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THE COMPREHENSION STRATEGIES OF SECOND LANGUAGE (FRENCH) LISTENERS

BY 

LAURENS VANDERGRIFT

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS

FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

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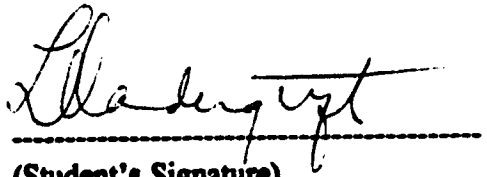

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This thesis is dedicated to the memory of my father

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ABSTRACT

This study investigated the strategies used by Core French high school students in transactional and interactional listening tasks. Differences in strategy use by level of language proficiency, gender, listening ability and learning style were analyzed.

Students at five different levels of language proficiency (Novice I to Intermediate III) participated in three separate research procedures. In Phase I, structured interviews were used to retrospectively report conscious use of learning strategies in different contexts. In the stimulated recall sessions of Phase II, students reported on their thought processes during a proficiency interview replayed on videotape immediately afterwards. A think-aloud procedure was used in Phase III to allow students to report their thought processes concurrently while listening to authentic texts. All reporting sessions were audio-recorded, transcribed and, along with the comprehension strategies observed during the interview, coded according to an established taxonomy.

All students evidenced a familiarity with metacognitive, cognitive, socio-affective and repair strategies, with an overall increase in total number of strategies used by proficiency level. Results indicate clear differences in strategy use by listening ability and proficiency level. The use of metacognitive strategies such as comprehension monitoring, problem identification and selective attention appeared to be the significant factor distinguishing the successful from the less successful listener. Although all students relied heavily on cognitive strategies such as inferencing and elaboration, the findings indicated greater use of transfer, translation and repetition at the Novice level and increased summarization, comprehension monitoring and other metacognitive

strategies at the Intermediate level. Observed use of repair strategies such as kinesics decreased and became less overt as proficiency increased. Whereas global reprises and hypothesis testing in English decreased as proficiency increased, deployment of these strategies in French increased. Fewer differences were identified by learning style. Although females tended to *report* more metacognitive strategies, differences in actual strategy *use* by gender were minimal. A qualitative analysis comparing representative protocols by proficiency level and listening ability provided further support for the quantitative results and revealed significant differences in the use of linguistic knowledge and world knowledge (schemata) in the comprehension process.

Implications for theory and second language pedagogy conclude the study.

Acknowledgements

In their book on completing dissertations, Long, Convey and Chwalek (1985) state that use of the word "prove" should be avoided in a dissertation; they maintain that the only thing one can prove is the ability to complete one's study. Although this "tome" may represent tangible proof of my ability to complete this study, I am indebted to many people who have helped me to realize this goal.

Thank you to my family:

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Introduction to the Research Question

1.1 Background to the question

This past decade has witnessed the germination and fruition of a major Canadian initiative to revitalize Core French programs (where French is taught as a subject). In order to provide a more stimulating, educational experience for Core French students, a multidimensional curriculum was proposed, integrating four syllabi (experience/ communication, culture, language, and general language education) into one unified curriculum model (Stern, 1982, 1983, 1984; Ullman, 1982). The National Core French Study researched and defined the content of each of these proposed syllabi; this report has provided the provinces with a framework for developing a richer Core French curriculum (LeBlanc, 1990).

Alberta Education has enlarged on the work of the National Core French Study in the elaboration of its new French as a Second Language: Program of Studies (Alberta Education, 1990). Within this multidimensional curriculum, the general language education syllabus presents a unique challenge to teachers. The Alberta Program of Studies has incorporated the teaching and integration of learning strategies as the major focus of this syllabus in the curriculum. It recognizes that awareness and acquisition of successful learning strategies can help students become more autonomous and self-reliant language learners, a definite asset for present and future language learning endeavors.

A growing interest in learning strategies in second language education is also

evidenced by the recent release of a number of significant books (Wenden and Rubin, 1987; Brown, 1989; Cohen, 1990; O'Malley and Chamot, 1990; Oxford, 1990). Researchers are interested in discovering what language learners actually do in their learning and in how that learning can be facilitated. "Strategic investment of learners in their own linguistic destinies," (Brown, 1991, p. 256) will not only make them better language learners, but also give them a more rewarding language learning experience. Language learning strategies have become a relevant area for research today.

Application of learning strategies is pertinent to all four language skills. Communication (speaking), reading, and writing strategies have received more research attention than listening strategies, perhaps because listening has, until recently, been misunderstood as a passive and insignificant skill in language learning. However, the area of listening comprehension strategies is a worthwhile field which merits further research attention for at least two reasons: 1) the growing recognition of the key role of listening comprehension in the process of language acquisition, and 2) the dearth of knowledge about what language learners actually do to derive meaning from oral input.

Of the four language skills, listening comprehension is perhaps the most critical for language learning, especially at beginning stages. Research in the last twenty years (for example, Asher 1969; Postovsky 1974; Nord 1978; Byrnes 1984; Dunkel 1986, 1991; Feyten, 1991) has indicated that listening comprehension is a highly integrative skill, an important component in the process of language acquisition. Because it internalizes the rules of language, listening also facilitates the emergence of other language skills. Therefore, an awareness and deployment of effective listening

comprehension strategies can help students capitalize on the language input they are receiving. Finally, an investigation of listening comprehension strategies will help to provide a clearer understanding of the process of listening, thereby providing a more solid theoretical base for what teachers should do in the classroom.

1.2 The research question

The major question explored in this study was: What are the listening comprehension strategies used by high school language (French) learners, the frequency of their use and the factors which affect the choice of those strategies?

This study, conducted in three separate phases, used three different methodologies to identify the strategies used by students in both transactional and interactional listening tasks. In the first phase, thirty-six students from four course levels, reported retrospectively, by means of a structured interview, on the conscious listening strategies they used in different contexts. In the second phase, twenty-one students participated in proficiency interviews which were videotaped to record the observable comprehension strategies used during interactional listening. This was immediately followed by an audiorecorded stimulated recall session where students viewed the videotape and attempted to recall thought processes at points where they experienced comprehension difficulties. Results of the proficiency interviews placed the students at five different levels of language proficiency. These same students then participated in the think-aloud sessions of Phase III, where they reported their thought processes concurrently as they listened to an oral text. All reporting sessions were audio-recorded, transcribed and coded according to an established taxonomy. Strategies were categorized and counted,

and a listening comprehension strategy profile prepared for each student for subsequent grouping and analysis. Sub-questions guiding the analysis were:

1) Is there a difference in strategy use by level of language proficiency? If so, what are those differences?

