 ADJ+N) dans son, son, dans son, un petit maison, et/une (3 ET+DET) grand plante qui est à (2 V+PREP) côté de le lit, où une femme reste, une femme se repose. Um, il, aussi, à le bout de le lit, à la bout du lit, um, y en a (1 CLIT+V, 5i), y en y (1, 7i NCLIT+CLIT, 5i) va un_ (6iia DET#), _ on est (1, 7i NCLIT+V, 5i), pardon, on_ (6iia NCLIT#), on_ doit (6i NCLIT+V), on peut voir un_ (6iia DET#), un chat qui regarde l'homme qui est _ (6iia V#), qui, qui rentre à la maison, à la chambre, juste, juste maintenant. La femme, elle, elle, elle, elle lit, um, un_ / (6iia DET#), un_ livre (6i DET+N), peut - être (1 FIXED, 5i) un _ roman (6i DET+N) policier, et/elle (3 ET+NCLIT) aussi boit/un (2 V+DET) _ verre (6i DET+N) de vin. Le, le bouteille, la bouteille de vin/est (3 NSG+V)/aussi (2 V+ADV) à côté de, um, son lit. Elle a dit que à, c'est à (2 C'EST+PREP) cette heure que tu rentres, mon_ / (6iia DET#), ma, mon mari. Il semble, il parait très pa-, très, um, anxieux, et peut - être (1 FIXED, 5i) il a peur de, d'elle, um, parce qu'il n'y a pas, ils n'ont, il n'a pas/une (2 ADV+DET) explication pour um, pour être en retard. Il a dit «Hic» (3 V+CITATION).

SPEAKER 12: READING

1. C'est en (1 C'EST+PREP, 5i) plein air (1 ADJ+N, 5i). Il y a tant de choses à faire.
2. On en (1 NCLIT+CLIT, 5i) _a (1 CLIT+V, 5i) eu beaucoup, à mon avis (1 DET+N, 5i).
3. C'est une (1 C'EST+DET, 5i) question/intéressante (3 NSG+ADJ). J'y penserai certainement.
4. Elle vient de Haiti et/elle (3 ET+NCLIT) en est (1 CLIT+V, 5i) fière.
5. Tout est (1 NCLIT+V, 5i) terminé.
6. Voilà un arrangement (1 DET+N, 5i) très/honnête (1 ADV+ADJ).
7. Quand vous achetez (1 NCLIT+V, 5i) de la nourriture en conserve, examinez-vous la liste des ingrédients (1 DET+N, 5i)?
8. Aujourd'hui, plus de cinquante pour cent des Canadiens préfèrent des produits qui ne contiennent ni colorants ni additifs chimiques. Aussi, les commerçants qui veulent/ augmenter (2 V+INF) leurs chiffres d'affaire exploitent le goût des consommateurs/en (3 NPL+PREP) leur présentant des emballages (1 DET+N, 5i)/ où (3 NPL+ADV) le mot «naturel» est mis/en (2 V+PREP) relief. Pourtant à (3 ADV+PREP) notre époque, il est rare de trouver dans les supermarchés des aliments (1 DET+N, 5i) naturels/en (2 ADJPL+PREP) conserve qui ne contiennent pas d'agent de conservation.

SPEAKER 12: SPONTANEOUS

Bonjour, je vous téléphone pour répondre à vos questions. Premièrement, je tiens à (2 V+PREP) vous féliciter de votre programme. C'est un (1 C'EST+DET, 5i) programme très instructif (1 ADV+ADJ, 5i). Bon, au sujet de l'alimentation, personnellement, je n'achète pas des produits/en (2 NPL+PREP) conserve parce que je ne crois pas les fabricants. J'achète, j'achète plutôt des produits fraîches (6iib ADJPL#) comme la viande fraîche. Je suis dégoûté des commerçants qui veulent/augmenter (2 V+INF) leurs chiffres d'affaire en exploitant (1 PREP+V, 5i) le goût des consommateurs, en leur présentant des emballages (1 DET+N,
Le mot naturel est mis en relief. Les produits naturels sont les meilleurs, mais de notre époque il est très rare de trouver dans le supermarché des aliments (1 DET+N, 5i) naturels qui ne contiennent pas d'agent de conservation. C'est pourquoi, c'est pourquoi je préfère acheter des produits que, que je connais, que je connaisse, qu'ils sont vraiment fraîches (6iic ADJPL#).

SPEAKER 12: PICTURE (DESCRIPTION)
La scène se situe à l'intérieur dans une (1 PREP+DET, 5i) maison. Une femme est allongée (2 V+ADJ, 5i) sur un lit, et/ou (3 ET+DET) monsieur est debout devant, et/ou (3 ET+DET) _homme (1 DET+N, 5i) est debout devant/une (2 PREP+DET) porte fermée. Cette scène se passe dans une (1 PREP+DET, 5i) chambre. La femme allongée sur le lit tient un (2 V+DET) livre dans son, dans sa main droite, et/ou (3 ET+DET) verre dans sa main gauche. Son dos se repose sur, son _dossier (3 NSWET) sa tête se reposent sur _oreiller (1 DET+NI) s. Son long nez, son nez long/et (3 ADJ+ET) pointu est tout rouge, ce qui nous dit qu'elle vient de boire du vin ou du whisky. Un chat/est (3 NSG+V) /aussi (2 V+ADV) au pied du lit, et/ou (3 ET+DET) plante un peu plus loin. Suspendu au plafond/est (3 N+V) _un (2 V+DET, 5i) canari, dans sa cage. Une lampe est aussi (2 V+ADV) au-dessus de la tête de la femme allongée. À l'arrière-plan se trouve un homme (1 DET+N, 5i) qui, qui est debout devant la porte fermée. Il paraît qu'il vient de rentrer, et d'après son allure (1 DET+N, 5i), il paraît qu'il est, il semble, d'après son allure (1 DET+N, 5i), ça nous dit qu'il est soûl, peut-être (1 FIXED, 5i). Au-dessus de la porte, il y a une plante. Il paraît que c'est... oubliez cela. À côté de l'homme, contre le mur, il y a un miroir oval, et/à (3 ET+PREP) côté du miroir il y a une petite table, il y a une petite table où on peut remarquer/une (2 INF+DET) vase à fleur, et deux petits bouteilles, deux petites bouteilles/aux (2 NPL+PREP) flacons. Aussi contre le mur, derrière le lit, il y a aussi une image, un tableau, et je crois que c'est tout.

SPEAKER 13: READING
1. C'est en (1 C'EST+PREP, 5i) plein air (1 ADJ+N, 5i). Il y a tant de choses à faire.
2. On en (1 NCLIT+CLIT, 5i) a (1 CLIT+V, 5i) eu beaucoup, à mon avis (1 DET+N, 5i).
3. C'est une (1 C'EST+DET, 5i) question intéressante (3 NSG+ADJ, 5i). J'y penserai certainement.
4. Elle vient de Haiti et/elle (3 ET+NCLIT) en est (1 CLIT+V, 5i) fière.
5. Tout est (1 NCLIT+V, 5i) terminé.
6. Voilà un arrangement (1 DET+N, 5i) très honnête (1 ADV+ADJ, 5i). Voilà un arrangement (1 DET+N, 5i) très honnête (1 ADV+ADJ).
7. Quand vous achetez (1 NCLIT+V, 5i) de la nourriture en conserve, examinez-vous la liste des ingrédients (1 DET+N, 5i)?
8. Aujourd'hui, plus [plys] (6iib ADV#) de cinquante pour cent des Canadiens préfèrent des produits qui ne contiennent ni colorants ni additifs [nizaditif] (4i CONJ+N) chimiques. Aussi, les commerçants qui veulent augmenter (2 V+INF) leurs chiffres d'affaire exploitent le goût des consommateurs/en (3 NPL+PREP) leur présentant des emballages (1 DET+N, 5i)/ou (3 NPL+ADV) le mot naturel est mis en (2 V+PREP, 5i) relief. Pourtant à (3 ADV+PREP) notre époque, il est rare de trouver dans les supermarchés des aliments (1 DET+N) naturels/en (2 ADJPL+PREP) conserve qui ne contiennent pas d'agent de conservation.
SPEAKER 13: SPONTANEOUS
Allo, je m'appelle --. Je suis/un (2 V+DET) citoyen du Canada, alors je voudrais bien m'exprimer/en (3 INF+PREP) ce qui concerne l'industrie de l'alimentation/en (3, 7ii NSG+PREP) Canada, au Canada. Premièrement, je crois que les industries (1 DET+N, 5i) d'alimentation, premièrement doivent/être (2 V+INF) honnêtes/avec (3 ADJPL+PREP) leur public. Leur désir, leur désir d'avoir des grands chiffres d'affaire doivent pas déterminer, euh, les mensonges qu'on, qu'on lit sur l'emballage des nourritures. Par exemple, quand les industries (1 DET+N, 5i) nous dites que les produits naturels n'est pas... Personnellement, moi, euh, ça me dérange pas trop si quelque chose n'est pas naturelle, et pour les autres (1 DET+PRO, 5i) qui sont, qui sont pas mai concernés. il faut pas mentir. il faut/avoir (2 V+INF) la vérité. Merci beaucoup.

SPEAKER 13: PICTURE (DESCRIPTION)
Cette image illustrée par l'artiste .... se situe dans une (1 PREP+DET, 5i) chambre à coucher. Dans cette scène, y a deux personnages principaux. Y a une femme, pis/et (3 NSG+ET) et un petit/oiseau dans sa cage, dans sa cage. Euh, la femme ici, est allongée au lit. Elle a un petit pyjama. Elle est sous la couverture. En main, en main gauche, elle a un verre, qui est plein, et dans l'autre main elle a un livre qui est ouvert (2 V+ADJ, 5i) (6iiic ADJSG#). Et/à la porte, y a l'homme qui porte un costume, et/euh (8 ET+HES), il a un gros nez rouge. On dirait qu'il est soûlé et, il vient de rentrer/à (2 INF+PREP) la maison, et la femme à quelque chose à lui dire. Voilà ce qu'il dit: «Tu sais quelle heure il est? Comment peux-tu le savoir? T'es soulé de nouveau. Pourquoi peux-tu pas boire avec moi ici, au lit? On paye pour ce produit. Il faut votre contrôle, il faut/avoir (2 V+INF) la vérité. Merci beaucoup.

SPEAKER 14: READING
1. C'est en plein-air (1 CEST+PREP, 5i) plein-air (1 ADJ+N, 5i). Il y a tant de choses à faire.
2. On en a eu beaucoup, à mon-avis (1 DET+N, 5i).
4. Elle vient de Haiti et/elle (3 E+OCLIT) en est fière.
5. Tout est terminé.
6. Voilà un arrangement (1 DET+N), un arrangement (1 DET+N, 5i) très honnête (1 ADV+ADJ, 5i).
7. Quand vous achetez de la nourriture en conserve, examinez-vous la liste...
8. Aujourd'hui, plus de cinquante pour cent des Canadiens préfèrent des produits qui ne contiennent ni colorants ni additifs chimiques. Aussi, les commerçants qui veulent augmenter leurs chiffres d'affaire exploitent le goût des consommateurs en leur présentant des emballages où le mot «naturel» est mis (2 V+PREP) relief. Pourtant à notre époque, il est rare de trouver dans les supermarchés des aliments naturels ou des agents de conservation. 

SPEAKER 14: SPONTANEOUS
Oui, bonjour, je m'appelle --, et je suis d'opinion que l'industrie d'alimentation essaie de se moquer de ses consommateurs. Par exemple, si on va au supermarché, on peut voir beaucoup de gaspillage dans l'emballage. Par exemple, si on prend n'importe quel exemple, on peut voir que y a des mensonges sur l'emballage. Par exemple, on peut trouver le mot «naturel» partout, mais vraiment, le mot «naturel» veut dire quelque chose qui n'était pas transformée. Mais si on, par exemple, prend une tarte aux fruits, le fruit est seulement naturel, tellement la tarte n'est pas. Si on regarde les ingrédients, il y a beaucoup des additifs et des agents de conservation. Je crois que l'industrie d'alimentation veut seulement augmenter les chiffres d'affaire et pas faire de la nourriture qui est bon pour nous. Vraiment, je crois qu'on doit chercher partout dans le supermarché pour trouver quelque chose qui est vraiment naturel, et qui n'est pas un mensonge. Je crois que les, l'industrie d'alimentation doit changer beaucoup, et doit...
SPEAKER 15: READING
1. C'est en (1 C'EST+PREP, 5i) plein_air (1 ADJ+N, 5i). Il y a tant de choses à faire.
2. On en (1 NCLIT+CLIT, 5i) a (1 CLIT+V, 5i) eu beaucoup, à mon_avis (1 DET+N, 5i).
3. C'est une (1 C'EST+DET, 5i) question/intéressante (3 NSG+ADJ). J'y penserai certainement.
4. Elle vient de Haiti et/elle (3 ET+NCLIT) en est (1 CLIT+V, 5i) fière.
5. Tout est (1 NCLIT+V, 5i) terminé.
6. Voilà un arrangement (1 DET+N, 5i) très_honnête (1 ADV+ADJ, 5i).
7. Quand vous achetez (1 NCLIT+V, 5i) de la nourriture en conserve, examinez-vous la liste des_ ingrédients (1 DET+N, 5i)?
8. Aujourd'hui, plus de cinquante pour cent des Canadiens préfèrent des produits qui ne contiennent ni colorants ni additifs chimiques. Aussi, les commerçants qui veulent/augmenter (2 V+INF) leurs chiffres d'affaire exploitent le goût des consommateurs/en (3 NPL+PREP) leur présentant des emballages (1 DET+N, 5i)/ou (NPL+ADV) le mot « naturel » est mis en (2 V+PREP, 5i) relief. Pourtant/à (3 ADV+PREP) notre époque, il est rare de trouver dans les supermarchés des aliments (1 DET+N, 5i) naturels/en (2 ADJPL+PREP) conserve qui ne contiennent pas d'agent de conservation.

SPEAKER 15: SPONTANEOUS
Bonjour, mon nom/est (3 NSG+V) ---. J'ai vingt_ans (1 ADJ+N, 5i), et je vais/à (2 V+PREP) l'Université de Toronto. Uh, j'habite dans la pension-là, alors, pour moi, uh, je, je n'achète pas ma nourriture. C'est fait pour moi chaque jour, mais j'essaie à manger/autant (2 INF+ADV) de fruits, légumes, uh, que possible. Pour moi, ce sont les nourritures naturelles, uh, mais je sais pour quelqu'un qui, qui va au supermarché, uh, les consommateurs sont, sont attirés (2 V+ADJ, 5i) à (2 ADJPL+PREP) les emballages (1 DET+N, 5i) vifs, des gros lettres, les noms fameux. Uh, aussi, les industries (1 DET+N, 5i) utilisent (2 NPL+V) le mot « naturel » pour attirer les consommateurs. Pour moi, euh, les emballages (1 DET+N, 5i) vifs, ce n'est pas naturel, et les produits chimiques/ou (2 ADJPL+CONJ) conservateurs ne sont pas, uh, ne sont pas, euh, ne sont pas naturels non plus.

SPEAKER 15: PICTURE (DESCRIPTION)
La scène se passe dans un (1 PREP+DET, 5i) chambre à coucher. Uh, il y a deux personnes dans cette scène. Uh, une dame qui, qui est couchée, et/un (3 ET+DET) _homme (1 DET+N, 5i) qui vient d'entrer la scène. Uh, le plafond/est (3 NSG+V) fait/en (2 V+PREP) bois, il y a une plante à côté du lit, uh, il y a, un miroir penche du mur. uh, non pas/un (2 ADV+DET) miroir, une peinture, je veux dire. Il y a, non, une, une oiseau est assis (2 V+ADJ, 5i) dans une (1 PREP+DET, 5i) cage. La miroir est/à (2 V+PREP) droite du lit/et (3 NSG+ET) /un (3 ET+DET) petit table, une fenêtre est/au-dessus (2 V+ADV) d'une lampe qui est/à (2 V+PREP) côté. La chat regarde l'homme qui vient d'entrer, et la chat/est (3 NSG+V) aussi (2 V+ADV) à côté d'une bouteille de vin ou l'eau, quelque chose liquide. Uh, la dame couchée a l'air fatigué, elle tient sa livre/et/un (3 ET+DET) _/vers l'eau (6i DET+N) plein de liquide. Elle a une longue (6i DET+ADJ) nez (6i ADJ+N) pointu et des gros_ yeux (1 DET+N, 5i). Elle porte une boucle d'oreille carrée. Elle a les cheveux courtes/et (2, 4i ADV+ET, 5ii) bouclées.
L'homme qui vient d'entrer la scène a, il dit dans la boule, ça dit/ «Hic» (3 V+CITATION). Il a
l'air, il a l'air, euh, qu'il, qu'il, uh, qu'il vient de, de boire beaucoup d'alcool. Il a les yeux trés, trés ronds, les cheveux courtes, et les yeux très, très ronds, les cheveux courtes et l'air surpris, étonné, et peut-être (1 FIXED) fatigué aussi. Ça ne dit rien dans la boule.

SPEAKER 16: READING
1. C'est en (1 C'EST+PREP, 5i) plein air (1 ADJ+N, 5i). Il y a tant de choses à faire.
2. On en (1 NCLIT+CLIT, 5i) a (1 CLIT+V, 5i) vu, on en (1 NCLIT+CLIT, 5i) a (1 CLIT+V, 5i) eu beaucoup [bokup] (6iib ADV#), à mon avis (1 DET+N, 5i).
3. C'est une (1 C'EST+DET, 5ii) question intéressante (3 NSG+ADJ). J'y penserai certainement.
4. Elle vient d'Haiti et elle (3 ET+NCLIT) en est (1 CLIT+V, 5i) fière.
5. Tout est (1 NCLIT+V) terminé.
6. Voilà un arrangement (1 DET+N, 5i) très honnête (1 ADV+ADJ, 5i).
7. Quand vous achetez (1 NCLIT+V) de la nourriture en conserve, examinez-vous la liste des ingrédients (1 DET+N)?
8. Aujourd'hui, plus de cinquante pour cent des Canadiens [kanadjen] (6iib NPL#) préfèrent des produits qui ne contiennent ni colorants ni additifs [aditifs] (6iib NPL#) chimiques. Aussi, les commerçants qui veulent augmenter (2 V+INF) leurs chiffres d'affaires exploitent le goût des consommateurs/en (3 NPL+PREP) leur présentant des emballages (1 DET+N) ou (3 NPL+ADV) le mot naturel est mis/en (2 V+PREP) relief. Pourtant à (3 ADV+PREP) notre époque, il est rare de trouver dans les supermarchés des aliments (1 DET+N, 5i) naturels/en (2 ADJPL+PREP) conserve qui ne contiennent pas d'agent de conservation.

SPEAKER 16: SPONTANEOUS
Je pense que il y a, il n'y a pas beaucoup [bokup] (6iib ADV+DET) des choses qui sont naturelles. Je pense que dans, dans notre culture, les gens qui fait cette produit (6i DET+N) mettre les, le nom [nom] (6iib NSG#), la parole naturel pour nous d'acheter beaucoup [bokup] (6iib ADV+DET) des produits. Mais les gens ne sait pas si les produits sont naturels ou (3 NPL+CONJ) non, si n'est pas naturels. Je pense que il y a beaucoup [bokup] (6iib ADV+DET) des additifs (1 DET+N) dans, additifs [aditifs] (6iib NPL#), qui sont dans les produits, produits, et, ne sont pas naturels. Uh, le produit naturel, c'est dans notre maison qui nous fait, et qui nous achetons (1 NCLIT+V, 5ii) quand notre mère, .... Et je pense que comment je dis, que les produits naturels sont très beaucoup [bokup] (6iib ADV#), et il (3 ET+NCLIT) n'y a pas beaucoup [bokup] (6iib ADV+DET) des choses qui est vraiment naturel, qui a n'a pas des/additifs (1 DET+N). Et...
SPEAKER 16: PICTURE (DESCRIPTION)
Il y a un homme (1 DET+N, 5ii) qui est rentré dans la salle de chambre. Il a bu beaucoup [bokup](6ii ADV#). Il a, on peut remarquer qu'il a un [un] grand (6i DET+ADJ) nez, et/il (3 ET+NCLIT) regarde, il y a, il a, il y a un [un] regarder (6ii NSG#) un peu anxieuse (6ii ADJSG#) parce que il a vu sa femme dans son lit, que elle aspettait per lui, per rentrer dans la maison. Uh, la femme se, on peut remarquer qui, qui il y a une femme dans/un (1 PREP+DET)[un] grand (6i DET+ADJ) lit, et sa femme aussi a un [un] grand (6i DET+ADJ) nez, et des lèvres grandes. Uh, elle aussi a boire quelque chose. Elle a un verre (6i DET+N) dans son main, et/elle (3 ET+NCLIT) lège, lèger/un (7ii INF+DET) [un] livre (6i DET+N). Um, uh, il y a aussi, on peut voir que il y a un [un] chat (6i DET+N), uh, à droite à son lit, et/à (3 ET+PREP) gauche elle a, à droite elle a le lit. Il y a une grande plante, et/il (3 ET+NCLIT), on peut/observer (2 V+INF) /un (2 INF+DET) ([un]) type (6i DET+N) de lampe pour sa femme à léger/à (7ii INF+PREP), dans son lit. Uh, on peut remarquer, il y a une grande lampe au, sur, sous, sous le ceiling, I know that's not a French word, sorry. Et, on peut/observer (2 V+INF) /un (2 INF+DET) grand type de fenêtre uh, beside le, le grand lampe. Le homme est/un (2 V+DET) peu anxieuse (6ii ADJSG#) que il a buvù tante [tât] (6ii ADV#), et/il (3 ET+NCLIT) pense que elle veut dire quelque chose mauvais/à (3 ADJSG+PREP) lui. Mais je ne pense pas que elle est très mauvaise à lui parce que aussi, elle a bu quelque chose aussi.

SPEAKER 17: READING
1. C'est en (1 C'EST+PREP, 5i) plein_air (1 ADJ+N, 5i). Il y a tant de choses à faire.
2. On en (1 NCLIT+CLIT, 5i) a (1 CLIT+V, 5i) eu beaucoup, à mon_avis (1 DET+N, 5i).
3. C'est une (1 C'EST+DET, 5i) question/intéressante (3 NSG+ADJ). J'y penserai certainement.
4. Elle vient de Haiti et/elle (3 ET+NCLIT) en_est (1 CLIT+V, 5i) fière.
5. Tout est (1 NCLIT+V, 5i) terminé.
6. Voilà un arrangement (1 DET+N, 5i) très_honnête (1 ADV+ADJ, 5i).
7. Quand vous_achetez (1 NCLIT+V, 5i) de la nourriture en conserve, examinez-vous la liste des_ ingrédients (1 DET+N, 5i)?
8. Aujourd'hui, plus de cinquante pour cent des Canadiens préfèrent des produits qui ne contiennent ni colorants ni additifs chimiques. Aussi, les commerçants qui veulent/augmenter (2 V+INF) leurs chiffres d'affaire exploitent le goût des consommateurs/en (3 NPL+PREP) leur présentant des_emballages (1 DET+N, 5i)/où (3 NPL+ADV) le mot «naturel» est mis /en (2 V+PREP) relief. Pourtant/à (3 ADV+PREP) notre époque, il est rare de trouver dans les supermarchés des_aliments (1 DET+N, 5i) naturels/en (2 ADJPL+PREP) conserve qui ne contiennent pas d'agent de conservation.

SPEAKER 17: SPONTANEOUS
Bonjour, je suis --. Vous parlez d'alimentation naturelle, n'est-ce pas? Uh, je mange si bien, mais, uh, j'aime beaucoup les produits naturels comme les fruits, les légumes, mais/à (2 CONJ+PREP) mon_avis (1 DET+N, 5i), je pense que les Canadiens/en (3 NPL+PREP) général ne mangent pas/assez (2 ADV+ADV) des produits naturels. Um, on peut voir toujours des_additifs (1 DET+N, 5i) chimiques dans notre nourriture, comme dans le pain, et du lait, des
chose comme ça, mais/um (8 CONJ+HES), on gaspille beaucoup/aussi (2 ADV+ADV) quand, parce que il, il n'y a pas/assez (2 ADV+ADV) des, um, produits, um, naturels, et/um (8 ET+HES), je pense que c'est tout.

SPEAKER 17: PICTURE (DESCRIPTION)
Dans cette scène on peut voir une femme qui est dans son lit. Elle est dans sa chambre, et dans ce moment, son mari est/entré (2 AUX+V), mais son mari est vraiment nerveux parce que il a bu, et sa femme lui parlait/et (2 V+ET) /elle (3 ET+NCLIT) dit pourquoi elle a, il est, il est si tard, et pourquoi il a bu. Sur, à côté de son lit, il y a un miroir, et/à (3 ET+PREP) côté de la femme, il y a une petite bouteille de vin. Dans sa main, elle a un verre de vin, dans l'autre main elle a un livre qu'elle lu, et dans sa chambre, il y a une plante. En_haut (3 PREP+H ASPI&), il y a une petite oiseau, et là (3 ET+PREP) côté de la femme, il y a une petite oiseau, et là (3 ET+DET) peinture, un petit chat est/à (2 V+PREP) côté de son lit, et, il y a une fenêtre, derrière...La femme est, a un nez très long, elle a des cheveux courts, et...

SPEAKER 18: READING
1. C'est en (1 C'EST+PREP, 5i) plein_air (1 ADJ+N, 5i). Il y a tant de choses à faire.
2. On_en (1 NCLIT+CLIT, 5i) a (1 CLIT+V, 5i) eu, on_en (1 NCLIT+CLIT, 5i) a (1 CLIT+V, 5i) eu beaucoup, à mon_avis (1 DET+N, 5i).
3. C'est_une (1 C'EST+DET, 5i) question/intéressante (3 NSG+ADJ). J'y penserai certainement.
4. Elle vient de Haiti et/elle (3 ET+NCLIT) a, et/elle (3 ET+NCLIT) en, elle vient de Haiti et/elle (3 ET+NCLIT) en_est (1 CLIT+V, 5i) fière.
5. Tout_est (1 NCLIT+V, 5i) terminé.
6. Voilà un_arrangement (1 DET+N, 5i) très_honnête (1 ADV+ADJ, 5i).
7. Quand vous_achetez (1 NCLIT+V, 5i) de la nourriture en conserve, examinez-vous la liste des_ingredients (1 DET+N, 5i)?
8. Aujourd'hui, plus de cinquante pour cent des Canadiens préfèrent des produits qui ne contiennent ni colorants ni additifs chimiques. Aussi, les commerçants qui veulent/augmenter (2 V+INF) leurs chiffres d'affaire exploitent le goût des consommateurs/en (3 NPL+PREP) leur présentant des_emballages (1 DET+N, 5i)/ou (3 NPL+ADV) le mot «naturel» est mis_en (2 V+PREP, 5i) relief. Pourtant/à (3 ADV+PREP) notre époque, il est rare de trouver dans les supermarchés des_aliments (1 DET+N, 5i) naturels/en (2 ADJPL+PREP) conserve qui ne contiennent pas d'agent de conservation.

SPEAKER 18: SPONTANEOUS
À mon_avis (1 DET+N, 5i), je mange toujours des_aliments (1 DET+N, 5i), aliments naturels. Par exemple, um, comme des fruits, des légumes, des choses qui sont simples/et (3 ADJPL+ET) qui, qui n'ont, ne sont pas transformées, comme les, les_aliments (1 DET+N, 5i) chimiques/ou (3 ADJPL+CONJ) on_ajoute (1 NCLIT+V, 5ii) des_additifs (1 DET+N, 5i) /ou (2 NPL+CONJ) colorants. Ils ne sont pas naturels. Um, je ne mange jamais des_aliments (1 DET+N, 5i) de gras. Uh, j'esp-, je, je veux, je mange toujours des produits naturels qui sont des, qui ne sont pas transformés, on n'ajoute pas rien pour les conserver, comme les, les_aliments (1 DET+N, 5i) chimiques. Um, je, les_aliments (1 DET+N, 5i) chimiques ne sont, ne sont pas
bons pour la santé. C'est...

SPEAKER 18: PICTURE (DESCRIPTION)
Cette scène se situe à l'intérieur, dans une chambre. On voit/un couple. Le mari vient du travail. Il ne sent pas bien. Sa femme est dans le lit. Elle lit. L'homme, l'homme a l'air fatigué, et, et, et la femme a l'air dégoûtante. L'homme a, il porte, il porte un complet et une cravate. Ses yeux (1 DET+N, 5i) sont grands, ses cheveux sont courts. Son nez est long et pointu. La femme, ses yeux (1 DET+N, 5i) sont grands. Ses lèvres sont épaisses, son nez est pointu et long. Ses cheveux sont courts. On remarque aussi un chat qui est à gauche de la femme. On voit/aussi derrière le chat un bouquet, un bouquet qui est à gauche de l'homme. On, on se trouve aussi au mur, un bouclier, on aperçoit aussi un miroir à gauche de l'homme. On, on se trouve aussi au mur, un, un miroir à gauche de l'homme.

SPEAKER 19: READING
1. C'est en plein air (1 ADJ+N, 5i). Il y a tant de choses à faire.
2. On en eu beaucoup, à mon avis (1 DET+N, 5i).
3. C'est une question intéressante (3 NSG+ADJ). J'y penserai certainement.
4. Elle vient de Haiti et/elle en West fière.
5. Tout West (1 NCLIT+V, 5i) terminé.
6. Voilà un arrangement (1 DET+N, 5i) très honnête (1 ADV+ADJ, 5i).
7. Quand vous achetez de la nourriture en conserve, examinez-vous la liste des ingrédients (1 DET+N, 5i)?
8. Aujourd'hui, plus de cinquante pour cent des Canadiens préfèrent des produits qui ne contiennent ni colorants ni additifs chimiques. Aussi, les commerçants qui veulent augmenter leur chiffres d'affaire exploitent le goût des consommateurs en leur présentant des emballages (1 DET+N, 5i) où le mot «naturel» est mis (2 V+PREP, 5i) relief. Pourtant à notre époque, il est rare de trouver dans les supermarchés des aliments naturels qui ne contiennent pas d'agent de conservation.

SPEAKER 19: SPONTANEOUS
Uh, bonsoir monsieur, j'écoute, je veux dire que j'écoute votre émission toujours. Um, ce que je veux dire, um, bon, je me présente. Premièrement, j'ai vingt-deux ans (1 ADJ+N, 5i), je suis étudiante (2 V+N, 5i), uh, et je m'inquiète toujours à ma santé, donc, je crois que je suis presque expert. Um, moi, j'achète toujours les, les, les aliments, les nourritures naturels, uh, mais, je veux dire aussi que j'aime, j'aime le goût, c'est pas seulement pour ma santé que je les achète (1 CLIT+V, 5i). Uh, je lis toujours la liste des ingrédients (1 DET+N, 5i) des produits qui, qui a beaucoup des...
(6iia DET#), des_ agents (1 DET+N, 5i) de conservation. Um, moi, j'aimerais plus [plys] (6iia ADV#), plus [plys] (6iib ADV#) d'éducation dans, cette, cette arène.

**SPEAKER 19: PICTURE (DESCRIPTION)**
Cette scène se situe à l'intérieur, dans_ une (1 PREP+DET, 5i) chambre. Au centre, au centre de la chambre, on trouve un grand lit/où (3 NSG+ADV) est_ assise (2 V+ADJ, 5i) une, uh, femme malade, je crois. Elle lit/un (2 V+DET) livre, et/elle (3 ET+NCLIT), et_s'est_ assise (2 AUX+V, 5i) sur des_oreillers (1 DET+N, 5i) /et (3 NPL+ET) /elle (3 ET-NCLIT) est sur une couverture. Elle boit quelque chose, peut-être (1 FIXED, 5i), uh, de l'alcool parce que, um, il y a une bouteille à côté, à côté de la lit. Um, une lampe est trouvée sous sa tête pour aider, pour l'aider. Um, à gauche, au, à gauche de le lit, uh, une, se situe une grande plante, et/un (3 ET+DET) petit chat s'étend à côté de la lit. Aussi, uh, sur le mur on trouve un dessin, et/uh (8 ET+HES), à droit de la lit, um, se situe un miroir, et/un (3 ET+DET) bureau avec des bouteilles/et (2 NPL+ET) /un (3 ET+DET) vase de fleurs, avec des fleurs. Uh, la femme qui est sur le lit, uh, est très, très malade. Elle a un grand nez, et/il(3 ET+NCLIT) est rouge, très rouge. Elle regarde son mari, je crois, qui, qui vient d'entrer la, la chambre. Il aussi a un grand nez, il porte un cravate, un costume et/uh (8 ET+HES), il a, il a trop bu, je crois, uh, on sait, on le sait parce qu'il dit «Hic». Um, devant, derrière lui, c'est la porte.

**SPEAKER 20: READING**
Les Japonais vont_ -ils (1 V+NCLIT, 5i) manger les_Américains (1 DET+N, 5i)? Matsushita, vous connaissez? Jusqu'à cet automne, les_Américains (1 DET+N, 5i) n'avaient qu'une vague idée de la puissance et des_ambitions (1 DET+N, 5i) de ce groupe japonais plus connu en_Europe (1 PREP+N, 5i) et/outre (3 ET-ADV) Atlantique sur les marques Panasonic ou Pioneer. Et puis, coup sur coup, le géant japonais, que l'on croyait cantonné dans l'électronique, a abattu ses cartes. Et d'un, en_Octobre (1 PREP+N, 5i), il annonce son_intention (1 DET+N, 5i) d'acheter pour huit milliards de dollars le Gulliver Américain, MCA, père de Universal studios, opérateur de parcs de loisirs, et propriétaire d'une très lucrative maison de disques. Et de deux, à la mi-novembre, c'est sur l'informatique que Matsushita jette son dévolu. Le groupe d'Ousaka ouvrira l'année prochaine un laboratoire de recherche fondamentale en pleine coeur (6i ADJ+N) de la célèbre Silicon Valley. Objectif: attirer les meilleurs chercheurs/américains (2 NPL+ADJ) /actuellement (3 ADJPL+ADV) /employés (2 ADV+V) par les_universités (1 DET+N, 5i)/ ou (3 NPL+CONJ) par les_entreprises (1 DET+N, 5i) concurrentes. Une attaque frontale pour obtenir le leadership dans_un (1 PREP+DET, 5i) secteur stratégique.