2) Is there a difference in strategy use by successful and less successful listeners? If so, what are those differences?

3) Is there a difference in strategy use by gender? If so, what are those differences?

4) Is there a difference in strategy use by personal learning style? If so, what are those differences?

1.3 Definitions of terms

A **successful listener** pays attention in class, understands what must be done, quickly "links in" to the gist of a text, is willing to participate and respond appropriately in a conversation, and is willing to take risks in guessing the meaning of what is not known, in contrast to a **less successful listener** who has a great deal of difficulty understanding, is often inattentive, is "thrown off" by unknown words, and easily "gives up." Definitions and subsequent placement of a student in the appropriate category was determined in collaboration with participating teachers.

Language learning strategies are deliberate cognitive steps which are used by learners to enhance comprehension, learning and retention of the target language, and which can be accessed for conscious report (adapted from Rigney, 1978 and O'Malley and Chamot, 1990). They can be grouped into three major categories: 1) **cognitive strategies** which involve interacting with the material to be learned, manipulating the

material mentally or physically, or applying a specific technique to a learning task; 2) **metacognitive strategies** which involve thinking about the learning process, planning for learning, monitoring the learning task, and evaluating how well one has learned; and, 3) **socio-affective strategies** which involve interacting with another person to assist learning or directing one's feelings, motivation and attitudes in accomplishing a learning task (O'Malley and Chamot 1990, pp. 137-39).

Think-aloud is a form of introspection involving stream-of-consciousness disclosure of thought processes by the language learner as the information is attended to, i.e. while it is still in short-term memory (Cohen, 1987).

Stimulated recall uses a videotaped recording of a lesson/activity in which a student has participated, in order to stimulate recall of his/her thought processes at particular points in that activity.

Protocols are the transcripts of student reports during introspection which have been coded to identify specific strategies.

Schemata are predetermined, typical sequences of actions which define well-known situations, around which world knowledge is organized. They can take the form of either textual, content or cultural schemata (Long, 1989).

Listening comprehension is an active process of meaning construction in which the listener draws on various information sources in order to interpret the intended meaning of a message (Faerch & Kasper, 1986). It can be either **interactional** or **transactional**. Interactional, or participatory listening, involves interaction with a target language speaker, whereas transactional, or non-participatory listening is essentially one-

way listening for information, where the listener has little control over the input.

Second language learning is understood to encompass the more comprehensive terms of "learning" or "acquisition."

1.4 Delimitations

This study involved high school students in a large urban area in Alberta during the 1990-91 school year. All students were approximately sixteen years of age, at different levels of language proficiency.

1.5 Limitations

1) Students may not be able to recall fully and/or verbalize all of their strategies in the interview, stimulated recall or the think-aloud sessions.

2) Time constraints did not allow for all students to participate in the stimulated recall and think-aloud sessions. This resulted in a very small sample size, especially when these students were spread out over a number of sublevels of language proficiency. In that light, this study should be considered exploratory in nature.

3) No suitable listening comprehension test for Core French students at the high school level was available to provide a baseline score for differentiating between successful and less successful listeners (see Lapkin, Argue & Foley, 1992).

1.6 Assumptions

1) Students are able to describe, with encouragement, the particular behaviours and techniques they use to understand an oral text in French.

2) Learning style can be measured by means of a standardized test.

1.7 Overview of the thesis

This chapter has presented the purpose of the study and an overview of the research design. Essential terms were defined and assumptions, delimitations, and limitations were acknowledged.

The second chapter reviews the literature on language learning strategies. Major studies are examined for their contributions to methodology and their understanding of the nature and use of strategies. This chapter concludes with a conceptualization of the role of strategies in language learning.

A review of the literature on listening comprehension is presented in the third chapter. Arguments for the importance of listening comprehension in language learning are presented, followed by a discussion of the dynamic processes involved in this skill. The small body of research dealing with listening comprehension strategies is introduced and discussed.

The fourth chapter describes the participants in this study and the procedures for their selection; the instruments and the procedure for identifying oral texts; the research and data collection procedures; and, the data analysis plan. The pilot study is described and criticisms of verbal report methodology are addressed.

The results of all three research phases of this study are presented in the fifth chapter. A quantitative analysis is used to compare strategy use according to the variables that were investigated. In addition, a qualitative analysis is used to lend support to the findings of the quantitative analysis and to filter out other differences not discernable through a quantitative analysis.

The final chapter summarizes the study. Results are discussed, conceptual claims considered, and implications presented for both pedagogy and further research.

Chapter II

Review of Language Learning Strategies

2.0 Overview

Since the 1970s, when cognitive approaches to language learning began to replace behaviourist approaches, the focus of second language learning research has shifted from the product to the process of learning. With this shift came a greater interest in the thought processes of the language learner as an important variable in second language learning. Language learning strategies (LLSs) have become a legitimate and important field of research because of their potential to further our understanding of second language learning and the role of individual differences in that process.

The existing body of research assists in the development of an understanding of what LLSs are and how they are used, and it shows what refinements have been made in the methodology to differentiate and classify individual strategies. This body of literature leads one to conclude that it is both feasible and beneficial to focus more attention on refining, expanding, applying and evaluating what is known about LLSs.

As a result, this chapter will attempt to develop a conceptual framework for the role of LLSs in language learning. Research on models of second language learning leads one to conclude that an information-processing theory of human thought accommodates what is being documented on how LLSs contribute to and facilitate language learning.

2.1 Defining language learning strategies

What are LLSs? Despite the widespread reference to this language construct in the research literature, there is a lack of consensus on what is understood by the term (for example, see Stevick, 1990). On the one hand there are those who talk about "techniques and devices" used by learners and, on the other hand, those who refer to "general characteristics" of learners. Earlier studies on learning strategies intermingled techniques and devices with general learner characteristics. Later studies, building largely on work done in cognitive psychology, eventually separated out the techniques and devices and began systematically to classify them into a taxonomy of LLSs; learner characteristics were no longer emphasized.

Over the fifteen year history of language learning strategy research, a great deal of progress has been made in bringing some organization and theoretical support into the field. There is, however, still disagreement among researchers on definitions and classifications, which is confusing to those who read the research. After comparing ten or more different LLS systems, Oxford, Cohen and Sutter (1991) call for a conference of all researchers involved in the field to develop a consensus in definitions and classifications.

In an attempt to elucidate the "elusive nature of the term," Wenden (1987a) examined some of the elements underlying the differing views. Her analysis led her to posit six criteria which characterize LLSs. LLSs are language learning behaviours which 1) refer to specific actions, not learner characteristics; 2) can be observable or non-observable; 3) are problem-oriented; 4) contribute to learning directly or indirectly;

5) may be consciously deployed; and, 6) are amenable to change. Based on these characteristics, the following working definition of LLSs is proposed for the purposes of this research. LLSs are deliberate, cognitive steps used by learners to enhance comprehension, learning and retention of the target language; they can be accessed for conscious verbal report (adapted from Rigney, 1978 and O'Malley & Chamot, 1990).

LLSs focus on techniques for learning a second language. As such, they should be distinguished from communication strategies which focus on techniques used to communicate in the target language. The latter help to negotiate meaning between speakers, while the former help the learner to assimilate language knowledge and skills (Tarone, 1981).

2.2 Language learning strategy research

2.2.1 Early studies

Initially, LLS research studied the "good language learner" in order to identify characteristics and behaviours that less successful learners might emulate.

2.2.1.1 Describing the "good language learner"

Teachers have always been conscious of the different degrees of success experienced by students in second language learning. Given two students with equal motivation and academic ability in the same classroom with the same curriculum, why is one student more successful than another? What characteristics describe his/her approach to learning? The search for an answer to these questions led initially to a description of the observable: the behaviours of "the good language learner." It is here that the study of LLSs finds its roots.

In an attempt to understand some of the specific learning behaviours displayed by successful language learners, Rubin (1975) and Stern (1975) posited some preliminary general characteristics based on classroom observation, their own teaching experiences and intuition. Good language learners, according to Stern, have 1) a personal learning style or positive LLSs; 2) an active approach to the learning task; 3) a tolerant and outgoing approach to the target language and empathy with its speakers; 4) a technical know-how for tackling language; 5) strategies of experimentation and planning with the object of developing the new language into an ordered system and revising this system progressively. They are 6) constantly searching for meaning; 7) willing to practise; 8) willing to use the language in real communication; 9) self-monitoring, i.e. they have a critical sensitivity to language use; and, 10) developing the target language more and more as a separate reference system in which they are learning to think. Rubin identifies good language learners as: 1) willing and accurate guessers; 2) having a strong desire to communicate; 3) uninhibited; 4) willing to practise; 5) monitoring their own speech and the speech of others; 6) prepared to attend to form; and, 7) attentive to meaning. These preliminary studies include an interesting combination of techniques and learner characteristics, suggesting the need for greater refinement.

Rubin and Stern provided insight into the characteristics of good language learners by describing and classifying their traits. Both writers, however, recognized the need to verify these descriptions. Going one step further, Rubin pointed to the need for an empirical data base to validate these observed characteristics; she recognized that what goes on inside the mind of the language learner is a necessary component of LLS

research.

2.2.1.2 Advances in methodology

In a landmark methodological study, Hosenfeld (1976) successfully demonstrated how to probe the learning process for a more fruitful study of what actually occurs in language learning. In order to get as close as possible to the learners' mental processes, and thereby tap their learning strategies, she asked students to "think aloud" as they completed a particular learning task.

"Thinking aloud," a form of introspection, encourages students to reveal specific steps in their thought processes concurrently while engaged in a learning task. The researcher encourages students through the use of techniques such as indirect questions, circuitous questioning and following the lead of the student. Introspection must be distinguished from retrospection in which the student reconstructs a thought pattern that has already taken place, as in interviews and questionnaires. Introspection is preferable to retrospection because the latter, due to temporal constraints, may not reveal the complete pattern of specific thought steps and it may not reveal the thought pattern in the order in which it actually unfolded.

Information provided by students during introspection led Hosenfeld to the surprising conclusion that students often are not doing what their teachers think they are doing. Students often interpret language tasks differently from what was intended by the teacher. Particularly during grammar tasks, students used different LLSs for the same task and different attitudes accompanied the same LLSs.

During reading sessions, Hosenfeld (1979, 1984) was able to identify the LLSs

and characteristics of successful second language readers, including keeping meaning in mind, use of context to decode unfamiliar words and a positive self-concept as a reader. In spite of the rich data which she collected, she could not identify precisely many of the LLSs which she isolated because a systematic taxonomy of LLSs had not yet been sufficiently developed. She could only identify in broad terms what can now be pinpointed more precisely with the help of LLS taxonomies developed since that time.

Besides her significant contributions in methodology, Hosenfeld also did pioneer work in teaching LLSs. Based on her research in reading strategies, Hosenfeld (1979, 1984; Hosenfeld *et al.*, 1981) outlined a learner training model with specific instructional steps geared to meet the individual needs of students.

Compared to the LLS research being conducted in the field, Hosenfeld's work was advanced in terms of the methodology used. Her pioneering work developed the verbal report avenue of introspection as a methodology in second language research (Hosenfeld, 1977, 1979; Cohen & Hosenfeld, 1981). It is interesting to note that this methodology was not used in LLS research again until at least ten years later, when it was validated and further refined by other second language researchers (see for example, Faerch & Kasper, 1987; Cohen, 1987).

2.2.1.3 Validating the characteristics of the "good language learner."

After initially describing and classifying the observable, research activity turned to successful language learners themselves to identify the special LLSs that could explain their success. In spite of Hosenfeld's pioneering work in introspection, however, research activity was limited to retrospective channels such as interviews, surveys, and

questionnaires for insight into how learners approach and perform language learning tasks.

2.2.1.3.1 The "good language learner" study

A major study by the Modern Language Centre at OISE attempted to validate Stern's (1975) and Rubin's (1975) lists by focusing on the "good language learner" (Naiman, *et al.*, 1978). An adult interview study was followed by a large-scale classroom study. Successful high school French students participated in retrospective interviews, completed tests to identify their personality traits and cognitive styles, and were observed in class. Based on the interviews, researchers identified five major characteristics which they called strategies. Following are their descriptions: 1) an active approach to learning and practice; 2) a realization of language as a system; 3) an awareness of language as a means of communication and interaction; 4) monitoring of second language performance; and 5) management of the affective demands of language learning. From these descriptions it is obvious that distinctions between learner characteristics and LLSs are still not sharply defined.