**SPEAKER 20: SPONTANEOUS**
Vous là! Est-ce que c'est votre chien? Qu'est-ce qu'il y a? Est-ce que vous n'avez/aucune (2 V+ADJ) sens (6i ADJSG+N) de responsabilité? Il est très dangereux de laisser votre chien courir partout dans le parc. Le vôtre vient de me mordre. Et c'est_ horrible (1 C'EST+ADJ, 5i)! Il y a des_enfants (1 DET+N, 5i) /ici (2 NPL+ADV). Si je, et si j'avais peur des chiens? Ou allergique? Qu'est-ce que vous feriez dans ce cas? Oui, j'ai un chien. Je comprends qu'il aime, il aime courir, et qu'ils ont (1 NCLIT+V), qu'ils ont (1 NCLIT+V, 5i) besoin d'exercices libres,
SPEAKER 20: PICTURE (DESCRIPTION)
Cette image, qui est un (2 V+DET, 5i) peu difficile à voir, montre trois enfants (1 ADJ+N, 5i), qui sont probablement des garçons. Ils ont (1 NCLIT+V, 5i) l'air d'aimer le baseball. Les deux, il y a deux qui restent du bout, et qui portent des chemises des Blue Jays de Toronto, et des chapeaux/aussi (2 NPL+ADV). Ah, une autre qui s'assoie par, par terre ou sur le plancher. Um, c'est difficile à voir ce qu'il porte. Um, l'enfant du, un, à droite, a un gant de baseball sur, sur la main, et l'autre a un_ / ([œn]) (6iia DET#), un bâton/à (3 NSG+PREP), qu'il, qu'il tient dans les mains. Ils sont dans, dans une (1 PREP+DET, 5i) salle où on lave des vêtements, et il (3 ET+NCLIT) y a une fenêtre derrière les, les enfants (1 DET+N, 5i). Um, ils ont (1 NCLIT+V, 5i) l'air de, de s'amuser parce que tous les trois sourient. Et il (3 ET+NCLIT) y a aussi un avec (3 NSG+PREP) le gant qui hausse les épaules (1 DET+N, 5i), peut-être (1 FIXED, 5i) qu'il, qu'il ne comprend pas la personne qui, qui leur parle. Um...

SPEAKER 21: READING
Les Japonais vont-ils manger les Américains (1 DET+N, 5i)? Matsushita, vous connaissez? Jusqu'à cet automne, les Américains (1 DET+N, 5i) n'avaient qu'une vague idée de la puissance et des ambitions (1 DET+N, 5i) de ce groupe japonais plus connu en Europe (1 PREP+N, 5i) et outre Atlantique sur les marques Panasonic ou Pioneer. Et puis, coup sur coup, le géant japonais, que l'on croyait cantonné dans l'électronique, a abattu ses cartes. Et d'un, en Octobre (1 PREP+N, 5i), il annonce son intention (1 DET+N, 5i) d'acheter pour huit milliards (6i DET+N) de dollars le Gulliver Américain, MCA, père de Universal studios, opérateur de parcs de loisirs, et propriétaire d'une très lucrative maison de disques. Et de deux, à la mi-novembre, c'est sur l'informatique que Matsushita jette son dévolu. Le groupe d'Osaka ouvrira l'année prochaine un laboratoire de recherche fondamentale en plein coeur de la célèbre Silicon Valley. Objectif: attirer les meilleurs chercheurs américains (2 NPL+ADJ, 5i)/actuellement (2 ADJPL+ADV)/employés (2 ADV+V) par les universités (1 DET+N, 5i) ou (2 NPL+CONJ) par les entreprises (1 DET+N, 5i) concurrentes. Une attaque frontale pour obtenir le leadership dans un (1 PREP+DET, 5i) secteur stratégique.

SPEAKER 21: SPONTANEOUS
Monsieur, votre chien m'a mordu à la jambe! Regardez, ça me fait du mal. Um, j'ai vraiment/horreur (2 ADV+ADJ) des chiens, et votre chien/est (3 NSG+V) le plus pire possible. Um, c'est le plus grand chien que j'ai vu. Um, je demande que vous tenez votre chien/ à (3 NSG+PREP) laisse. Uh, le monsieur dirait, ce n'est pas ma faute, um, ce chien/ est (3 NSG+V) très sauvage. Um, on ne peut pas contrôler mon chien, et je suis très fier de ça parce que vous regardez, um, il est très fort/et (3 ADJSG+ET) grand. Est-ce que vous pensez que um,
je, tiendrai ce chien/en (3 NSG+PREP) laisse, à laisse, um, comme s'il était/une (2 V+DET) petite (6i DET+ADJ) (6iiia ADJ#), petite (6iiia ADJ#), uh, lapin? Um, et moi, je dirai, mais monsieur, il m'a, um, il m'a mordue, um, si vous ne faisez quelque chose, je vais...

**SPEAKER 21: PICTURE (DESCRIPTION)**
Cette image est_une (2 V+DET, 5i) image des trois_enfants (1 DET+N, 5i), il y a, il y a, non, trois_enfants (1 DET+N, 5i), il y a une, une petite fille, et deux petits garçons. Um, ils portent tous les t-shirts de l'équipe Blue Jays. Et/um (8 ET+HES), ils portent aussi les chapeaux/uh (8 NPL+HES), Blue Jays, des Blue Jays. Um, ils sont tous [tu] très, très sales, um, et/um (8 ET+HES), le petit garçon, um, le plus petit garçon, il est/assis (2 V+ADJ) sur le plancher, et/il (3 ET+NCLIT) s'-a, et s'-a, s'appuie sur ses genoux. La chambre semble être une cuisine, ou une cuisine ou une chambre où on lave les vêtements. Um, la machine derrière les_enfants (1 DET+N, 5i) semble être peut-être (1 FIXED, 5i) une machine à laver, uh, une machine à laver, et/il (3 ET+NCLIT) y a une plante à côté du fenêtre, et/um (8 ET +HES), et la petite fille porte aussi les chapeaux/uh Blue Jays, des Blue Jays. Um, ils sont tout (tu) très, très sales, um, et/um (8 ET+HES), le petit garçon, um, le plus petit garçon, il est/assis (2 V+ADJ) sur le plancher, et/il (3 ET+NCLIT) s'-a, et s'-a, s'appuie sur ses genoux. La chambre semble être une cuisine, ou une cuisine ou une chambre où on lave les vêtements. Um, la machine derrière les_enfants (1 DET+N, 5i) semble être peut-être (1 FIXED, 5i) une machine à laver, uh, une machine à laver, et/il (3 ET+NCLIT) y a une plante à côté du fenêtre, et/um (8 ET +HES), et la petite fille porte aussi un gant de baseball. Um, peut-être (1 FIXED, 5i) c'est/uns (1 C'EST+DET, 5i) /avertissement (1 DET+N, 5ii) pour um, avertir les, um, les, les_agents (1 DET+N, 5i) de laver, laver.

**SPEAKER 22: READING**
Les Japonais vont_ils (1 V+NCLIT, 5i) manger les_Américains (1 DET+N, 5i)? Matsushita, vous connaissez? Jusqu'à cet automne, les_Américains (1 DET+N, 5i) n'avaient qu'une vague idée de la puissance et des_ambitions (1 DET+N, 5ii) de ce groupe japonais plus connu en_Europe (1 PREP+N, 5i) et/outre (3 ET+ADV) Atlantique sur les marques Panasonic ou Pioneer. Et puis, coup sur coup, le géant japonais, que l'on croyait cantonné dans l'électronique, a abattu ses cartes. Et d'un_((enj)) (6iib DET#), en_Octobre (1 PREP+N, 5i), il annonce son_intention (1 DET+N, 5i) d'acheter pour huit milliards de dollars le Gulliver Américain, MCA, père de Universal studios, opérateur de parcs de loisirs, et propriétaire d'une très lucrative maison de disques. Et de deux, à la mi-novembre, c'est sur l'informatique que Matsushita jette son dévolu. Le groupe d'Osaka ouvrira l'année prochaine un ([un]) laboratoire (6i DET+N) de recherche fondamentale en pleine coeur (6i ADJ+N) de la célébré Silicon Valley. Objectif: attirer les meilleurschercheurs/américains (2 NPL+AD.J) /actuellement (2 ADJPL+ADV) /employés (2 ADV+V) par les_universités (1 DET+N, 5i) /ou (2 NPL+CONJ) par les/entreprises (1 DET+N) concurrentes. Une attaque frontale pour obtenir le leadership dans_un (1 PREP+DET, 5i) secteur stratégique.

**SPEAKER 22: SPONTANEOUS**
Le chien_/ (6iib NSG#), ce chien_/ (6iib NSG#), ton chien_/ (6iib NSG#), il vient d'essayer, essayer me manger. Est-ce que je peux le tirer, s'il vous plaît? J'ai un rifle dans mon voiture et je peux le tirer. Et, avez-vous/une (3 NCLIT+DET) bandage pour ma jambe? J'ai, j'ai très malade et j'ai besoin d'assistant, assistance s'il vous plaît, et/um (8 ET+HES), oui, oui, oui, je suis sûr qu'il est très gentil mais/'il (2 CONJ+NCLIT), je déteste ce chien_/ (6iib NSG#), et je vais le tuer. Et/um (8 ET+HES), avez-vous/un (3 NCLIT+DET) ([un]) bandage (6i DET+N)? Mon tête, je me sens ([sän]) (6iib V#)/ un_/ peu (6i DET+N) légère (6iib ADVSG#) et/uh
(8 ET+HES), ouf, le train est (3 NSG+V, 5i) doux/ici (3 ADJSG+ADV), et/um (8 ET+HES), oh, et je ne peux pas continuer. Appelle-moi l'ambulance.

SPEAKER 22: PICTURE (DESCRIPTION)
Premièrement, les enfants (1 DET+N, 5i) sont/((sôt)) (6iib V#), qu'est-ce que c'est, oh, devant/une (2 PRÉP+DET) fenêtre, et/aussi (3 ET+ADV) un/([un]) (6iiia DET), um, I guess, une laver machine, machine laver. Um, je ne sais pas pourquoi, aussi une fenesse [frnês], et/um (8 ET+HES), il y a trois enfants (1 DET+N, 5i), trois jeunes/hommes /avec (3 NPL+PREP) les/um (8 DET+HES). Je ne sais pas pourquoi, mais les/um (8 DET+HES), merchandises des Blue Jays de Toronto. Um, peut-être (1 FIXED, 5i) ils sont/([sôt]) frères (6i V+N). Je ne sais pas pourquoi, um, le détergent/aussi (3 NSG+ADV) est là, peut-être (1 FIXED, 5i) Palmolive. Aussi, il y a beaucoup de vêtements sales dans la basket. Je ne sais pas le mot pour basket. Aussi, ils/([ils]) (6iiia NCLIT#), ah bien/([bjen]) (6iib ADV#), évidemment, ils aiment (1 NCLIT+V, 5i) jouer le baseball, um, parce que ils aiment (1 NCLIT+V, 5i) les/uh (8 DET+HES), les/uh (8 DET+HES), qu'est-ce que c'est le mot pour glove? Anyway, ils aussi (1, 7i NCLIT+ADV, 5i) portent les chapeaute/et (2 NPL+ET)/uh (8 ET+HES), qu'est-ce que c'est, les gants, yeah, il est/un (2 V+DET) gant de baseball. Malheureusement, ils sont/([sôt]) pour (6i V+PREP) l'équipe de Toronto, et/uh (8 ET+HES), l'équipe ne peut pas gagner. Aussi, what else?

SPEAKER 23: READING
Matsushita, vous connaissez? Jusqu'à cet automne, les Américains (1 DET+N, 5i) n'avaient qu'une vague idée de la puissance et des ambitions (1 DET+N, 5i) de ce groupe japonais plus connu en Europe (1 PREP+N, 5i) et/ou/et (3 ET+ADV) Atlantique sur les marques Panasonic ou Pioneer. Et puis, coup sur coup, le géant japonais, que l'on croyait cantonné dans l'électronique, a abattu ses cartes. Et d'un, en Octobre (1 PREP+N, 5i), il annonce son intention (1 DET+N, 5i) d'acheter pour huit milliards de dollars le Gulliver Américaine (6iib ADVSG#), MCA, père de Universal studios, opérateur de parcs de loisirs, et propriétaire d'une très lucrative maison de disques. Et de deux, à la mi-novembre, c'est sur l'informatique que Matsushita jette son dévolu (6i DET+N). Le groupe d'Osaka ouvrira l'année prochaine un laboratoire de recherche fondamentale en plein cœur de la célèbre Silicon Valley. Objectif: attirer les meilleurs chercheurs/américains (2 NPL+ADJ) 12. /actuellement (2 ADJPL+ADV) /employés (2 ADV+V) par les universités (1 DET+N, 5i) /ou (2 NPL+CONJ) par les entreprises (1 DET+N, 5i) concurrentes. Une attaque frontale pour obtenir le leadership dans un (1 PREP+DET, 5i) secteur stratégique.

SPEAKER 23: SPONTANEOUS
-Um, excusez-moi, est-ce que c'est votre chien?
-Oui, c'est le mien.
-Il m'a mordue.
-Ben, non, c'est pas possible.
-Mais non, je vous jure qu'il m'a mordue maintenant.
-Um, non, il, uh, mais si, excusez-moi. Pas possible, il ne mord jamais.
Mais si, il m'a mordu maintenant.
- Alors, vous l'avez provoqué.
- Non, pas du tout. On vous...

SPEAKER 23: PICTURE (DESCRIPTION)
Bon, c'est probablement l'été, et il (3 ET+NCLIT) y a trois enfants (1 DET+N, 5i) dans, um, sur um, le tableau ici. Uh, et ils (3 ET+NCLIT) sont tous les garçons, et ils (3 ET+NCLIT) doivent/apparemment (2 V+ADV) faire le lavage en machine que leur mère les a (1 CLIT+V, 5i) donnés. Et la mère vient à (2 V+PREP) la maison/et (3 NSG+ET)/ ils (3 ET+NCLIT) l'ont probablement tout ratée, ou quelque chose comme ça. Et, ils, ils sont tous habillés dans des, non, ils font le baseball, et/à l'ET+ADV, um, c'est probablement que ils sont très sales, quand ils (1 ADV+NCLIT, 5i) vient à (2 V+PREP) la maison. Et/ils (3 ET+NCLIT) vont, ils veulent tous devenir um, des joueurs de baseball quand ils (1 ADV+NCLIT, 5i) y a, uh, des sales choses dans le panier, qu'ils doivent laver, et la mère est probablement triste qu'ils sont toutes [tut] (6i ADV+ADJ) sales. Um, ils/ont (1 NCLIT+V) le bâton de baseball.

SPEAKER 24: READING
Les Japonais vont-ils (1 V+NCLIT, 5i) manger les Américains (1 DET+N, 5i)? Matsushita, vous connaissez? Jusqu'à cet automne, les Américains (1 DET+N, 5i) n'avaient qu'une vague idée de la puissance et des ambitions (1 DET+N, 5i) de ce groupe japonais plus connu en Europe (1 PREP+N, 5i) et/ou (3 ET+ADV) Atlantique sur les marques Panasonic ou Pioneer. Et puis, coup sur coup, le géant japonais, que l'on croyait cantonné dans l'électronique, abattu ses cartes. Et d'un, en Octobre (1 PREP+N, 5i), il annonce son intention (1 DET+N, 5i) d'acheter pour huit milliards de dollars le Gulliver Américain, MCA, père de Universal studios, opérateur de parcs et (2 NPL+ET) de loisirs, et propriétaire d'une très lucrative maison de disques. Et de deux, à la mi-novembre, c'est sur l'informatique que Matsushita jette son dévolu. Le groupe d'Osaka ouvrira l'année prochaine un laboratoire de recherche fondamentale en plein cœur de la célèbre Silicon Valley. Objectif: attirer les meilleurs chercheurs américains (2 NPL+ADJ) /actuellement (2 ADJPL+ADV) /employés (2 ADV+V) par les universités (1 DET+N, 5i) /ou (2 NPL+CONJ) par les entreprises (1 DET+N, 5i) concurrentes. Une attaque frontale pour obtenir le leadership dans un (1 PREP+DET, 5i) secteur stratégique.

SPEAKER 24: SPONTANEOUS
- Excusez-moi, votre chien vient de me mordre!
- Oh, désolé, je m'excuse.
- C'est tout?
- Oui, c'est tout. Qu'est-ce que vous voulez que je fasse?
- Je ne sais pas, mais, ne pensez-vous pas que les chiens devraient être (2 V+INF, 5i) tenus/en (2 V+PREP) laisse toujours?
- Non.
- Mais votre chien est en (2 V+PREP, 5i) train d'attaquer des personnes/innocents
J'étais seulement ici, seule, tranquille, à me promener dans le parc, et voilà, votre chien vient m'attaquer. Je, je ne sais pas, si je ne sais pas où il se promène votre chien, il est peut-être sale, il a peut-être des maladies.

-Voulez-vous aller voir un docteur?

-Oui, mais bien sûr, mais rien n'a changé. Vous a-t-il promené votre chien, il est peut-être sale, il a peut-être des maladies.

-Voulez-vous aller voir un docteur?

-Oui, mais bien sûr, mais rien n'a changé. Vous avez toujours pas mis votre chien en contrôle. Il faut contrôler votre animal. Il faut le tenir en laisse.

-Mais c'est cruel pour les animaux, ne pensez-vous pas?

-Non, surtout pas, je pense que c'est cruel pour les personnes de ne pas le faire.