In addition to the broad strategy categories identified above, researchers also identified something which they called a general learning approach.

> The "good language learner" finds a style of learning appropriate to him by initially conforming to or adapting the learning situation effectively; in the process of his language learning he learns to identify personal preferences regarding the way he would like to learn a language and selects learning situations accordingly. (Naiman *et al.*, 1975, p. 59)

This "cognitive flexibility," also identified by Prokop, Fearon and Rochet (1982), enables successful language learners to deploy appropriate LLSs and adapt to different learning

tasks and conditions. Abraham and Vann (1987) also identified cognitive flexibility, and ranked it as one of the key differences between successful and unsuccessful language learners.

2.2.1.3.2 Refining Rubin's list

In order to validate the characteristics of successful language learners which she posited earlier, Rubin (1981) attempted to identify the cognitive processes of second language learners which contribute directly to learning. She reported on a variety of methods used to isolate and identify cognitive processes: formal classroom observation, observation of videotaped one-on-one tutorials, observation of a communicative class activity (the strip story), self-report surveys and directed diary writing. Directed self-report through diary writing by sophisticated language learners proved to be the most productive method for identifying specific LLSs.

LLSs identified were grouped into two categories. The first category, processes that contribute directly to learning, includes 1) clarification/verification; 2) monitoring; 3) memorization; 4) guessing/inductive inferencing; 5) deductive reasoning; and, 6) practice. A second category, consisting of activities that contribute indirectly to learning, includes: 1) creating opportunity for practice; and, 2) production tricks (communication or compensation strategies). Reiss (1981, 1985) and Ramirez (1986) identified many of the same LLSs through the use of questionnaires, thereby confirming the earlier research. By distinguishing between processes that contribute directly to learning and those that contribute indirectly, Rubin began to differentiate between LLSs. In fact, in her distinction between direct and indirect processes she was actually differentiating between

LLSs and communication strategies.

This early period of research attempted to validate the characteristics of successful language learners as identified by Rubin and Stern. A list of learning behaviours that appear to be related to successful language learning have been identified, although some learner characteristics still need to be culled out. However, the documentation of any relationships or qualitative differences between LLSs has been limited.

2.2.2 Intermediate studies

This next period of research, beginning in the early 1980's, is characterized largely by studies using surveys, interviews and questionnaires to identify language learning behaviours that lead to success in language learning (for example, Reiss, 1981, 1985; Ramirez 1986; Prokop, Fearon and Rochet, 1982). There are, however, two studies that merit closer attention: the findings by Politzer and McGroarty (1985) on the variability of LLSs and the inquiry by Wenden (e.g. 1983) into the role of metacognition.

2.2.2.1 Politzer and McGroarty studies

Politzer (1983) used a self-report survey to measure the use of LLSs ("good learning behaviours") by university students. Student responses were compared to achievement and level of language study. Continuing in the same line of research, Politzer and McGroarty (1985) compared ESL student responses for each item on a similar self-report survey to gain scores on three pre- and post-tests for aural comprehension, grammar and communicative competence. The results of these studies, taken together, indicate that many different variables can affect the choice of LLSs: achievement, level of language learning, goal of language study, method of teaching,

cultural background of the learner and possibly gender. As a result, these researchers are hesitant about identifying good LLSs for all situations and all purposes since "good behaviours may be differentially appropriate for the various types of skills related to the purpose of second language study." (p. 118) Prokop, Fearon and Rochet (1982) arrive at a similar conclusion and warn against making any "dogmatic" statements about language learners without taking into account all the various background variables. As suggested by Oxford (1986), the significance of the Politzer and McGroarty study is the discovery that the effectiveness of many LLSs appears to depend on the characteristics and needs of the learner and the requirements of the situation. So, in spite of earlier research efforts to filter out learner characteristics from learning behaviours, use of these learning behaviours does appear to interact with learner characteristics.

2.2.2.2 Wenden's contributions: the role of metacognition

Wenden's important contribution to the field of LLS research is in calling attention to the role of metacognitive knowledge in LLS use, that is, what learners know about their language learning, how they direct it and how they evaluate their progress (Wenden 1987b). Metacognition is important to language learning because it directs the efficient use of LLSs. Like the rudder on a boat, metacognitive LLSs set the direction of cognitive activity, overseeing, regulating or self-directing language learning.

Intrigued by Rubin's (1975) characteristics of the good language learner, Wenden (1986) interviewed adult ESL students about their LLSs and their beliefs about language learning. More specifically, Wenden wanted to determine how second language learners selected and evaluated their LLSs during a language learning task or a communicative

interaction in the target language, and what they actually knew about the process of second language learning. She discovered that language learners have very explicit beliefs about how to learn a language and that these beliefs seem to consciously or unconsciously direct their learning. In an attempt to understand what was happening she turned to work being carried out in cognitive psychology. Her own research, complemented by her study of cognition, led her to postulate eight questions (summarized in Table 2.1) that language learners might ask themselves as they try to self-direct their learning.

Table 2.1. *Questions by which Second Language Learners Self-direct their Learning*

Question:	Decision:
1. How does this language work? (Knowing about learning)	Learners makes judgments about the linguistic and sociolinguistic codes.
2. Why have I (not) learned? What's it like to learn a language? (Knowing about learning)	Learners make judgments about how to learn a language and about what language learning is like.
3. What should I learn and how? (Planning)	Learners decide upon linguistic objectives, resources, and use of resources.
4. What should I emphasize? (Planning)	Learners decide to give priority to special linguistic items.
5. How should I change? (Planning)	Learners decide to change their approach to language learning.
6. How am I doing? (Self-evaluation)	Learners determine how well or how poorly they use the language and diagnose their needs.
7. What am I getting out of this? (Self-evaluation)	Learners determine whether an activity or strategy is useful for learning.
8. How am I responsible for my learning? How is language learning affecting me? (Self-evaluation)	Learners assess how they influence their learning process and how they are affected by it.

Source: Wenden (1983, p. 111) and O'Malley & Chamot (1990, p. 102) Reprinted here with permission of Cambridge University Press.

These questions incorporate two important dimensions of metacognitive activity:

planning and self-evaluation. Later, O'Malley *et al.* (1985a) identify a third metacognitve strategy: self-monitoring, a crucial strategy for effective listening comprehension. As suggested by O'Malley and Chamot (1990), Wenden's failure to mention this strategy specifically might be explained by her emphasis on general approaches to learning rather than active cognitive processes. Wenden concludes that it is crucial for the teacher to be aware of students' beliefs about language learning and about the effectiveness of their LLSs, especially if strategy training is to succeed.

2.2.2.3 Interim conclusions

With the exception of Hosenfeld, the research studies on LLSs up to this point have made use of questionnaires/surveys and retrospective interviews to validate and refine the lists posited by Stern and Rubin. These research efforts have demonstrated that students do use LLSs, but that these LLSs interact with other variables. A body of LLSs have been identified, but classification systems are still rudimentary. Although some differentiation between types of LLSs has been suggested in Wenden's identification of higher-level metacognitive activity, distinctions have not yet been clearly delineated. Research has been primarily exploratory and has operated within a theoretical vacuum; there has been no theoretical framework to explain how LLSs influence language learning success.

2.2.3 Recent studies

The more significant studies during the next, most recent period of research (mid to late 1980's) are more sophisticated in methodology, and they attempt to situate their research and interpretation of results within a cognitive framework. The researchers

from this period start to use models developed in cognitive science to hypothesize about processes in learning and to interpret data, based on the crucial assumption that cognition plays a salient role in language learning. Furthermore, the unsuccessful language learner is now becoming an important subject for research, and initiatives to teach LLSs are being introduced.

2.2.3.1 Contributions by O'Malley, Chamot and colleagues

A group of researchers at InterAmerica Research Associates have designed and conducted a number of significant studies, both short and long term, (O'Malley, *et al.*, 1985a, 1985b; Chamot, *et al.*, 1987; Chamot *et al.*, 1988a, 1988b), to identify more specific LLSs used by second language learners and to investigate the teachability of LLSs.

2.2.3.1.1 Creating a comprehensive classification scheme

Phase I of the first study (O'Malley, *et al.*, 1985a) made use of student retrospective accounts, formal classroom observation and teacher interviews to identify LLSs used by high school ESL students in a variety of classroom language activities. Like Rubin (1981) they determined that classroom observation was not very productive for identifying LLSs. Teacher interviews revealed that they were not very aware of the LLSs used by their students, but they were interested in learning more about LLSs.

Retrospective reports by the students yielded the most productive data. First, a total of 26 cognitive and metacognitive LLSs were identified, using a previously developed classification scheme from cognitive science (Brown & Palincsar, 1982) as a reference guide. In addition, a third category was added to account for strategies used

in interaction with others. Second, researchers established that students at an intermediate level of language proficiency used proportionately more metacognitive LLSs than students at beginner levels. Third, results revealed that students tended to select LLSs associated with performing discrete-point tasks rather than LLSs associated with integrative, cognitively demanding tasks such as listening and speaking. The latter were areas where the students needed the most help, suggesting these tasks as potentially productive areas for LLS training. This led the researchers to Phase II of the study, the learner training phase (O'Malley, *et al.*, 1985b).

The significance of this study for the development of LLS research is the validation of a body of LLSs and an accompanying classification scheme already identified in cognitive science literature. Two main categories of strategies, cognitive and metacognitive, also proved to be useful for capturing the range of cognitive activity in language learning. Metacognitive strategies, defined earlier in the context of Wenden's research, are the directors of the learning process. They are limited in effectiveness, however, without an arsenal of appropriate cognitive strategies. The role of cognitive strategies is described by Galloway and Labarca (1990):

> What...cognitive strategies have in common is (1) the active mental engagement of the learner in the purposeful establishment of new functional knowledge through contextualized practice, and (2) the formation of stable and meaningful connections between prior knowledge and new information. (p. 145)

Many of the same strategies identified earlier in cognitive science were also reported by second language learners, leading researchers to suggest that cognitive processing might be a "generic activity applied to all areas of learning." (O'Malley & Chamot, 1990, p. 122) Finally, to account for the learning that happens when language learners cooperate

with classmates or question the teacher for clarification, a third category, "social mediation" strategies was included. This tripartite classification scheme adds greater precision to future research efforts in identifying and classifying LLSs.

2.2.3.1.2 Refining and validating the tripartite classification scheme

Chamot and Küpper (1989) reported on a three part study to investigate the use of LLSs by high school and college students at different levels of language proficiency with a foreign language (Spanish and Russian). This extensive project included a descriptive, a longitudinal and a strategy training study.

In the descriptive study of Phase I (Chamot, *et al.*, 1987), effective and ineffective language learners, as nominated by their teachers, reported retrospectively on their strategy use for different types of language tasks. The resulting pattern of strategy use demonstrated that the classification scheme developed from the earlier study (O'Malley, *et al.*, 1985a) was also useful for describing the LLSs of foreign language learners.

The most significant contribution of this study is the examination of the LLSs of unsuccessful language learners. Although these learners used fewer LLSs than their more successful classmates, researchers were surprised to discover that these learners were acquainted with LLSs and were able to report on their own mental processes. Consequently researchers suggest that this awareness may be a starting point for LLS instruction for less successful learners. The major difference between successful and unsuccessful language learners appears to lie in the range of LLSs used and the way they are applied. This observation was also made by Hasbun (1988) who reported that less

successful learners were familiar with effective LLSs but they applied them inconsistently.

The unsuccessful language learner has been researched more intensively by Abraham and Vann (1987; Vann & Abraham, 1990). Results of an initial case study (1987) of two language learners suggested that the unsuccessful learner, in contrast to his/her more successful counterpart, overemphasized grammatical correctness, was inflexible in LLS use, and had a narrow philosophy of language learning prompted by a "lack of maturity in learning." (p. 96) A second study (1990), using a think aloud methodology for a number of different language tasks, focused exclusively on the unsuccessful learner. Instead of merely tallying LLSs used, the researchers attempted to link demonstrated LLS use with task demands. They discovered that unsuccessful learners failed to apply LLSs appropriately to the task. More precisely, unsuccessful language learners appeared to lack the necessary metacognitive LLSs "which would enable them to assess the task and bring to bear the necessary strategies for its completion." (p. 191) Clearly, a study of the unsuccessful language learner has added important dimensions to an understanding of the learning process.