SPEAKER 24: PICTURE (DESCRIPTION)
Je peux voir trois enfants, deux garçons et une fille. Ils ont l'air d'être tous une famille dans une chambre de leur maison. Ils sont, deux sont debouts, et une est assise par terre. Ils sont devant le machine à laver, la machine à laver, et par terre, je peux voir le linge que leur mère, ou peut-être, leur père est en train de faire. Il y a une fenêtre derrière eux, avec une plante. Il me semble que il fait beau dehors. Les deux garçons ont un chapeau sur leur tête, et c'est difficile de voir si la fille, elle aussi a un chapeau. Les deux garçons ont des chemises de baseball, de l'équipe de Toronto Blue Jays, et leurs chapeaux sont du Toronto Blue Jays. Ils ont aussi l'équipement de basebail, l'équipement, et ils sont tous heureux. Ils ont des visages souriants. Alors, je suppose qu'ils vont aller dehors pour jouer avec leurs amis et leur famille. Ils vont s'amuser dehors parce qu'il fait beau.

SPEAKER 25: READING
Les Japonais vont-ils manger les Américains? Matsushita, vous connaissez? Jusqu'à cet automne, les Américains n'avaient qu'une vague idée de la puissance et des ambitions de ce groupe japonais plus connu en Europe et loutre Atlantique sur les marques Panasonic ou Pioneer. Et puis, coup sur coup, le géant japonais, que l'on croyait cantonné dans l'électronique, a abattu ses cartes. Et d'un, en Octobre, il annonce son intention d'acheter pour huit milliards de dollars le Gulliver Américain, MCA, père de Universal studios, opérateur de parcs de loisirs, et propriétaire d'une très lucrative maison de disques. Et de deux, à la mi-novembre, c'est sur l'informatique que Matsushita jette son dévolu. Le groupe d'Osaka ouvrira l'année prochaine un laboratoire de recherche fondamentale en plein cœur de la célèbre Silicon Valley. Objectif: attirer les meilleurs chercheurs/américains actuellement employés par les universités concurrentes. Une attaque frontale pour obtenir le leadership dans un secteur stratégique.
SPEAKER 25: SPONTANEOUS
Monsieur, Monsieur, vient/ici (2 V+ADV), votre chien m'a mordu dans ma jambe. Est-ce que vous êtes (1 NCLIT+V, 5i) fou? Vous devez tenir votre chien/en (3 NSG+PREP) laisse. Alors, qu'est-ce que je vais faire maintenant? Qu'est-ce qui arrive si votre chien/a (3 NSG+V) des maladies? Puis je devrais/aller (2 V+INF) /au (2 INF+PREP) médecin, puis/avoir (2 ADV+INF) des piqûres. Qui va payer pour ça? Regarde, ça saigne, c'est fou! Vous devez/être (2 V+INF) responsable de votre chien. Et, qu'est-ce qui arrive s'il y aurait des/enfants (1 DET+N, 5i) /ici (2 NPL+ADV) qui se promenaient, qui jouaient, et puis votre chien, il va les faire mal, va les faire peur. Alors, je crois que vous devez, dorénavant, mettre prendre responsabilité pour votre chien, et puis si moi, j'ai des problèmes, je vous assure (1 CLIT+V, 5i), Monsieur, que je vous amenez (1, 7i CLIT+V, 5i) /au (2, 7i V+PREP) cour s'il y a aucun problème. Je vais/aller (2 V+INF) /au (3 INF+PREP) médecin maintenant, et puis donnerez-moi votre numéro de téléphone, votre numéro, votre nom, pardon, et vous voyez maintenant, vous avez (1 NCLIT+V, 5i) tâché mes, mes nouveaux pantalons. Alors, vous me devez pour l'argent.

SPEAKER 25: PICTURE (DESCRIPTION)
Voici une image de trois/enfants (1 DET+N, 5i) qui sont dans la... chez_eux (1 PREP+PRO, 5i). Il y a un garçon, il a à peu près huit_âges (1 DET+N, 5i), et la soeur aînée, à-peu-près/onze (3 LEXICAL+ONZE) ans, et puis la petite soeur, qui est_avec (2 V+PREP, 5i) eux, à-peu-près quatre ans. Les deux plus_âgées (1 ADV+ADJ, 5i) /ont (2 ADJP+V) des casquettes, et des t-shirts de Blue Jays, et puis/à (2 CONJ+NCLIT) ont/avec (2 V+PREP) des it-, un gant, et/un (3 ET+DET) béton pour le baseball. Tous les trois/ont (2 NPL+V) /un (2 V+DET) petit regard, ils regardent comme s'ils sont coupables de faire quelque chose, d'avoir fait quelque chose. Et, on peut pas voir très clairement, mais je dirais qu'ils sont pleins de boue car ils ont (1 NCLIT+V, 5i) joué dehors, alors/ils (2 ADV+NCLIT) regardent leur mère, peut-être (1 FIXED, 5i), elle est pas là sur l'image. Et puis maintenant/elle (3 ADV+NCLIT) doit toute nettoyer (6i ADV+INF), la [vil] et leurs_habits (1 DET+N, 5i), et puis, peut-être (1 FIXED, 5i) ceci est_une (2 V+DET, 5i) annonce pour une certaine marque de savon, alors que, et/autour (3 ET+PREP) d'eux, il y a une corbeille avec des_habits (1 DET+N, 5i) dedans, et puis, ils ont (1 NCLIT+V, 5i) l'air très contents, qu'i/(i) ont/ (1 NCLIT+V) /eu (2 AUX+V) une très bonne journée à jouer/au (2 INF+PREP) baseball. Euh, les, les deux/ont (2 NPL+V) des, les deux_âgés (1 ADJ+N, 5ii) /ont (2 NPL+V) des pantalons.

SPEAKER 26: READING
Les Japonais vont_ils (1 V+NCLIT, 5i) manger les_Américains (1 DET+N, 5i)? Matsushita, vous connaissez? Jusqu'à cet automne, les_Américaines (1 DET+N, 5i) (famiRikan) (6iib NPL#) n'avaient qu'une vague idée de la puissance et des_ambitions (1 DET+N, 5i) de ce groupe japonais plus connu en_Europe (1 PREP+N, 5i) et/ou (3 ET+ADV) Atlantique sur les marques Panasonic et Pioneer. Et puis, coup sur coup ([kup]) (6iib NSG#), le géant japonais, que l'on croyait cantonné dans l'électronique, a abattu ses cartes. Et d'un, en_Octobre (1 PREP+N, 5i), il annonce son_intention (1 DET+N, 5i) d'acheter pour huit milliards de dollars le Gulliver Américain, MCA, père de Universal studios, opérateur de parcs de loisirs, et propriétaire d'une très lucrative maison de disques. Et de deux, à la mi-novembre, c'est sur
l'informatique que Matsushita jette son dévolu (6i DET+N). Le groupe d'Osaka ouvrira l'année prochaine un laboratoire de recherche fondamentale en plein coeur de la célèbre Silicon Valley. Objectif: attirer les meilleurs chercheurs/américains (2 NPL+ADJ) /actuellement (2 ADJPL+ADV)/employés (2 ADV+V) par les universités (1 DET+N, 5i) /ou (2 NPL+CONJ) par les entreprises (1 DET+N, 5i) concurrentes. Une attaque frontale pour obtenir le leadership dans le secteur stratégique.

SPEAKER 26: SPONTANEOUS
Excusez-moi, Monsieur, mais les chiens doit/être (2 V+INF) toujours tenê en laisse, parce que vous_ êtes (1, 7i NCLIT+V, 5i) son maître et c'est votre droit. Il y a des lois, et les personnes qui ne les suivent doivent/être (2 V+INF) punies. Les chiens ne sait pas ce qu'il fait, alors, vous devez le faire pour vous, vous devez tenir, tenir le chienne (6iib NSG#) toujours/en (2 ADV+PREP) laisse parce que peut_ être (1 FIXED, 5i) il y avait/un_/(un) (2 V+DET) petit (6i DET+ADJ) _ enfant (1 ADJ+N, 5i). Qu'est-ce que, qu'est-ce que se passait? On doit les, on doit tenir en laisse le chien parce que on ne peut laisser le chien courir partout, parce qu'il y a personnes qui ont peur des chiens. Aussi il y a des personnes qui sont/allergiques (2 V+ADJ)/à (2 ADJPL+PREP) les animaux (1 DET+N, 5i). Et/ainsi (3 ET+ADJ) je pense que ce n'est pas, ce n'est pas le faute de le chien, mais votre faute. Alors tu dois le tenir en laisse parce que je...

SPEAKER 26: PICTURE (DESCRIPTION)
Dans cette photo on voit trois, trois jeunes, uh, et, je pense que c'est deux garçons/et (2 NPL+ET) /une (3 ET+DET) fille. Peut_ être (1 FIXED, 5i) ils sont frères/et (2 NPL+ET) soeur, et/ils (3 ET+NCLIT) sont allés (2 AUX+V, 5i) jouer du baseball, je pense, parce qu'il a des ch-, des vêtements des Blue Jays, et peut_ être (1 FIXED, 5i) ils sont leur équipe plus favorit. Et/uh (8 ET+HES), je pense, je ne peux voir pas bien cette photo, mais je pense qu'ils sont très dégueulassés les vêtements, alors, ils doivent laver les vêtements parce qu'ils sont dans la lavanderie parce que je vois/une (2 V+DET) machine à laver, et aussi (3 ET+ADV, 5i) des autres (1 DET+ADJ, 5i) vêtements qui ne sont pas nettoyés. Et/aussi (3 ET+ADV) il y a beaucoup de choses pour laver les vêtements: uh, le javex, le bleach. Il y a aussi le furnace, le chose à chauffer la maison, et toujours c'est dans le sous-sol, et/ainsi (3 ET+ADV) je pense que c'est la lavanderie parce que c'est dans le sous-sol. Et_um (8 ET+HES, 5i), ils sont_/ [(söt)] (6iib V#), je pense que la mère leur a parce qu'ils ont (1 NCLIT+V, 5i) /un (2 V+DET) _,/ (6iia DET#), un regarde (6i N#) qu'ils sont_/ [(söt)] (6iib V#), je ne sais comme, mais/ils (2 CONJ+NCLIT) voient que, la mère les, les punit parce qu'ils sont très, ils ne sont pas nettes ([(net]!/ (6iib ADJ#), alors, ils ont (1 DET+N, 5i) cette regarde (6iib N#) de je suis désolé.

SPEAKER 27: READING
Les Japonais vont_ ils (1 V+NCLIT, 5i) manger les Américains (1 DET+N, 5i)? Matsushita, vous_connaissiez (6i NCLIT+V)? Jusqu'à cet automne, les Américains (1 DET+N, 5i) _ n (6iib NPL#) 'avaient qu'une vague idée de la puissance et des_ambitions (1 DET+N, 5i) de ce groupe japonais plus connu en Europe (1 PREP+N, 5i) et/ou (3 ET+ADV) Atlantique sur les marques Panasonic ou Pioneer. Et puis, sur coup au (3, 7i NSG+PREP, 5i) coup_/ (6iib NSG#), sur coup_/ coup (6i, 7i N+N)_/ (6iib NSG#), le géant japonais, que l'on croyait cantonné dans
l'électronique, a abattu ses cartes. Et d'un_/ (6iib ADJ#), en_Octobre (1 PREP+N, 5i), il annonce son_intention (1 DET+N, 5ii) d'acheter pour huit_/ milliards (6i DET+N) de dollars le Gulliver Américain, MCA, père de Universal studios, opérateur de parcs de loisirs, et propriétaire d'une très lucrative maison de disques. Et de deux, à la mi-novembre, c'est sur l'informatique que Matsushita jette son_dévolu (6i DET+N). Le groupe d'Osaka ouvrira l'année prochaine un_laboratoire (6i DET+N) de recherche fondamentale en plein coeur de la célèbre Silicon Valley. Objectif: attirer les meilleurs chercheurs_américains (2 NPL+ADJ, 5i) /actuellement (2 ADJP+ADV)/ employés (2 ADV+V) par les/universités (1 DET+N) /ou (2 NPL+CONJ) par les_entreprises (1 DET+N, 5i) concurrentes. Une attaque frontale pour obtenir le leadership dans_un (1 PREP+DET, 5i) secteur stratégique.

SPEAKER 27: SPONTANEOUS
-Êtes-vous stupide? Méchant chienne (6iic NSG#)! Ton chienne (6iib NSG#) m'a mur sur la jambe. Je m'excuse Monsieur, je dois/informer (2 V+INF) la Police. Tu dois_être (2 V+INF) ce chien tenu.
-Ah non, Monsieur, n'informez pas la Police. C'est_une (1 C'EST+DET, 5i) petite erreur.
-Qu'est-ce que ton chien/a (3 NSG+V) pensé?
-Je pense, Monsieur, que vous_avez (1 NCLIT+V, 5i) une ressemblance à ma marie.
-Ah oui, je compris. Au revoir.
-Au revoir.

SPEAKER 27: PICTURE (DESCRIPTION)
Il y a deux petite ([ptit]) garçons (6i ADJP+N), avec peut_être (1 FIXED, 5i) son, son soeur. Ils_ont (1 NCLIT+V, 5i) des chapeaux de base-, d'équipe de baseball Blue Jays, et/aussi (3 ET+DET) une, une ba-, ils_/([ilz]) (6iia NCLIT#), ils_ont (1 NCLIT+V, 5i) l'air de, d'un_/ (6iia DET#), uh, d'un_/ (6iia DET#), automatique machine de washing. Ils_ont (1 NCLIT+V, 5i) des vêtements, des vêtements sales, et/uh (8 ET+HES), il y a aussi un fenêtre, et, les_autres (1 DET+ADJ, 5i) choses. Un machine pour les vêtements sales.

SPEAKER 28: READING
Matsushita, vous connaissez? Jusqu'à cet automne, les_Américains (1 DET+N, 5i) n'avaient qu'une vague idée de la puissance et des_ambitions (1 DET+N, 5i) de ce groupe japonais plus connu en_Europe (1 PREP+N, 5i) et/outre (3 ET+ADV) Atlantique sur les marques Panasonic ou Pioneer. Et puis, coup sur coup, le géant japonais, que l'on croyait cantonné dans l'électronique, a abattu ses cartes. Et d'un, en_Octobre, (1 PREP+N, 5i) il annonce son_intention (1 DET+N, 5i) d'acheter pour huit milliards de dollars le Gulliver Américain, MCA, père de Universal studios, opérateur de parcs de loisirs, et propriétaire d'une très lucrative maison de disques. Et de deux, à la mi-novembre, c'est sur l'informatique que Matsushita jette son dévolu. Le groupe d'Osaka ouvrira l'année prochaine un laboratoire de recherche fondamentale en plein coeur de la célèbre Silicon Valley. Objectif: attirer les meilleurs chercheurs/américains (2 NPL+ADJ) /actuellement (2 ADJP+ADV)/ employés (2 ADV+V) par les/universités (1 DET+N, 5i) /ou (2 NPL+CONJ) par les_entreprises (1 DET+N, 5i) concurrentes. Une attaque frontale pour obtenir le leadership dans_un (1 PREP+DET, 5i) secteur stratégique.
SPEAKER 28: SPONTANEOUS
-Pourquoi vous promenez votre chien sans l'être (1 PREP+INF, 5i) tenu en laisse?
-Je suis désolé, Monsieur.
-Oh, mon Dieu, il saigne à la jambe! Votre maudit chien (3 NSG+V) déchiré mon pantalon. J'étais/en (2 V+PREP) train d'aller/au (2 INF+PREP) travail. Qu'est-ce que je vais faire maintenant?
-Calmez-vous, Monsieur, je pourrais vous payer pour votre pantalon.
-Mais Monsieur, vous saignez la jambe! Vous ne pouvez pas/aller (2 ADV+INF)/au (2 INF+PREP) travail!
-Ah, je m'en fou. Je pourrai rentrer chez moi pour changer de vêtements.

SPEAKER 28: PICTURE
C'est une (1 C'EST+DET, 5i) représentation de deux enfants (1 DET+N, 5i): un garçon/et (3 NSG+ET)/une (3 ET+DET) fille qui porte euh, des, des, des vêtements pour jouer/au (2 INF+PREP) baseball, et/uh (8 ET+HES), ils, ils se tient debout dans un (1 PREP+DET, 5i) sous-sol. Uh, en arrière (1 PREP+ADV, 5i) d'eux, y a une machine à laver, une sécheuse, des étagères (1 DET+N, 5i), avec de quoi pour, avec de quoi laver, uh, le linge. Ils se tiennent debout/à (2 ADJ+PREP) côté du uh, du linge, et/uh (8 ET+HES), derrière la fille, y a une bouteille d'eau à javel. Uh, aussi, y a, uh, l'appareil qui chauffe l'eau, à côté du garçon. Et/uh (8 ET+HES), ils/ (6iia NCLIT#), ils ont (1 NCLIT+V, 5i) des gants pour, jouer/au (2 INF+PREP) baseball. Aussi ils portent des chemises de, d'une équipe locale de baseball, les Toronto Blue Jays. Uh, de même, y a aussi une cafetière sur une étagère.

SPEAKER 29: READING
Les Japonais (6iib NPL#) vont ils (1 V+NCLIT, 5i) manger les Américains (1 DET+N, 5i)? Matsushita, vous connaissez? Jusqu'à cet automne, les Américains (1 DET+N, 5i) n'avaient qu'une vague idée de la puissance et des ambitions (1 DET+N, 5i) de ce groupe japonais plus connu en Europe (1 PREP+N, 5i) et/ou (3 ET+ADV) Atlantique sur les marques Panasonic ou Pioneer. Et puis, coup/ (6i NSG#) sur coup/ (6iib NSG#), le géant japonais, que l'on croyait cantonné dans l'électronique, a abattu ses cartes. Et d'un, en/octobre (1 PREP+N), il annonce son/intention (1 DET+N) d'acheter pour huit/ milliards (6i DET+N) de dollars le Gulliver Américain, MCA, père de Universal studios, opérateur de parcs de loisirs, et propriétaire d'une très lucrative maison de disques. Et de deux, à la mi-novembre, c'est sur l'informatique que Matsushita jette son dévolu. Le groupe d'Osaka ouvrira l'année prochaine un laboratoire (6i DET+N) de recherche fondamentale en plein cœur de la célèbre Silicon Valley. Objectif: attirer les meilleurs chercheurs/américains (2 NPL+ADJ)/actuellement (2 ADJPL+ADV) employés (2 ADV+V) par les/universités (1 DET+N) ou (2 NPL+CONJ) par les entreprises (1 DET+N, 5i) concurrentes. Une attaque frontale pour obtenir le leadership dans un (1 PREP+DET) secteur stratégique.
SPEAKER 29: SPONTANEOUS
Excusez-moi, Monseur. Vous êtes le maître de ce chien? Voilà le mal que j'ai reçu à cause de votre chien. Je vous disais dix, plusieurs fois de ne pas laisser votre chien dans le parc. Et voilà! Et vous continuez de faire cela, et voilà le résultat! Vous savez, ce n'est pas très gentil de le faire, ça! Et si vous continuez, je vous avertis que j'appelle le Police! Mais maintenant, non, pas plus d'explications! J'en ai assez. Je ne veux plus. Maintenant, vous me payez pour ce que, pour le résultat que votre chien me fait mal. Si non, je vous avertis que je le fais le même mal à votre chien. Il faut l'attacher, vous savez? Il faut l'attacher chez vous/ou l'enfermer. Il ne...pas laisser...
SPEAKER 30: SPONTANEOUS

SPEAKER 30: PICTURE (DESCRIPTION)
Dans cette image, il y a trois enfants (1 DET+N, 5i). Il y a un garçon plus âgé (1 ADV+ADJ, 5i) et deux garçons, et/ou une fille assez devance (2 PREP+PRO). Ils sont situés devant la machine à laver. À côté d'eux, il y a un basket de linge sale, peut-être (1 FIXED, 5i), il y a un autre petit-enfant (1 ADJ+N, 5i), ils ont joué un bon jeu de baseball. Une attaque frontale pour obtenir le leadership dans un secteur stratégique.

SPEAKER 31: READING
Matsushita, vous connaissez? Jusqu'à cet automne, les Américains (1 DET+N, 5i) n'avaient qu'une vague idée de la puissance et des ambitions (1 DET+N, 5i) de ce groupe japonais plus connu en Europe (1 PREP+N, 5i) et/ou l'autre côte, ils ont acheté pour huit milliards de dollars le Gulliver Américain, MCA, père de Universal studios, opérateur de parcs de loisirs, et propriétaire d'une très lucrative maison de disques. Et de deux, à la mi-novembre, c'est sur l'informatique que Matsushita jette son dévolu (6i DET+N). Le groupe d'Osaka ouvrira l'année prochaine un laboratoire de recherche fondamentale en pleine coeur de la célèbre Silicon Valley. Objectif: attirer les meilleurs chercheurs/américains (2 NPL+ADJ) actuellement /employés (2 ADV) par les universités (1 DET+N) ou par les entreprises (1 DET+N, 5i) concurrentes. Une attaque frontale pour obtenir le leadership dans un secteur stratégique.
SPEAKER 31: SPONTANEOUS
Madame, votre chien m'a mordue. Regardez ma jambe. Le sang, vous pouvez voir l'eau. C'est dégueulasse. Et pourquoi ne vais-je pas à l'hôpital...? Parce que je voudrais vous montrer ce que votre chien fait. Il devrait être en laisse dans le parc. Je vous prie de commencer à faire ceci, car les gens pour la plupart, aiment leurs jambes. Maintenant, vous devez m'excuser, car je dois aller à l'hôpital, mais vous pouvez regarder de nouveau, ma jambe, le sang, et tout cela, et marquez que un chien doit être toujours en laisse dans le parc. Je dois partir et aller à l'hôpital pour qu'il puisse faire quelque chose avec ma jambe. Merci, et prenez mes conseils coeur, s'il vous plaît. Il y a-

SPEAKER 31: PICTURE (DESCRIPTION)
C'est une photographe d'une chambre dans laquelle se trouve une machine à laver et une machine à sécher. Et un panier, plein de vêtements. On voit deux garçons: un est plus petit que l'autre. Tous les deux portent les vêtements de base de les Toronto Blue Jays avec des petits chapeaux de baseball et les, les, celui qui est plus grand porte un gant de baseball, l'autre un, petit bat, chose, et ils ont d'être trompés jusqu'aux eaux de, de boue, de la pluie ou quelque chose, et ils, ils, ils ont l'air de essayer d'être très innocents. Ils, je pense qu'ils sont, ils sont très sales. Et ils, ça vaudrait mieux qu'ils se mettent tous les deux dans la machine à laver. Et puis, il y a aussi une fenêtre et une plante dans la fenêtre. Il y a, oh, il y a une petite personne à genou, en bas. Je n' sais pas s'il est petit garçon ou une fille.

SPEAKER 32: READING
Les Japonais vont ils manger les Américains? Matsushita, vous connaissez? Jusqu'à cet automne, les Américains n'avaient qu'une vague idée de la puissance et des ambitions de ce groupe japonais plus connu en Europe et l'Atlantique sur les marques Panasonic ou Pioneer. Et puis, coup sur coup, le géant japonais, que l'on croyait cantonné dans l'électronique, a abattu ses cartes. Et d'un, en Octobre, il announce son intention d'acheter pour huit milliards de dollars le Gulliver Américaine, MCA, père de Universal studios, opérateur de parcs et loisirs, et propriétaire d'une très lucrative maison de disques. Et de deux, à la mi-novembre, c'est sur l'informatique que Matsushita jette son dévolu. Le groupe d'Osaka ouvrira l'année prochaine un laboratoire de recherche fondamentale en plein cœur de la célèbre Silicon Valley. Objectif: d'attirer les meilleurs chercheurs américains/actuellement employés par les universités concurrentes. Une attaque frontale pour obtenir le leadership dans le secteur stratégique.
SPEAKER 32: SPONTANEOUS
Monsieur, les chiens peuvent-être très dangereuses sans avoir une laisse. Si ce n'était pas moi mais/un jeune enfant qui votre chien mordu, que pensez-vous que ça sera arrivé? Aussi, Monsieur, c'est contre la loi d'avoir votre chien libre dans un parc, ou n'importe où dans le ville. Vous pouvez/avoir beaucoup de difficultés avec la loi. Je pense qu'ils ont beaucoup de punitions très sévères pour avoir les chiens sans laisse. Et pensez aussi à votre chien lui-même. C'est aussi moins dangereux si vous tened à corde, parce que si un autre chien vient, vous pouvez le contrôler vraiment facilement. Dans un grand comme Toronto, vous voudrez pas votre chien marche tout libre. Ça pouvait avoir beaucoup des conséquences graves, comme, votre chien pourrait,... dans une auto.

SPEAKER 32: PICTURE (DESCRIPTION)
Um, il y a deux garçons. Ils sont dans une salle où on lave les vêtements. Oh, les deux, excusez, il y a trois garçons. Um, les trois tiennent les équipements de baseball. Um, a une bat de baseball. L'un des garçons/a gant de baseball, um, qui regarde comme il est le plus vieille de les trois. Um, le plus petit tiend une gant, et regarde dans une caméra. Um, ça regarde comme, comment ils vont sortir pour jouer au baseball après la photo est, après leurs parents sont finis de prendre les photographes. Ils regardent excités, et veux jouer le baseball.

SPEAKER 33: READING
Matsushita, vous connaissez? Jusqu'à cet automne, les Américains n'avaient qu'une vague idée de la puissance et des ambitions de ce groupe japonais plus connu en Europe et/ou et/ou Atlantique sur les marques Panasonic ou Pioneer. Et puis, coup sur coup, le géant japonais, que l'on croyait cantonné dans l'électronique, a abattu ses cartes. Et d'un, en Octobre il annonce son intention d'acheter pour huit milliards de dollars le Gulliver Américain, MCA, père de Universal studios, opérateur de parcs de loisirs, et propriétaire d'une très lucrative maison de disques. Et de deux, à la mi-novembre, c'est sur l'informatique que Matsushita jette son dévolu. Le groupe d'Osaka ouvrira l'année prochaine un laboratoire de recherche fondamentale en plein cœur de la célèbre Silicon Valley. Objectif: attirer les meilleurs chercheurs/américains par les universités concurrentes. Une attaque frontale pour obtenir le leadership sector
stratégique.

SPEAKER 33: SPONTANEOUS
Sacre-bleu, mon, mon gars! Votre imbécile de chien m'a mordu à la jambe. Qu'est-ce que tu, qu'est-ce que tu fais/ici (2 V+ADV) avec ton chien? Est-ce que tu ne sais pas qu'il doit, que ce chien doit/être (2 V+INF) tenu en laisse, dans les parcs publics? Mon Dieu, j'espère qu'il a été vacciné, si non, tu sais ce qui m'attend? Ce qui m'attend, c'est, c'est (6iiia C'EST#) centaines d'hyperdermiques dans le ventre. Quel imbécile de chien! Mon Dieu, je vais le tuer! Je vais, je vais vous tuer/aussi (2 INF+ADV). Uh, centaines d'hyperdermiques dans mon ventre, ça va faire très mal. Sacre-bleu. Oh, je vais le tuer, et je vais le, je vais le manger pour dîner. Est-ce que tu ne...

SPEAKER 33: PICTURE (DESCRIPTION)
Il me semble que c'est_une (1 C'EST+DET, 5i) annonce publicitaire pour un, un certain marque de détergeant. Les gars/ont (2 NPL+V) passé la journée en jouant le baseball. Ils_ont (1 NCLIT+V, 5i) des chemises avec le Toronto Blue Jays, et des chapeaux.Uh, les trois_ enfants (1 ADJ+N, 5i) sont tout sales, et, c'est_évident (1 C'EST+ADJ, 5i) qu'ils veulent que leur mère lave leurs vêtements. Si, si le, si la mère peut les laver, ça veut dire que le nouveau marque de Tide avec javel accomplit son, son tâche. Le, le gars sur, à la gauche a son bâton de baseball, et j'espère que, qu'il ne veut pas frapper sa mère si elle ne veut pas laver les vêtements. Il y a beaucoup de vêtements sur le plancher/à (3 NSG+PREP) côté, et les gars, c'est naturel pour les garçons de jouer le baseball. Leurs visages sont_amusants (2 V+ADJ, 5i) parce que ils disent, oh, ce n'est pas I1.not.e faute que nous sommes sales. C'est, nous sommes seulement des, des, des_enfants (1 DET+N, 5i). Mais/on (2 CONJ+NCLIT) _a (1 NCLIT+V, 5i), il me semble qu'ils_ont (1 NCLIT+V, 5i, ils_ont (1 NCLIT+V, 5i) /eu (2 AUX+V) beaucoup de fun.

SPEAKER 34: READING
Les Japonais vont_ils (1 DET+N, 5i) manger les_Américains (1 DET+N, 5i)? Matsushita, vous connaissez? Jusqu'à cet automne, les_Américains (1 DET+N, 5i) n'avaient qu'une vague idée de la puissance et des_ ambitions (1 DET+N, 5i) de ce groupe japonais plus connu en_Europe (1 PREP+DET, 5i) et/ou (3 ET+ADV) Atlantique sur les marques Panasonic ou Pioneer. Et puis, coup sur coup, le géant japonais, que l'on croyait cantonné dans l'électronique, a abattu ses cartes. Et d'un, en_Octobre (1 PREP+N, 5i), il annonce son_intention (1 DET+N, 5i) d'acheter pour huit / milliards (6 DET+N) de dollars le Gulliver Américain, MCA, père de Universal studios, opérateur de parcs de loisirs, et propriétaire d'une très lucrative maison de disques. Et de deux, à la mi-novembre, c'est sur l'informatique que Matsushita jette son_dévolu (6 DET+N). Le groupe d'Osaka ouvrira l'année prochaine un laboratoire de recherche fondamentale en plein coeur de célèbre Silicon Valley. Objectif: attirer les meilleurs chercheurs/américaines (2 NPL+ADJ) 13.(6iib ADJPL#) /actuellement (2 ADJPL+ADV, 4ii)/employés (2 ADV+V) par les_universités (1 DET+N, 5i) /ou (2 NPL+CONJ) par les_entreprises (1 DET+N, 5i) concurrentes. Une attaque frontale pour obtenir le leadership dans_un (1 PREP+DET, 5i) secteur stratégique.
SPEAKER 34: SPONTANEOUS
Mais qu'est-ce que vous faites? Gardez, tu dois garder vos chiens, votre chien dans le parc. Je suis ici pour m'amuser, pas pour m'effrayer. Tu dois, tu dois prendre tes responsabilités si tu, si tu veux/aller parc, parc avec, avec ton chien. Tu dois, ton chien doit être liché dans le parc. Il y a beaucoup de gens qui sont très apeurés des chiens. Tu dois prendre ta responsabilité.
J'espère que la prochaine fois je le trouve liché.

SPEAKER 34: PICTURE (DESCRIPTION)
Commençons de la gauche. Il y a une furnace, aussi une bouteille de nettoyage, et quelques bouteilles au-dessous de ceci. Aussi, il y a une fenêtre avec une plante. Demère, les garçons, il y a une autre bouteille qui n'est pas trop claire, et/aussi un javex (6 DET+N) pour nettoyer les robes. Aussi, il y a un, un machine de lavage. Il y a deux garçons/avec (3 NPL+PREP) des chapeaux Blue Jays. Il y a, les deux sont vêtus en les t-shirts des Toronto Blue Jays. Um, il y a des pantalons. Ils sont préparés de jouer/au (2 INF+PREP) baseball. Il y a aussi un petite fille engenouée avec un sourit ((suri)). Les trois/ont (2 NPL+V)/un (2 V+DET) sourit sur leurs visages. Aussi à droite il y a un/um (8 DET+HES, 5i), une chose qui tient les, les robes. Ils sont tous jetés là-bas. Ils sont très contentes (6ic ADJPL).

SPEAKER 35: READING
Les Japonais vont-ils manger les Américains (1 DET+N, 5i)? Matsushita, vous connaissez? Jusqu'à cet automne, les Américains (1 DET+N, 5i) n'avaient qu'une vague idée de la puissance et des ambitions (1 DET+N, 5i) de ce groupe japonais plus [plys], (6iia ADV#) plus connu en_Europe (1 PREP+N, 5i) et/outre (3 ET+ADV) Atlantique sur les marques Panasonic ou Pioneer. Et puis, coup sur coup, le géant japonais, que l'on croyait cantonné dans/lelectronique (6i PREP+DET), a abattu ses cartes. Et d'un_/ (6iiv DET#), en_Octobre (1 PREP+N, 5i), il annonce son/intention (1 DET+N, 5i) d'acheter pour huit_/milliards (6i DET+N) de dollars le Gulliver Américain, MCA, père de Universal studios, opérateur de parcs de loisirs, et propriétaire d'une très lucrative maison de disques. Et de deux, à la mi-novembre, c'est sur l'informatique que Matsushita jette son dévolu (6i DET+N). Le groupe d'Osaka ouvrira l'année prochaine un laboratoire de recherche fondamentale en plein coeur de la célèbre Silicon Valley. Objectif: attirer les meilleurs chercheurs/américains (2 NPL+ADJ)/ actuellement (2 ADJPL+ADV) /employés (2 ADV+V) par les_universités (1 DET+N, 5i) ou (2 NPL+CONJ) par les_entreprises (1 DET+N, 5i) concurrentes. Une attaque frontale pour obtenir le leadership dans/uns (1 PREP+DET, 5i) secteur stratégique.

SPEAKER 35: SPONTANEOUS
Mais Monsieur! Qu'est-ce qui se passe? J'ai marché dans ce parc public, et votre chien me mord! Grâce à Dieu que ce n'était pas sérieux! Mais, Monsieur, vous devez vraiment tenir en laisse votre chien. Imagine si, s'il mord_/ (6iib V#) quelqu'un d'autre qui n'est pas si agréable que moi! Que ferez-vous dans ce cas, Monsieur? Que ferez-vous? «Ah, madame», dit le maître, «je m'excuse, je m'excuse encore. Celui est très_agile (1, 7ii ADV+ADJ, 5i)
aujourd'hui. Il ne sort (6iib V#), il ne sort (6iib V#) déjà depuis deux semaines, parce qu'il était malade. Il était seulement/excité (2 ADV+ADJ) de sortir finalement. Encore, je m'excuse et vous êtes (1 NCLIT+V) vraiment, vous êtes (1 NCLIT+V) tr-, vraiment très agréable (1 ADV+ADJ, 5i). Merci, Madame, de votre patience, et compréhension.