In the longitudinal study of Phase II (Chamot, *et al.*, 1988), students from Phase I (who were still in language study four semesters later) were interviewed again. This time, however, they were asked to "think aloud" as they performed a number of different integrated language tasks such as listening, reading, writing and a cloze activity. Results indicated that students at higher course levels used more LLSs than students at beginner levels, and that all students used more cognitive than metacognitive LLSs. Some use of

social and affective LLSs was reported. LLS use seemed to be influenced by years of language study, the nature and difficulty of the task, and motivation. Differences between successful and less successful learners were reflected mostly in the variety of LLSs used and their appropriate application to the task.

This study is significant in a number of ways. First of all, researchers were able to improve the tripartite classification system developed in the ESL study, refining definitions of LLSs and making adjustments for the different types of language tasks performed. Most importantly, the influence of affective factors was now recognized. Based on reported strategies used to lower anxiety, the third category, social mediation, has been opened up to include affective factors and called socio-affective strategies. Second, verbal report through think-alouds was reintroduced as a methodology for tapping LLSs. Third, the unsuccessful language learner was now recognized as a reliable source of information on strategic processing.

These studies by O'Malley, Chamot and colleagues have added to our understanding of LLSs by making a clear distinction between cognitive and metacognitive strategies, and by separating out a third category, namely socio-affective strategies. Skehan (1989, p. 139) suggests that, at present, this tripartite scheme is the "most useful classification of strategies," that could bring "greater systematicity" to future LLS research. The significant contribution of O'Malley and colleagues to theory building in LLS research will be discussed later.

2.2.3.2 Contributions by Oxford and colleagues

Oxford's contribution to LLS research is threefold: developing a classification

scheme, affirming the crucial role of affective LLSs, and conducting a number of factor analytic studies.

2.2.3.2.1 Development of the SILL

Oxford developed and field-tested a questionnaire to assess the use of LLSs called the Strategy Inventory for Language Learning (SILL) (Oxford, 1985, 1990). This classification scheme, which mirrors Rubin's (1981) earlier categories, consists of two basic categories: direct and indirect strategies. Each set of LLSs is further sub-divided, and then sub-divided again into more specific behaviours.

Direct strategies, the LLSs necessary for processing the target language mentally, consist of three sub-categories: memory, cognitive and compensation strategies. The language learner uses memory strategies to recall and retrieve information; cognitive strategies are used to decode and encode language; and compensation strategies are used to make up for knowledge gaps. Most of the compensation strategies identified, however, do not fit our definition of LLSs and rightfully belong to the domain of communication strategies as defined earlier in this chapter.

Indirect strategies, LLSs which work with direct strategies for general management of learning, also consist of three sub-categories: metacognitive, affective and social strategies. Metacognitive strategies help to coordinate the learning process; affective strategies help to regulate emotions; and social strategies involve learning with and from others.

Oxford's exhaustive classification scheme, consisting of more than 60 LLSs, incorporates every strategy cited in the LLS literature. Although comprehensive, this

scheme does present some difficulties. First, there is some repetition of LLSs and boundaries between other LLSs are too fluid. Second, the sheer size and number of subdivisions make it cumbersome and difficult for researchers to use as an analytical and classification tool. Third, it is inadequate as a heuristic for LLS research, since it "...is far removed from any underlying cognitive theory [and] fails to prioritize which strategies are most important to learning." (O'Malley & Chamot, 1990, p. 103)

2.2.3.2.2 Affective aspects of language learning

On the other hand, the strength of this classification scheme is its recognition of the affective dimension of language learning. In spite of the powerful influence of affective factors on success or failure in language learning, the use of affective LLSs is very seldom reported. Students may not consider them to be LLSs because they do not deal directly with the language. A review of LLS surveys (Oxford, 1991) showed that the response form did not allow respondents to indicate whether they even used LLSs of an affective nature. Future research efforts must find ways to identify the use of affective strategies, account for them in a theoretical framework and incorporate them into a classification system, such as the one developed by O'Malley and Chamot (1990). The latter is weak in representing the affective dimension of language learning, including only four LLSs within a combined socio-affective category.

2.2.3.2.3 Factor analytic studies

The SILL has been used by Oxford and associates for a number of factor analytic studies to analyze strategy use among different populations. One study (Ehrman & Oxford, 1989; Oxford & Nyikos, 1989) compared 1200 university student responses

using the SILL and a background questionnaire concerning motivation, gender, language background and other topics. Responses revealed the following behaviours: 1) formal rule-related practice (high level of usage); 2) out-of-class functional practice (least frequently used); 3) metacognitive strategies (low use); 4) general study strategies (popular); and, 5) in-class conversational input elicitation strategies (popular). In addition, results showed that motivation, gender and years of language study had the greatest effect on strategy use.

A similar factor analytic study of language laboratory learning strategies of German students at the University of Alberta (Prokop, 1989) yielded six major factors. These factors, all consistently related to achievement, included: 1) attending to the details of the learning task; 2) displaying creativity and engaging in risk-taking language behavior; 3) using a serial approach to the learning task, 4) using mediating responses; 5) using a relational approach; and 6) using a global approach. Although the nature of the instrument did not encourage the report of strategies used in functional language practice, it provided a clearer picture of strategy use in classroom language learning. Factors one, two and six validate the observations of Rubin (1975) and Stern (1975). while factors four and five are elaborative techniques, featuring strategies specifically related to learning vocabulary and grammar. Factor three, which was negatively related to achievement, is closely related to the strategies of unsuccessful students identified by Reiss (1983).

Oxford and colleagues have also examined the relationship between LLS use and variables such as gender and learning style (Oxford, Nyikos & Ehrman, 1988; Ehrman

& Oxford, 1989, 1990; Oxford & Nyikos, 1989). Respondents completed the SILL as well as a self-report questionnaire (Myers-Briggs Type Indicator) designed to reveal basic personality preferences. Analysis of variance revealed that gender and general learning style (thinking vs. feeling, judging vs. perceiving, etc.) have a strong influence on choice of LLSs. Researchers conclude that a personality test such as the MBTI can serve as a "signpost" to describe personality traits and assign the preferred type of training for that personality type.

The relationship between learning style and strategy use is further explored by Oxford (1991, 1992) who posits three style dimensions considered significant for language learning. Analytic versus global processing, the most salient style dimension, incorporates previously researched style aspects such as field dependence/independence and brain hemisphericity. Tolerance versus intolerance of ambiguity incorporates learning style aspects such as perceiving/judging and flexible/constricted thinking. Finally, sensory preference of the learner (visual, auditory, tactile, kinaesthetic or a combination of these), represents an important factor, although it has not been extensively researched.

2.2.4 Summary

This overview of LLS research includes the major studies which have contributed important and necessary pieces of information to the still incomplete picture puzzle of LLSs in language learning. Based on these studies, it can be argued that the following parts of the picture appear to be clear:

1) Both successful and unsuccessful language learners use many different LLSs, and

these learners are capable of describing the strategies they use.

2) The difference between successful and unsuccessful language learners appears to lie in the range of LLS use and the deployment of LLSs appropriate to the task.

3) Learners at higher levels of language proficiency appear to use a wider range of LLSs than beginning learners.

4) The most useful system for classifying LLSs is the tripartite division of metacognitive, cognitive and socio-affective LLSs, also commonly used in cognitive psychology.

5) Choice of LLSs appears to be influenced by other variables such as gender, learning style and ethnic background.

6) Introspection through verbal reports or "think-alouds" appears to be the most fruitful methodology for tapping LLSs, enabling learners to report LLSs which have become automatic and are no longer conscious.

2.3. Developing a conceptual framework for LLS research

As suggested throughout the first part of this chapter, most LLS research can be characterized by a "research-then-theory approach," (Skehan, 1989, p. 98) a problem noted by others as well, in particular O'Malley and Chamot (1990). This part of the chapter will examine a human information-processing perspective on second language learning to better understand how LLSs facilitate the learning process.

Before proceeding, however, notice should be taken of one widely-known theoretical model which does make reference to strategy use. Strategic competence is one component of a theoretical model of communicative competence proposed by Canale

and Swain (1980). In this model, strategic competence is defined as

> ...verbal and non-verbal communication strategies that may be called into action to compensate for breakdowns in communication due to performance variables or to insufficient competence. (Canale and Swain, 1980, p. 30)

Strategic competence, in this model, focuses on communication strategies which were differentiated from LLSs earlier in this chapter. Since LLSs facilitate learning (see definition p. 4), it is important to clarify the role of LLSs in a theory of learning rather than a theory of communicative competence.

2.3.1. A preliminary model for understanding LLSs

Bialystok (1978, 1979) was the first researcher to investigate the role of LLSs within a theoretical framework. Underlying Bialystok's work is the basic premise that language learning is a cognitive process, meaning that the human mind processes language in the same way as other kinds of information. In her model of second language learning, which predates the tri-partite and the SILL classification systems described earlier, Bialystok allowed for two groups of LLSs: formal strategies, consisting of formal practising and monitoring, and functional strategies, consisting of functional practising and inferencing. These LLSs link together the three levels of the model, an input, a knowledge and an output level. At the knowledge level, the infamous "black box," there are three different stores: 1) other knowledge; that is, the learner's mother tongue, other languages and accumulated world knowledge; 2) explicit linguistic knowledge; that is, conscious knowledge *about* the target language; and, 3) implicit linguistic knowledge; that is, the unconscious intuitive knowledge *of* the target language. When a learner interacts in the target language, s/he utilizes all three knowledge sources,

but the strategies deployed will depend on the type of knowledge required for the task. For example, in listening the learner would utilize all three stores of knowledge; however, the difficulty of the task and the language proficiency of the learner would probably determine which knowledge store(s) contribute most to task completion and the amount of inferencing the listener will have to do.

Bialystok's model has important implications for language teaching and LLS instruction. First, oral communication using the implicit linguistic knowledge store would not necessitate the use of LLSs, at least not consciously. Second, in contrast to Krashen's controversial Monitor Model, this model hypothesizes that explicit linguistic knowledge can become implicit through a strategy of formal practice (emphasis on language form rather than meaning). This would suggest that LLSs can become automatic through explicit instruction and convert to implicit linguistic knowledge, thereby facilitating language competence.

Although useful as a heuristic for understanding the nature and role of important LLSs such as inferencing, monitoring and practice, Bialystok's model is not sufficiently comprehensive to account for the range and qualitative differences between LLSs reported in the more sophisticated research of the last five years. Furthermore, it does not take into account the recent advances in cognitive theory; that is, the research into the role of different mental processes in learning.

2.3.2. Towards a cognitive model of research on LLSs

Continuing in the same line of thought as Bialystok, O'Malley and Chamot (1990; O'Malley, Chamot & Walker, 1987) also viewed cognitive theory as a productive

framework for conceptualizing language learning and accounting for the power of LLSs to influence memory processes. Cognitive theory attempts to explain how new knowledge is formed, how the ability to use this knowledge correctly and appropriately is developed, and how this new knowledge is integrated into the learner's existing cognitive structures (Ellis, 1990, p. 176). As suggested by these researchers and cognitive theory, language is assumed to be another complex cognitive skill, not a specific function of the human mind. This implies that language learning follows the same principles of learning as does any other cognitive skill. In order to avoid cognitive overload, language learners need to acquire efficient strategies for processing new information. O'Malley and Chamot (1990) built largely on the work of John Anderson in order to gain a better understanding of second language learning processes.

In his theoretical model, Anderson (1985) proposes two kinds of memory to explain how knowledge is initially stored and then represented in memory. The learner initially pays attention to certain features of language input which are comprehensible and/or meaningful to him/her and then transfers this information to the short-term memory (STM), where it is held briefly. STM, sometimes called working memory, holds only small bits of knowledge which, depending on its salience and/or meaningfulness to the learner, is transferred to long-term memory (LTM). There knowledge may be stored as isolated islands, or most likely as interconnected networks of nodes.

Anderson posits "production systems" to explain how learners develop the ability to access this stored knowledge, to gain control over it and perform language tasks. In

order to describe these dynamics, he distinguishes between two kinds of knowledge: factual or "declarative" knowledge (what we know *about*) and procedural skills or "procedural" knowledge (what we know *how* to do).