SPEAKER 35: PICTURE (DESCRIPTION)
Il y a ici trois garçons qui aiment vraiment le baseball. Ils sont/habillés (2 V+ADJ)/avec (2 V+PREP) les vêtements de baseball. Ils ont (1 NCLIT+V, 5i)/un (2 V+DET) gant et (3 NSG+E7) tout le paraphernalia de baseball. Ils sont probablement de Toronto parce qu'ils sont/habillés (2 AUX+V)/avec (2 ADJ+PREP) l'uniforme de l'équipe de Toronto qui s'appelle les Blue Jays. Ils se trouvent peut-être (1 FIXED, 5i) au sous-sol de sa propre maison, où se trouve aussi la machine de laver. Ils ont (1 NCLIT+V, 5i) le visage de cceh, je suis en forme, je joue, je me sale, et c'est comme ça. Um, ils sont très contents, et peut-être (1 FIXED, Si) c'est y (1 CTES+DET, Si)/_ (6iia DET#), samedi, ou un jour où il n'y a pas d'école, peut-être (1 FIXED, 5i) dans l'été. Um, et, je dis/encore (2 V+ADV) que peut-être (1 FIXED, 5i) ce n'est pas ils (2, 7iiADV+NCLIT, 5i) qui lavent les vêtements.

SPEAKER 36: READING
Les Japonais vont-ils (1 V+NCLIT, 5i) manger les Américains (1 DET+N, 5i)? Matsushita, vous connaissez? Jusqu'à cet automne, les Américains (1 DET+N, 5i) n'avaient qu'une vague idée de la puissance et des ambitions (1 DET-f-N, 5ii) de ce groupe japonais plus connu en Europe (1 PREP+N, 5i) et/ou/et (3 ET+ADV) Atlantique sur les marques Panasonic ou Pioneer. Et puis, coup sur coup, le géant japonais, que l'on croyait cantonné dans l'électronique, a abattu ses cartes. Et d'un, en Octobre (1 PREP+N, 5i), il annonce son intention (1 DET+N, 5i) d'acheter pour huit milliards de dollars le Gulliver Américain, MCA, père de Universal studios, opérateur de parcs de loisirs, et propriétaire d'une très lucrative maison de disques. Et de deux, à la mi-novembre, c'est sur l'informatique que Matsushita jette son dévolu. Le groupe d'Osaka ouvrira l'année prochaine un laboratoire de recherche fondamentale en plein cœur de la célèbre Silicon Valley. Objectif: attirer les meilleurs chercheurs/américains (2 NPL+ADJ)/actuellement (2 ADJPL+ADV)/employés (2 ADV+V) par les universités (1 DET+N, 5i) ou (2 NPL+CONJ) par les entreprises (1 DET+N, 5i) concurrentes. Une attaque frontale pour obtenir le leadership dans un (1 PREP+DET, 5i) secteur stratégique.

SPEAKER 36: SPONTANEOUS
Euh, Monsieur, êtes-vous le maître de ce chien? Euh, vous savez, votre petit Fido m'a mordu dans le jambe. dans la jambe. Il m'a fait mal! Moi, j'aime les chiens/autant (3 NPL+ADV) que vous, Monsieur! Mais je crois que vous devriez le tenir en laisse. Vous avez (1 NCLIT+V, 5i)/un (2 V+DET) chien sauvage. Quelle sorte de chien mord des personnes dans un (1 PREP+DET, 5i) parc lorsqu'ils sont/en (2 V+PREP) train de faire un joli promenade? Votre chien n'est pas bien gardé. Est-ce que, est-ce que vous n'a-, vous savez, il peut même faire mal aux enfants (1 DET+N, 5i). Et maintenant, est-ce que vous allez (1 NCLIT+V, 5i) me
SPEAKER 36: PICTURE (DESCRIPTION)
Dans cette image, il s'agit de trois jeunes garçons qui portent des casquettes de baseball et des chemises qui ont des symboles (6iiia DET#) de baseball, euh, le symbole des Toronto Blue Jays. Euh, un des garçons/a un gant de baseball dans sa main, et/un autre (1 DET+PRO) a un bâton de baseball. Le troisième garçon/est un assis (2 V+ADJ) par terre. Derrière les garçons se trouve un machine pour laver les vêtements, et/un autre (1 DET+ADJ) machine pour sécher les vêtements. Il y a aussi toutes sortes de choses pour faire un nettoyage. Euh, il y a une plante aussi derrière les garçons. Et par terre, il y a une, une, il y a une sorte de boîte qui contient toute sorte de vêtements qui sont déjà lavés/ou peut-être (1 FIXED) qui sont, qui sont, qui doivent/être (2 V+INF) lavés. Il semble que les garçons sont, sont très sales, et que peut-être (1 FIXED) leur mère va laver leurs vêtements car ils, peut-être (1 FIXED) ils ont (1 NCLIT+V, 5i) justement rentrés d'un, d'un jeu de baseball. Ils ont (1 NCLIT+V, 5i) des regards très innocents (1 ADV+ADJ) sur leur visage, comme, comme s'ils sont juste des garçons. Qu'est-ce qu'ils doivent faire? Ils doivent jouer.

SPEAKER 37: READING
Les Japonais vont-ils manger les Américaines (1 DET+N, 5i) (6iic NPL#)? Matsushita, vous connaissez? Jusqu'à cet automne, les Américaines (1 DET+N, 5i) n'avaient qu'une vague idée de la puissance et des ambitions (1 DET+N, 5i) de ce groupe japonais plus connu en Europe (1 PREP+N, 5i) et/ou Atlantique sur les marques Panasonic ou Pioneer. Et puis, coup sur coup, le géant japonais, que l'on croyait cantonné dans l'électronique, a abattu ses machines. Et d'un, en Octobre (1 PREP+N, 5i), il annonce son intention (1 DET+N, 5i) d'acheter pour huit milliards (6i DET+N) de dollars le Gulliver Américaine (6ii ADJSG#), MCA, père de Universal studios, opérateur de parcs de loisirs, et propriétaire d'une très lucrative maison de disques. Et de deux, à la mi-novembre, c'est sur l'informatique que Matsushita jette son dévolu. Le groupe d'Osaka ouvrira l'année prochaine un laboratoire de recherche fondamentale en plein coeur de la célèbre Silicon Valley. Objectif: attirer les meilleurs chercheurs/américaines (2 NPL+ADJ) (6iib ADJPL#) actuellement (2 ADJPL+ADV) employés (2 ADV+V) par les universités (1 DET+N) ou les entreprises (1 DET+N, 5i) concurrentes. Une attaque frontale pour obtenir le leadership dans un (1 PREP+DEt, 5i) secteur stratégique.

SPEAKER 37: SPONTANEOUS
Ah, c'est une très belle journée pour promener dans le parc. Oh là là! D'où vient-il (1 V+NCLIT, 5i), ce chien? C'est terrible! Mes pauvres jambes! Tout le temps les gardiens de ces chiens laissent les promener. Ces chiens...place! Ce n'est pas juste. On doit faire
quelque chose pour éliminer cette problème (6i DET+N). Peut-être (1 FIXED, 5i) demain matin, je vais voir la Police.

SPEAKER 37: PICTURE (DESCRIPTION)
Maman, est-ce que tu peux faire la ménage pour nous? Tous (1 NCLIT+N, 5i) nous sommes des enfants (1 DET+N, 5i). Nous, vous avez (1 NCLIT+V, 5i) /éité (2 AUX+V) notre âge un jour. Et/ou (3 ET+ADV), oh, mais, on doit/avoir (2 V+INF) des belles vêtements (6i ADJPL+N) pour demain. On va voir un match du baseball demain/avec (3 ADV+PREP) les Toronto Blue Jays. Ah, merci, maman. Demain matin, on va faire quelque chose très belle pour vous. J'ai fait/un (2 V+DET) petit dialogue entre les enfants (1 DET+N, 5i) /et (2 NPL+ET) la maman. Um, je ne sais pas si c'est la correcte chose, mais....

SPEAKER 38: READING
Les Japonais vont-ils (1 V+NCLIT, 5i) manger les Américains (1 DET+N, 5i)? Matsushita, vous connaissez? Jusqu'à cet automne, les Américains (1 DET+N, 5i) n'avaient qu'une vague idée de la puissance et des ambitions (1 DET+N, 5i) de ce groupe japonais plus connu en Europe (1 PREP+N, 5i) et/ou (3 ET+ADV) en Atlantique (1 PREP+NP, 5i) sur les marques Panasonic ou Pioneer. Et puis, coup sur coup, le géant japonais, que l'on croyait cantonné dans l'électronique, a abattu ses cartes. Et d'un, en Octobre (1 PREP+N, 5i), il annonce son intention (1 DET+N, 5i) d'acheter pour huit milliards de dollars le Gulliver Américain, MCA, père de Universal studios, opérateur de parcs de loisirs, et propriétaire d'une très lucrative maison de disques. Et de deux, à la mi-novembre, c'est sur l'informatique que Matsushita jette son dévolu. Le groupe d'Osaka ouvrira l'année prochaine un laboratoire de recherche fondamentale en plein cœur de la célèbre Silicon Valley. Objectif: attirer les meilleurs chercheurs/américains (2 NPL+ADJ) /actuellement (2 ADJPL+ADV) /employés (2 ADV+V) par les universités (1 DET+N, 5i) /ou (2 NPL+CONJ) par les entreprises (1 DET+N, 5i) concurrentes. Une attaque frontale pour obtenir le leadership dans/ un (1 PREP+DET, 5i) secteur stratégique.

SPEAKER 38: SPONTANEOUS
-Ay! Ah, maudit chien! Maintenant, je saigne! Monsieur, savez-vous que vous devez/avoir (2 V+INF) votre chien sur un laisse?
-Oui, madame, mais ce pays/est (3 NSG+V) libre, je peux faire ce que je veux. Et mon chien a le droit d'être libre.
-Oui, je sais cela, mais c'est/un (1 C'EST+DET) parc public. Ne, ne pouvez-vous pas voir le signe qui dit «tout chien doit ((dwazetเสริม))être (2 4ii V+INF, 5i) sur un laisse»?
-Oui, Madame, mais, voyons donc, c'est une (1 C'EST+DET, 5i) petite égratignure. Mon chien/est (3 NSG+V) vraiment/aimable (2 ADV+ADJ).
-Quel est ton problème? Monsieur, je vais te reporter/à (3 INF+PREP) la Police, ce moment, ou l'attendant du parc. Et prenez garde, vous aurez (1 NCLIT+V, 5i), vous dev-, vous_allerez (1 NCLIT+V, 5i) voir, devoir payer/un (2 INF+DET) [epo] (1, 7i DET+N, 5i).
SPEAKER 38: PICTURE (DESCRIPTION)
Dans le portrait, il y a trois garçons. Deux des garçons portent des chemises de Blue Jays, et des chapeaux de Blue Jays aussi. Une (6i PRO) des/um (8 DET+HES), une des (6i PRO) garçons porte un gant de, uh, baseball, et l'autre, le bâton de baseball. Les trois garçons se situent dans le salle où on, l'on fait notre lavage, car on voit le laveuse, et le séchoir de chaque côté. Um, à, en arrière (1 PREP+N, 5i) de deux garçons, ensemble. Sur le plancher, le petit garçon/est (3 NSG+V) assise ([asiz]) (2 V+ADJ, 5i) (6iib V#) devant les deux autres (1 DET+ADJ, 5i) garçons qui sont debout.s. Et à (3 ET+PREP) la droit, um, à la droite de l'image, on voit/un (2 V+DET) panier plein de vêtements sales. Uh, en arrière (1 PREP+N, 5i), on voit des produits que l'on fait notre lavage, comme une brosse, une bouteille. Le garçon qui tient le gant/a (3 NSG+V) ses bras étirés (2 NPL+ADJ, 5i).

SPEAKER 39: READING
Les Japonais vont-ils (1 V+NCLIT, 5i) manger les Américains (1 DET+N, 5i)? Matsushita, vous connaissez? Jusqu'à cet automne, les Américains (1 DET+N, 5i) n'avaient qu'une vague idée de la puissance et des ambitions (1 DET+N, 5i) de ce groupe japonais plus connu en Europe (1 PREP+N, 5i) et/ou (3 ET+ADV) Atlantique sur les marques Panasonic ou Pioneer. Et puis, coup sur coup, le géant japonais, que l'on croyait cantonné dans l'électronique, a abattu ses cartes. Et d'un, en Octobre (1 PREP+N, 5i), il annonce son intention (1 DET+N, 5ii) d'acheter pour huit/wmilliards (6i DET+N) de dollars le Gulliver Américain, MCA, père de Universal studios, opérateur de parcs de loisirs, et propriétaire d'une très_/ (6iia ADV#), très lucrative maison de disques. Et de deux, à la mi-novembre, c'est sur l'informatique que Matsushita jette son dévolu. Le groupe d'Osaka ouvrira l'année prochaine un laboratoire...

SPEAKER 39: SPONTANEOUS
-Oh, désolé, est-ce que mon chien/a (3 NSG+V) fait quelque chose?
-Mais/oui (2 CONJ+ADV), certainement! Votre salot comme chien m'a tiré par la jambe! Il doît-être (2 V+WF, 5i) avec vous toujours!
-Mais non, non, nous jouons dans le parc! Il doît-être (2 V+INF, 5i) libre de courir où il veut.
-Mais non! C'est pas ça. S'il est libre, il peut faire des choses mauvaises à des personnes innocents (2 NPL+ADJ, 5i) comme moi. Ils sont des petites enfants (1 ADJ+N, 5i)/ici (2 NPL+ADV) et plus, et/ils (3 ET+NCLIT) sont aussi (2 V+ADV, 5i) des personnes âgées (2 NPL+ADJ, 5i). Qu'est-ce qu'ils vont penser si un chien comme ça court/à (2 V+PREP) eux/et (3 PRO+ET) leur tire par la jambe?
-Oh, je suis désolé. Mon chien n'a jamais fait ça au passé. Au futur, je vais...

SPEAKER 39: PICTURE (DESCRIPTION)
Dans cette image on voit les deux garçons/et (2 NPL+ET) /une (3 ET+DET) fille. Il se peut qu'ils sont/deux (6iib V#) frères/et (2 NPL+ET) /une (3 ET+DET) soeur, et/ils (3 ET+NCLIT) sont dans/une (1 PREP+DET, 5i) salle à lavage. Et/on (3 ET+NCLIT) voit ça parce qu'il y a des vêtements sur le plancher/et (3 NSG+ET)/on (3 ET+NCLIT) voit des machines/à (2 NPL+PREP) lavage. On voit/aussi (2 V+ADV) une bouteille de nettoyant. Peut-Être (1 FIXED, 5i), c'est l'été parce qu'ils portent des, juste des t-shirts/et (2 NPL+ET) des caps sur
les têtes. Les deux frères, peut-être (1 FIXED, 5i) aiment jouer/au (2 INF+PREP) baseball parce qu'ils portent des vêtements des Blue Jays de Toronto. Et/ils (3 ET+NCLIT) semblent très heureuses (1 ADV+ADJ, 5i) (6iib ADJSG#) d'avoir peut-être (1 FIXED, 5i) déjà joué aujourd'hui. Euh, le soeur est là aussi parce que, parce qu'on ne voit pas son chemise et/on (3 ET+NCLIT) ne sait pas s'il veut jouer/aussi (2 INF+ADV), mais/il (2 CONJ+NCLIT) n'y a aucune raison pour quoi elle ne peut pas. Et/ils (3 ET+NCLIT) ont (1 NCLIT+V, 5i) l'air très contentes, (6iib ADJPL#) et peut-être (1 FIXED, 5i) la mère est là parce que les trois semblent qu'ils ont (1 NCLIT+V, 5i) fait quelque chose mauvaise, mais/ici (2 CONJ+ADV), il essaie d'être, ou de sembler/innocente (2 INF+ADJ) avec leurs visages heureuses et (6iib ADJPL#, 5i) aucune (3 ET+ADJ) orgueil(6i ADJSGtN). Euh,...

**SPEAKER 40: READING**

Les Japonais vont-ils (1 V+NCLIT, 5i) manger les Américains (1 DET+N, 5ii) Matsushita, vous connaissez? Jusqu'à cet automne, les Américains (1 DET+N, 5i) n'avaient qu'une vague idée de la puissance et des ambitions (1 DET+N, 5i) de ce groupe japonais plus connu en Europe (1 PREP+N, 5i) et/ou (3 ET+ADV) Atlantique sur les marques Panasonic ou Pioneer. Et puis, coup sur coup, le géant japonais, que on croyait cantonné dans l'électronique, a abattu ses cartes. Et d'un, en Octobre (1 PREP+N, 5i), il annonce son intention (1 DET+N, 5ii) d'acheter pour huit milliards de dollars le Gulliver Américain, MCA, père de Universal studios, opérateur de parcs de loisirs, et propriétaire d'une très lucrative maison de disques. Et de deux, à la mi-novembre, c'est sur l'informatique que Matsushita jette son dévolu. Le groupe d'Osaka ouvrira l'année prochaine un laboratoire de recherche fondamentale en plein coeur de la célèbre Silicon Valley. Objectif: attirer les meilleurs chercheurs/américains (2 NPL+ADJ) / actuellement (2 ADPL+-ADV) / employés (2 ADV+V) par les universités (1 DET+N, 5ii) / ou (2 NPL+CONJ) par les entreprises (1 DET+N, 5ii) concurrentes. Une attaque frontale pour obtenir le leadership dans un (1 PREP+DET, 5i) secteur stratégique.

**SPEAKER 40: SPONTANEOUS**

À mon avis (1 DET+N, 5i), je pense que les chiens doit/avoir (2 V+INF) des promenades/au (2 NPL+PREP) parc pour qu'ils puissent court/et (2, 7i V+ET) fait d'exercice. Mais/aussi (2 CONJ+ADV), de plus, si c'est l'endroit/est (3 NSG+V) public, il faut que les propriétaires des animaux (1 DET+N, 5i) fait certaines (6iib ADJPL#) qu'ils ne peuvent pas faire mal aux autres (1 DET+ADJ, 5i) gens comme, um, mord la jambe ou, et/aux (3 ET+PREP) autres (1 DET+ADJ, 5i) gens qui se promènent. Alors, je pense qu'il est/important (2, 7i V+N) que les chiens sont toujours tenus/en (2 V+PREP) laisse parce que il y a des gens qui ont peur des animaux (1 DET+N, 5i) et/ou (3 NPL+ET), et/ainsi (3 ET+ADV) il (2 ADV+NCLIT) faut qu'il, que les animaux (1 DET+N, 5i) ne peuvent pas faire mal aux gens.

**SPEAKER 40: PICTURE (DESCRIPTION)**

Um, c'est une (1 C'EST+DET, 5i) photo qui est seulement noir et blanc. Et/il (3 ET+NCLIT) y a trois garçons qui sont dans une (1 PREP+DET, 5i) cuisine et/on (3 ET+NCLIT) sait ça parce qu'il y a un réfrigérateur à côté d'eux, et/aussi (3 ET+ADV) il y a des, des boîtes/et (2 NPL+ET)
des autres (1 DET+ADJ, 5i) choses sur le cabinet. Um, un des garçons/est (2 NPL+V) assis (2 V+ADJ), et les autres (1 DET+ADJ, 5i) deux sont, sont derrière de lui. Ils portent des, des t-shirts, un qui a le mot, um, Toronto, parce qu'il, ils ont (1 NCLIT+V, 5i) l'équipement de baseball dans, dans leurs mains. Um, les deux garçons portent aussi des caps de baseball qui a un/oiseau (1 DET+N), qui est le symbole de l'équipe de Toronto. Ils ont (1 NCLIT+V, 5i), les trois garçons/ont (2 NPL+V) des sourires sur ses visages. Um, de plus, il y des vêtements sales/à (2 ADJPL+PREP) côté de le petit garçon qui a assis. Et aussi (3 ET+ADV), il y a un plant ([plâ]) qui est derrière des trois garçons, et c'est devant le fenêtre dans, dans la cuisine.

SPEAKER 41: READING
Matsushita, vous connaissez? Jusqu'à cet automne, les Américains (1 DET+N, 5i) n'avaient qu'une vague idée de la puissance et des ambitions (1 DET+N, 5i) de ce groupe japonais plus connu en Europe (1 PREP+N, 5i) et/ou l'Atlantique sur les marques Panasonic ou Pioneer. Et puis, coup sur coup, le géant japonais, que l'on croyait cantonné dans l'électronique, a abattu ses cartes. Et d'un, en Octobre (1 PREP+N, 5i), il annonce son intention (1 DET+N, 5i) d'acheter pour huit/milliards (6i DET+N) de dollars le Gulliver Américain, MCA, père de Universal studios, opérateur de parcs, de loisirs, et propriétaire d'une très lucrative maison de disques. Et de deux, à la mi-novembre, c'est sur l'informatique que Matsushita jette son dévou (6i DET+N). Le groupe d'Osaka ouvrira l'année prochaine un laboratoire de recherche fondamentale en pleine coeur (6i ADJSG+N) de la célèbre Silicon Valley. Objectif: attirer les meilleurs chercheurs/américains (2 NPL+ADJ)/actuellement (2 ADJ?L+ADV) /employés (2 ADV+V) par les universités (1 DET+N, 5i)/ou (2 NPL+CONJ) par les entreprises (1 DET+N, 5i) concurrentes. Une attaque frontale pour obtenir le leadership dans un (1 PREP+DET, 5i) secteur stratégique.

SPEAKER 41: SPONTANEOUS
Vous avez, (1 NCLIT+V, 5i) Monsieur, .... chien / auprès (3 NSG+ ADV, 5ii) de vous. Mais le chien/a (3 NSG+V) besoin l'espace pour jouer. Quand il (1 ADV+NCLIT, 5i) mord quelqu'un à (3 PRO+PREP, 5i) la jambe, il joue? Les chiens le fait toujours! C'est égal (1 C'EST+ADJ, 5i) s'il le fait toujours! Votre chienne m'a (6iib NSG#) mordi. Mais c'est cruel de lui attacher/à (2 INF+PREP) ton corps. Mais c'est plus pratique! On s'est, on s'est fait/habituer (2 V+INF). Moi, j'ai beaucoup de mords ([m3~d]) (6iib NPL#) sur mes jambes.

SPEAKER 41: PICTURE (DESCRIPTION)
Il y a deux garçons dans un (1 PREP+DET, 5i) laverie d'une maison. Ils ont (1 NCLIT+V, 5i) fini un jeu de baseball, et/ils (3 ET+NCLIT) sont, et ses vêtements sont très sales. Ils attendent (1 NCLIT+V, 5i) pour, pour leur mère qui, qui sera fâchée. Mais/ils (2 CONJ+NCLIT) ont (1 NCLIT+V, 5i) les visages très innocents (1 ADV+ADJ, 5i), comme, oh, ce n'est pas notre faute! Bon! C'est/inevitable (1 C'EST+ADJ). Les garçons/en (3 NPL+PREP) droit est (7ii NSG+V) plus, plus âgé (1 ADV+ADJ, 5i) que le garçon/à (3 NSG+PREP) gauche. Peut-être (1 FIXED, 5i) son, son grand frère, et/il (3 ET+NCLIT), il fait les explications (1 DET+N, 5i) à (3 NPL+PREP) leur mère, quand le, quand le petit garçon sourit. C'est une (1 C'EST+DET, 5i), c'est une (1 C'EST+DET, 5i) photographie, c'est une (1 C'EST+DET, 5i)
image typique quand les garçons s-, ou les enfants (1 DET+N, 5i) sont sales, c'est à (1 C'EST+PREP) la mère de faire, de laver les vêtements et (2 NPL+ET) de laver les, les enfants (1 DET+N, 5i).

SPEAKER 42: READING
Les Japonais vont-ils (1 V+NCLIT, 5i) manger les Américaines (1 DET+N, 5i)? Matsushita, vous connaissez? Jusqu'à cet automne, les Américains (1 DET+N, 5i) n'avaient qu'une vague idée de la puissance et des ambitionnes (1 DET+N, 5i) (6iic NPL#) de ce groupe japonais plus connu en Europe (1 PREP+N, 5i) et/ou (3 ET+ADV) Atlantique sur les marques Panasonic ou Pioneer. Et puis, coup_./(6i NSG#) sur, coup_./(6iib NSG#) sur coup, le géant japonais, que l'on croyait cantonné dans l'électronique, a abattu ses cartes. Et d'un_, (6iib ADJ#), en-Octobre (1 PREP+N, 5i), il annonce son intentionne (1 DET+N, 5i) (6iib NSG#) d'acheter pour huit_/milliards (6i DET+N) de dollars le Gulliver Américaine (6iib ADJSG#), MCA, père de Universal studios, opérateur de parcs de loisirs, et propriétaire d'une très lucrative maison (6iib NSG#) de disques. Et de deux, à la mi-novembre, c'est_/ sur (6iib V#) l'informatique que Matsushita jette son_/dévolu (6i DET+N). Le groupe d'Osaka ouvrira l'année prochaine un laboratoire de recherche fondamentale en plein cœur de la célèbre Silicon Valley. Objectif: attirer les meilleurs chercheurs/américains (2 NPL+ADJ) /actuellement (2 ADJPL+ADV) /employés (2 ADV+V) par les universités (1 DET+N, 5i)/ou (2 NPL+CONJ) par les entreprises (1 DET+N, 5i) concurrentes. Une attaque frontale pour obtenir le leadership dans_un (1 PREP+DET, 5i) secteur stratégique.

SPEAKER 42: SPONTANEOUS
Monsieur, c'est la troisième fois que votre chien me mord_./(6iib V#) sur la jambe. Je vous_ai (1 CLIT+V, 5i) déjà rapporté cet incidente (6iib NSG#) plusieurs fois. Il faut/absolument (2 V+ADV) tenir votre chienne en (3 NSG+PREP, 5ii) /laisse (6i PREP+N) quand vous l'emportez_au (2 V+PREP) parc. Je vous dites que c'est la dernière fois que je vous dites, que je vous très bien, comme aujourd'hui. La prochaine fois j'irai à las autorités (1, 7ii DET+N, 5i), et je vous demanderai que votre chienne est (3 NSG+V, 5ii) gardé là. Merci.

SPEAKER 42: PICTURE (DESCRIPTION)
C'est, dans l'image, il y a trois enfants (1 DET+N, 5i) dans une (1 PREP+DET, 5i) cuisine. Il, je crois qu'ils sont, ce sont deux garçonne/et (2 4ii NPL+ET, 5i) / une (3 ET+DET) fille. Les garçonnés (6iib NPL#), peut-être (1 FIXED, 5i) qu'ils viennent d'être dehors, et/ils (3 ET+NCLIT) jouaient de baseball parce qu'ils_ont (1 NCLIT+V, 5i) (fon) un (2 4ii V+DET, 5i)_/,(6iiia DET#), un gant de baseball. Un/des (6i PRO+DET) enfants (1 DET+N, 5i) _(afâtel) et (2 4ii NPL+ET, 5i) les, les,..., ils_ont (1 NCLIT+V, 5i) [fon] (6iib V#) les caps sur la tête. Et la petite fille, il est, elle est assise (2 V+ADJ, 5i) sur le plafond. Il y a des des linges, des vêtements dans un (1 PREP+DET, 5i) /,(6iiia DET#), un panier pour laver. Et/il (3 ET+NCLIT) y a, il y a des, je crois qu'ils sont très sales parce qu'ils viennent d'être dehors. Et je regarde la machine à laver, la sécheuse derrière les enfants (1 DET+N, 5i). Je crois que c'est la mère qui les/a (1 CLIT+V) demandé de laver ces vêtements, mais/ils (2 CONJ+NCLIT) sont là comme s'ils, ils viennent, ils deviennent sales/encore
SPEAKER 43: READING
Les Japonais vont-ils (1 V+NCLIT, 5i) manger les Américains (1 DET+N, 5i)? Matsushita, vous connaissez? Jusqu'à cet automne, les Américains (1 DET+N, 5i) n'avaient qu'une vague idée de la puissance et des ambitions (1 DET+N, 5i) de ce groupe japonais plus connu (6i ADV+V) en Europe (1 PREP+N, 5i) en outre (1 PREP+ADV, 5i) Atlantique sur les marques Panasonic ou Pioneer. Et puis, coup sur coup, le géant japonais, que l'on croyait cantonné dans l'électronique, a abattu ses cartes. Et d'un / (6iib ADJ#), en Octobre (1 PREP+N, 5i), il annonce son intention (1 DET+N, 5i) d'acheter pour huit milliards de dollars le Gulliver Américain, MCA, père de Universal studios, opérateur de parcs de loisirs, et propriétaire d'une très lucrative maison de disques. Et de deux, à la mi-novembre, c'est sur l'informatique que Matsushita jette son dévolu (6i DET+N). Le groupe d'Osaka ouvrira l'année prochaine un laboratoire de recherche fondamentale en pleine coeur (6i ADJSGtN) de la célèbre Silicon Valley. Objectif: attirer les meilleurs chercheurs/américains (2 NPL+ADJ) /actuellement (2 ADJPL+ADV) /employés (2 ADV+V) par les universités (1 DET+N, 5i) ou (2 NPL+CONJ) par les entreprises (1 DET+N, 5i) concurrentes. Une attaque frontale pour obtenir le leadership dans un (1 PREP+DET, 5i) [un] secteur (6i DET+N) stratégique.

SPEAKER 43: SPONTANEOUS
J'ai promené dans un parc (1 PREP+N, 5i), un jour. Soudainement, un grand chien m'a mordu dans la jambe. Ah, premièrement, je suis très, très fâchée qu'il m'a mordu, um, parce que je n'aime pas de chien, pas du tout. Ils, je pense qu'ils sont très lourds/ (6ii c ADJPL#). Um, je pense que c'est / (6iiia C'EST#), très nécessaire que les chiens s'en tiennent par des personnes, um, parce que il peut être (2 V+INF, 5i) très, très dangereux pour les personnes qui, que n'aiment pas des chiens. Um, après qu'il m'a mordu, je ne pouvais pas marcher. Um, j'ai beaucoup de problèmes, um, et je suis très, très fâchée qu'il m'a mordu.

SPEAKER 43: PICTURE (DESCRIPTION)
Dans cette photographie, il y a trois personnages. Uh, ils sont trois garçons qui sont très jeunes. Ils semblent d'être cinq ans, sept ans/et (2 NPL+ET) neuf ([mœf]) ans (4ii ADJ+N, 5i). Uh, ils semblent d'être très contents parce qu'ils ont (1 NCLIT+V, 5i) /un (2 V+DET) grand sourire sur ses visages. Um, ils ont (1 NCLIT+V, 5i) mise ([miz]) (6iib V#) des jeans et des t-shirts que disent les Toronto Blue Jays, et/ il (3 ET+NCLIT) y a aussi des chapeaux que disent aussi (2 V+ADV) les Toronto Blue Jays. Dans ses mains/ il (3 NPL+NCLIT) y a un ([un]) bat (6i DET+N). Um, ils semblent d'être dans le sous-sol, um, où se lavent les vêtements. Um, sur la machine de laver, il y a des, des médicaments pour laver les vêtements, et/ il (3 ET+NCLIT) y a aussi des vêtements lourdes (6iib ADJPL#) qui doivent/ être (2 V+INF) lavés. Um, le petit/ garçon (6i ADJ+N) de cinq ans/est (2 NPL+V) assis (2 V+ADJ) ([asiz]) (6iiic V#).
SPEAKER 44: READING
Les Japonais vont-ils (1 V+NCLIT, 5i) manger les Américains (1 DET+N, 5i)? Matsushita, vous connaissez? Jusqu'à cet automne, les Américains (1 DET+N, 5i) n'avaient qu'une vague idée de la puissance et des ambitions (1 DET+N, 5i) de ce groupe japonais plus connu en Europe (1 PREP+N, 5i) et/ou (3 ET+ADV) Atlantique sur les marques Panasonic ou Pioneer. Et puis, coup sur coup, le géant japonais, que l'on croyait cantonné dans l'électronique, a abattu ses cartes. Et d'un, en Octobre (1 PREP+N, 5i), il annonce son intention (1 DET+N, 5i) d'acheter pour huit milliards (6i DET+N) de dollars le Gulliver Américain, MCA, père de Universal studios, opérateur de parcs de loisirs, et propriétaire d'une très lucrative maison de disques. Et de deux, à la mi-novembre, c'est sur l'informatique que Matsushita jette son dévolu (6i DET+N). Le groupe d'Osaka ouvrira l'année prochaine un laboratoire (6i DET+N) de recherche fondamentale en plein cœur de la célèbre Silicon Valley. Objectif: attirer les meilleurs chercheurs/américains (2 NPL+ADJ) /actuellement (2 ADJPL+ADV) /employés (2 ADV+V) par les universités (1 DET+N, 5i) ou (2 NPL+CONJ) par les entreprises (1 DET+N, 5i) concurrentes. Une attaque frontale pour obtenir le leadership dans un (1 PREP+DET, 5i) secteur stratégique.

SPEAKER 44: SPONTANEOUS
-Monsieur, (6iib NSG#), êtes-vous le maître du chien?
-Oui, c'est moi.
-Excusez-moi, mais votre chien m'a, m'a mordu la jambe.
-Oh, je m'excuse. Il a échappé de moi.
-Je comprends, mais vous devrez/être (2 V+INF) plus attentif (1 ADV+ADJ, 5i) quand vous vous emmène (1, 7i CLIT+V, 5i), quand vous, vous emmène (1, 7i CLIT+V, 5i), emmenez votre chien/au (3 NSG+PREP) parc. Il y a des enfants (1 DET+N, 5i), et des vieux qui ne peuvent pas se battre contre le chien.
-Oh, je suis très désolé. Je vous portera à l'hôpital. Ça va?
-Oui, ça va très bien parce que je ne peux pas bien marcher. Et/um (8 ET+HES), bon. D'accord ([dakɔʁd]) (6iic N#). On, j'ai mon auto (1 DET+N, 5i) dans le parc.

SPEAKER 44: PICTURE (DESCRIPTION)
Il, il y a trois enfants (1 DET+N, 5i) dans cette image. Ils sont dans le sous-sol de la maison, peut-être (1 FIXED, 5i). Et, la machine à laver/est (3 NSG+V) derrière leur. Um, ils sont très contents. Ils ont (1 NCLIT+V, 5i) un (2 V+DET) très, un très beau sourire. Um, je pense qu'ils aiment (1 NCLIT+V, 5i) aussi (2 V+ADV) le baseball, um, et l'équipe Toronto Blue Jays. Et/ils (3 ET+NCLIT) portent les vêtements de cette l'équipe. Uh, peut-être (1 FIXED, 5i), ils ont (1 NCLIT+V, 5i) fait quelque chose de mauvais, uh, par l'expression de, de, d'un des enfants (1 DET+N, 5i). Le, peut-être (1 FIXED, 5i) ils ont (1 NCLIT+V, 5i) fait quelque chose et la mère ou le père les a (1 CLIT+V, 5i) vus/et (2 V+ET) ils sont là comme à dire, «je ne sais pas, je n'ai fait rien». Ils_/ (6iia NCLIT#), peut-être (1 FIXED, 5i) ils sont trois, je pense que c'est une (1 C'EST+DET, 5i) petite fille au-dessus. Il y a les deux garçons. Ils sont très contents.
**SPEAKER 45: READING**

Les Japonais vont-ils manger les Américaines? Matsushita, vous connaissez? Jusqu'à cet automne, les Américaines (1 DET+N, 5i) n'avaient qu'une vague idée de la puissance et des ambitions (1 DET+N, 5i) de ce groupe japonais plus connu en Europe (1 PREP+N, 5i) et/ou des marques Panasonic ou Pioneer. Et puis, coup sur coup (6iib NSG#), le géant japonais, que l'on croyait cantonné dans l'électronique, a abattu ses cartes. Et d'un, en Octobre (1 PREP+N, 5i), il annonce son intention (1 DET+N, 5i) d'acheter pour huit milliards de dollars le Gulliver Américaine (6iib NSG#), MCA, père de Universal studios, opérateur de parcs de loisirs, et propriétaire d'une très lucrative maison de disques. Et de deux, à la mi-novembre, c'est sur l'informatique que Matsushita jette son dévolu (2 DET+N). Le groupe d'Osaka ouvrira l'année prochaine un laboratoire (6i DET+N) de recherche fondamentale en plein cœur de la célèbre Silicon Valley. Objectif: attirer les meilleurs chercheurs/américains (2 NPL+ADJ) actuellement employés (2 ADV+V) par les universités (1 DET+N, 5i)/ou concurrentes. Une attaque frontale pour obtenir le leadership dans un (1 PREP+DET, 5i) secteur stratégique.

**SPEAKER 45: SPONTANEOUS**

Et bien Monsieur, ne savez-vous que les chiennes (6iib NPL#) doivent être (2 V+INF) toujours près de ses maîtres? C'est dangereux de laisser, de les laisser courir dans le parc comme vous l'avez fait. Ne voyez-vous qu'il y a des petit_enfants (4ii ADJ+N, 5i) ici ([ptitâf])? Et si j'avais peur des chiens? Que, qu'aurais-tu fait? Si j'étais/allergique (2 V+ADJ), qu'aurais-tu fait? Tiens, la prochaine fois, vous devez/uh (8 V+HES), prendre ton chien. Il doit être ([dwavetR]) (4iii V+INF, 5i) toujours près, près du vous. Vous savez pas, c'est, si c'est dangereux, si j'ai peur, si les petit_enfants ([ptitâf]) (4ii ADJ+N, 5i) ont (NPL+V) peur. Tiens, ne fassez plus ça! C'est très dangereux.

**SPEAKER 45: PICTURE (DESCRIPTION)**

Bien, nous avons (1 NCLIT+V, 5i) trois petits garçons qui ont joué au baseball dans leur jardin. La leur mère leur plaint parce qu'ils se sont devenus tout contents de jouer dans le grand trou de l'eau qui était dans le jardin. Des enfants (1 DET+N, 5i) rient parce qu'ils sont, ils se sont divertis tant, mais la leur mère n'est pas si content ([kōtā]), parce qu'ils sont tous pleine de (6i ADJ+N+PREP), pleine de (6i ADJ+N+PREP) l'eau, et puis de, ils sont sales, très sales, alors/elle (2 ADV+NCLIT) leur plaint parce qu'ils doivent laver les leurs, les leurs t-shirts, les leurs pantalons, uh, parce que'ils n'ont pas attendu (2 ADV+V, 5i) à elle quand/elle (1 ADV+NCLIT) avait dit qu'ils ne doivent pas jouer dans le jardin parce qu'il avait trop d'eau. Parce qu'il a pleuré, le jour précédent. Et nous voyons qu'ils sont/ici (2 V+ADV), disent pas rien ([rjen]) (6iib ADV), le plus/âgé (1 ADV+ADJ) se plaint parce que sa mère se plaint. Et c'est ça.

**SPEAKER 46: READING**

Les Japonais vont-ils manger les Américains? Matsushita, vous connaissez? Jusqu'à cet automne, les Américains (1 DET+N, 5i) n'avaient qu'une vague idée de la puissance et des ambitions (1 DET+N, 5i) de ce groupe japonais plus connu
en Europe (1 PREP+N, 5i) et/ou _ext (3 ET+ADV) Atlantique sur les marques Panasonic ou Pioneer. Et puis, coup_/(6i NSG#) sur coup_/(6iib NSG#), le géant japonais, que l'on croyait cantonné dans l'électronique, a abattu ses cartes. Et d'un_/ (6iib ADJ#), en Octobre (1 PREP+N, 5i), il annonce son intention (1 DET+N) d'acheter pour huit_/milliards (6i DET+N) de dollars le Gulliver Américain, MCA, père de Universal studios, opérateur de parcs de loisirs, et propriétaire d'une très lucrative maison de disques. Et de deux, à la mi-novembre, c'est sur l'informatique que Matsushita jette son dévolu. Le groupe d'Osaka ouvrira l'année prochaine un_/laboratoire (6i DET+N) de recherche fondamentale en plein cœur de la célèbre Silicon Valley. Objectif: attirer les meilleurs chercheurs/américains (2 NPL+ADJ)/actuels (2, 7i ADJP+ADJ) /employés (2, 7i ADJP+V) par les_universités (1 DET+N, 5i)/ou (2 NPL+CONJ) par les_entreprises (1 DET+N, 5i) concurrentes.

SPEAKER 46: SPONTANEOUS
Mai, voyez, Monsieur, vous n'avez pas faire, faire laisser/aller (2 INF+INF) votre chien dans le parc pas mal comme ça. Vous voyez? Il me sursaute. Oui, je comprends. Il est gentil, quand même. Mais, vous voyez, il vient de me faire peur. Et ça ne va pas comme ça. De moins si vous laissez, vous le laissez/aller (2 V+N) comme ça, de moins, vous devez toujours le laisse un coup_/ (6iib NSG) d'œil. Aussi, il va trop loin/aussi (2 ADV+ADV), peut-être (1 FIXED, 5i) comme ça. Mais ça ne marche pas comme ça, c'est trop, c'est trop/inexpecatable (1, 7i ADV+ADJ). Je ne peux pas soutenir cette situation, vous voyez? Ah, oui, oui, je sais/ainsi (2 V+A.DV), mais, ça ne marche pas. On pense quand même que le chien/est (3 NSG+V) gentil mais vous voyez?

SPEAKER 46: PICTURE (DESCRIPTION)
Voilà dans la cuisine, nous voyons, il y a trois_enfants (1 DET+N, 5i) ([afas]) (6iic NPL#). À sa coste, il y a une basket de vêtements sales, et puis dernière eux (7i PREP+PRO, 5ii) /il (3 PRO+NCLIT) y a un mach-, une machine à laver. L'un, un des_enfants (1 DET+N, 5i) tiennent un (2 V+DET) bâton de hockey, et l'autre un_/ (6iia DET#), un bol, et puis un_/autre (1 DET+ADJ, 5ii) enfant qui est sous, qui se, se genouille, se genouille au-dessus du plancher. Dernière eux (7i PREP+PRO, 5ii) /il (3 PRO+NCLIT) y a des_armoires (1 DET+N, 5i) de comme, et/aussi (3 ET+ADV) des bouteilles de boire et de l'eau comme ça. Les trois_enfants (1 ADJ+N, 5i) portent probablement, il a fait cassé la fenêtre de son voisine (6iib NSG#), et puis/ils (2 ADV+NCLIT) sont punis par leurs parents. Et l'un dit, «moi, je, ce n'est pas moi, et je ne fais pas comme ça», et l'autre, «moi non plus». Et l'autre, ils_/ (6iia NCLIT#), um, le petit, c'est le petit frère qui est sous, dernière les deux confrères. C'est très peur, et peut_être (1 FIXED, 5i) il ne veut pas sortir, et leur dire c'est lui qui le fait New la fenêtre. Uh, et puis, dernière eux (7i PREP+PRO, 5ii), il y a aussi une image.

SPEAKER 47: READING
Les Japonais vont-_ils (1 V+NCLIT, 5i) manger les_Américains (1 DET+N, 5i)? Matsushita, vous connaissez? Jusqu'à cet automne, les_Américains (1 DET+N, 5i) n'avaient qu'une vague idée de la puissance et des_/ambitions (1 DET+N, 5ii) de ce groupe japonais plus connu en_Europe (1 PREP+N, 5i) et/ou _ext (3 ET+ADV) Atlantique sur les marques Panasonic ou
Pioneer. Et puis, coup sur coup, le géant japonais, que l'on croyait cantonné dans l'électronique, a abattu ses cartes. Et d'un, en Octobre (1 PREP+N, 5i), il annonce son intention (1 DET+N, 5ii) d'acheter pour huit milliards (6i DET+N) de dollars le Gulliver Américain, MCA, père de Universal studios, opérateur de parcs de loisirs, et propriétaire d'une très lucrative maison de disques. Et de deux, à la mi-novembre, c'est sur l'informatique que Matsushita jette son dévolu (6i DET+N). Le groupe d'Osaka ouvrira l'année prochaine un laboratoire de recherche fondamentale en plein cœur de la célèbre Silicon Valley. Objectif: attirer les meilleurs chercheurs américains (2 NPL+ADJ, 5i) / actuellement (2 ADJPL+ADV) / employés (2 ADV+V) par les universités (1 DET+N, 5i) / ou (2 NPL+CONJ) par les entreprises (1 DET+N, 5ii) concurrentes. Une attaque frontale pour obtenir le leadership dans un (1 PREP+DET, 5i) secteur stratégique.

SPEAKER 47: SPONTANEOUS
-Monsieur, votre chien m'a mordu à la jambe.
-Je m'excuse, Mademoiselle.
-Monsieur, un chien doit/être (2 V+INF) toujours tenu en laisse dans les parcs.
-Eh bien sûr, Mademoiselle, mais, tous les chiens veut courir et jouer dans le parc, dans le plein air (1 ADJ+N, 5i).
-Oui, mais quand ils (1 ADV+NCLIT, 5i) sont féroces comme le tien, c'est dangereux. Imaginez si ton chien/a (3 NSG+V) mordu la jambe d'un enfant (1 DET+N, 5i). Que fai-sez-vous?
-Oui, tu as raison. La prochaine fois, je le tiens/en (2 V+PREP) laisse. Au revoir.

SPEAKER 47: PICTURE (DESCRIPTION)
Il y a trois enfants (1 DET+N, 5i), deux garçons et (2 NPL+ET) / une (3 ET+DET) fille. Je pense qu'ils sont des frères et / une (3 ET+DET, 5ii) soeur. Um, ils viennent de jouer le baseball. Les garçons portent des t-shirts des Toronto Blue Jays, et aussi (3 ET+ADV) des caps de baseball avec le blue-jay. Um, ils sont devant le machine à laver. Ils sont tout (tut) (6i ADV+ADJ) sales et / (3 ADJPL+ET) peut-être (1 FIXED, 5i) sa mère a dit qu'ils sont sales et / (3 ADJPL+ET) / ils (3 ET+NCLIT) doivent se, ils doivent se changer les / (6iia DET#), les pantalons et / (2 NPL+ET) les t-shirts. La fille est, ils sont, tous les trois, ils sourire et / ils (3 ET+NCLIT) pensent que c'est drôle qu'ils sont sales. Et peut-être (1 FIXED, 5i) ...

SPEAKER 48: READING
Les Japonais vont-ils (1 V+NCLIT, 5i) manger les Américaines (1 DET+N, 5i) (6iic NPL#)? Matsushita, vous connaissez? Jusqu'à cet automne, les Américaines (1 DET+N, 5i) (6iib NPL#) n'avaient qu'une vague idée de la puissance et des ambitions (1 DET+N, 5ii) de ce groupe japonais plus connu en Europe (1 PREP+N, 5i) et / ou (3 ET+ADV) Atlantique sur les marques Panasonic ou Pioneer. Et puis, coup sur coup, le géant japonais, que l'on croyait cantonné dans l'électronique, a abattu ses cartes. Et d'un / (6iib ADJ#), en Octobre (1 PREP+N, 5i), il annonce son intention (1 DET+N, 5ii) d'acheter pour huit milliards (6i DET+N) de dollars le Gulliver Américain, MCA, père de Universal studios, opérateur de
parcs de loisirs, et propriétaire d'une très lucrative maison de disques. Et de deux, à la mi-novembre, c'est sur l'informatique que Matsushita jette son dévolu. Le groupe d'Osaka ouvrira l'année prochaine un laboratoire de recherche fondamentale en pleine coeur (adj+n) de la célèbre Silicon Valley. Objectif: attirer les meilleurs chercheurs américains (npl+adj, si)/actuellement (adjpl+adv)/employés (adv+v) par les/universités (det+n, 5i)/ou (npl+conj) par les/entreprises (det+n, 5i) concurrentes. Une attaque frontale pour obtenir le leadership dans/un (prep+det) secteur stratégique.

SPEAKER 48: SPONTANEOUS
.....et à la parc chaque jour, mais j'ai peur de ce chien fou qui est toujours/en (adv+prep) courante ([kurät]) (npl#). Demain, je porterai un fusile puissante ([puisät]) (nplg#) pour tuer ce chien mal. Après, le parc sera secure pour les/hommes (det+n, si), et les/ennfants (det+n, si). Ça ne sera pas/une (adv+det) chose, une mal chose.

SPEAKER 48: PICTURE (DESCRIPTION)
Les garçons, peut-être (fixed, si) frères, je pense, ont joué à baseball dans la ville. Ils/allés (nclit+v, si) venus, ils/avaient (det+n, si) venus/à (adv+prep) sa mère parce qu'ils veulent qu'elle lave les vêtements salés. Ils disent qu'ils sont seulement les garçons qui doit jouer à la [bu]. Ils disent que le baseball est son, est leur droit. Aussi, je pense que ces garçons/aient (adv+v) l'équipe Blue Jays de Toronto, ou, et/aussi (et+adv), ils/habitent (nclit+v) à Toronto. Ils sont dans la chambre de laver.

SPEAKER 49: READING
Les Japonais vont-ils (v+nclit, si) manger les Amériques (det+n, si), les Américaines (det+n, si) (npl#) Matsushita, vous connaissez? Jusqu'à cet automne, les Américains (det+n, si) n'avaient qu'une vague idée de la puissance et des ambitions (det+n, si) de ce groupe japonais plus connu eu/europe (prep+n, 5i) et/outre (et+adv) l'Atlantique sur les marques Panasonic ou Pioneer. Et puis, coup sur coup, le géant japonais, que l'on croyait cantonné dans l'électronique, a abattu ses cartes. Et d'un, en Octobre (prep+n, si), il annonce son intention (det+n, si) d'acheter pour huit/milliards (det+n) de dollars le Gulliver Américain, MCA, père de Universal studios, opérateur de parcs de loisirs, et propriétaire d'une très lucrative maison de disques. Et de deux, à la mi-novembre, c'est/ (nplb v#) sur l'informatique que Matsushita jette son/dévolu (det+n). Le groupe d'Osaka ouvrira l'année prochaine un laboratoire de recherche fondamentale en pleine coeur (adj+n) de la célèbre Silicon Valley. Objectif: attirer les meilleurs chercheurs/américains (npl+adj)/actuellement (adjpl+adv)/employés (adv+v) par les/universités (det+n, si)/ou (npl+conj) par les/entreprises (det+n, si) concurrentes. Une attaque frontale pour obtenir le leadership dans/un (prep+det, si) secteur stratégique.
SPEAKER 49: SPONTANEOUS
Madame, est-ce que ce c'est votre chien? Votre chien m'a moru à la jambe. Si je dois/être (2 V+INF) emmené à une école d'instruction pour arrêter ce forme de, de réagir. Est-ce qu'il a moru déjà quelqu'un autre (7i PRO+PRO)? Il faut que j'aille au médecin. La blessure sangre. J'espère que vous pouvez m'accompagner parce que je dois/expliquer (2 V+INF) comment, quel chien a me moru, moru. Et la prochaine fois j'espère que, que vous avez (1 NCLIT+V, 5i)/un (2 V+DET), un leash pour ton chien.

SPEAKER 49: PICTURE (DESCRIPTION)
Il y a trois enfants (1 DET+N, 5i). Ils sont tous sales. Uh, ils sont dans, dans la salle à laver, à laver, je ne sais pas comment s'appelle, à laver les vêtements. Le plus grand fils ne peut pas/expliquer (2 ADV+INF), uh, pourquoi ils sont tant sales. La fille a, a, porte un sourire très joli et mestif. Ils avaient (1 NCLIT+V, 5i), ils avaient (1 NCLIT+V, 5i) joué de baseball avant. Ils portent, ils sont habillés (2 V+ADJ, 5i) de chemise de Toronto Blue Jays. Et, uh, qui plus, quoi plus, et, le deuxième fils, um, a son bat de baseball et je crois qu'il regarde à sa mère. mais/on (2 CONJ+NCLIT) ne peut pas voir la mère, et, peut-être (1 FIXED, 5i) ils, ils ont (1 NCLIT+V, 5i) peur qu'elle va le puni, les punir, pardon. Et...
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