Declarative knowledge is roughly equivalent to Bialystok's category of explicit linguistic knowledge. It can usually be expressed verbally ("declared") and is learned quickly. Declarative knowledge is static information; it includes such things as verb conjugations, word order rules (e.g. object pronouns go before the verb), tense formation, and other kinds of information taught in a traditional grammar-oriented classroom. Declarative knowledge is stored in LTM as abstract meaning in the form of propositions, not as specific language. Propositions are represented in the form of nodes which are associated with other nodes via connecting links.

On the other hand, procedural knowledge is automated knowledge, roughly equivalent to Bialystok's implicit linguistic store. It is acquired gradually through extensive opportunities for practice and stored in LTM in the form of "production systems." Production systems include 1) a goal statement preceded by IF, followed by 2) a condition containing clause(s), 3) a command preceded by THEN, followed by 4) an action with clause(s) expressing the command. For example, the following production might describe how the placement of the object pronoun "y" is stored in LTM for a French speaker:

> IF the goal is to generate "y",
> and the verb is in present tense,
> and there is no infinitive following,
> THEN generate /y/ + the verb.

Procedural knowledge is dynamic information; it allows us to overcome our limited

information processing abilities to carry out complex tasks such as speaking fluently and/or listening effortlessly while processing large amounts of information rapidly.

Production systems help to explain how knowledge, first stored in declarative form, can become automatic through practice and then be represented in production sets. Anderson names three stages through which learners pass in order to assimilate stored procedural knowledge. In the cognitive stage, language learning is conscious and deliberate, knowledge is largely declarative in nature, and language use is replete with errors. In the associative stage, through teacher modelling and extensive opportunities for meaningful practice, more errors are detected and corrected, and declarative knowledge is increasingly converted into procedural form, resulting in greater fluency in expression. Finally, in the autonomous stage, through continued modelling and practice focused on meaning, language expression becomes fine-tuned. By this point, a language learner has often forgotten the once conscious rule underlying an utterance, and can now only articulate that "it sounds right."

Although Anderson does not make explicit reference to LLSs, one can see how, given our working definition of LLSs, this model can explain how strategies might be stored in LTM and how they can influence language learning. O'Malley *et al.* (1987) explain how a construct such as procedural knowledge can provide a theoretical basis for describing strategies. LLSs are a special kind of procedural knowledge that is conscious and deliberate (declarative) in the cognitive stage and, through practice, becomes increasingly automatic as the learner progresses through the associative to the autonomous stage. At this stage, LLSs are deployed unconsciously as proceduralized

knowledge. For example, the following production set might conceptualize the proceduralization of inferencing while the learner is engaged in a listening or a reading task:

> IF the goal is to comprehend an oral or written text,
> and I am unable to identify the meaning of a key word,
> THEN I will try to infer the meaning from context.
> (O'Malley and Chamot, 1990, p. 52)

LLSs that have become proceduralized will be deployed consciously when the learner is confronted with a more difficult language task.

Proceduralization of LLSs has important implications for LLS research methodology. In order to identify and describe the LLSs used by more proficient language learners, we must provide them with sufficiently challenging language tasks and utilize an introspective methodology, such as a think-aloud procedure, which will require that learners to bring to consciousness any LLSs that may have already been proceduralized.

2.3.3 Conclusion

Models of language learning attempt to provide a picture of what is essential and similar about the learning process, but clearly no model can encapsulate the vast differences that characterize individuals. Although the theoretical framework presented above is inadequate for explaining all phenomena (e.g. attitude and motivation) in language learning, it is, as O'Malley and Chamot (1990) maintain, a useful framework insofar as it explains the existence and use of LLSs in language learning. It does not, however, account for variability in second language learning. Considering that, its usefulness may be limited.

The next chapter will review the important role of listening comprehension in language learning, and the research dealing specifically with listening comprehension strategies.

Chapter III

Review of Second Language Listening Comprehension

3.0. Overview

Listening comprehension is a complex, active process. The language learner must discriminate between sounds, understand vocabulary and grammatical structures, interpret stress and intonation, retain what was gathered in all of the above and interpret it within the immediate as well as the larger sociocultural context of the utterance (Wipf, 1984, p. 345). To coordinate all this is no small feat and involves a great deal of mental activity on the part of the listener. Listening comprehension is anything but a passive activity.

The importance of listening comprehension in language learning has only been recognized recently. In fact, prior to the 1980's it merited very little attention in major texts on language pedagogy (for example, Mackey, 1965). Listening comprehension as a separate and important component of language learning came into focus only after significant debate about its validity. Recent research has demonstrated the critical role of language input in language learning (e.g. Krashen, 1981), providing support for the pre-eminence of listening comprehension in instructional methods. This has led Dunkel (1991, p. 433) to assert that the study of listening comprehension has become the "polestar" of second language acquisition theory building, research and pedagogy.

This chapter will trace how the focus on listening comprehension in second language learning developed, how the field of study unfolded to enhance an

understanding of the listening process, and how listeners can use strategies to ease that process. An examination of the literature relevant to this study can be divided into three sections: 1) literature which argues for a greater emphasis on listening comprehension (rather than speaking) at early stages of language learning; 2) literature which attempts to identify the dynamic processes involved in listening in order to create a useful conceptual framework; and, 3) literature on listening comprehension strategies.

3.1 Re-evaluating listening comprehension

During the late 1960's and early 1970's a number of second language educators began to look more closely at the role of listening comprehension as a potentially key factor in facilitating language learning, especially in the early stages. They compared first and second language acquisition in natural environments. When a child learns a first language, s/he spends a great deal of time listening and sorting through a vast array of verbal input before producing any language (see for example, Asher, 1969, 1972; Byrnes, 1984; LeBlanc, 1986; Postovsky, 1974, 1978; Winitz and Reeds, 1973). The same child demonstrates comprehension of what is said long before speaking begins. A similar "silent period" also seems to occur when children learn a second language in natural environments.

Such a pattern was not reflected in most second language classrooms, however. According to Morley (1983), this neglect of listening comprehension can be attributed to:

1) our intense concentration on "speaking" a language;
2) our use of listening as a means to teach speaking, but not as an end in itself;
3) our false assumption that listening is a passive skill;
4) the absence of a model from first language teaching as listening is seldom

> taught in first language instruction;
> 5) the fact that how we listen and comprehend largely remains a mystery; and,
> 6) the overwhelming complexity of the components of the "listening act" may have discouraged research and materials development. (p.26)

Listening comprehension instruction appeared to focus primarily on the acquisition of verbal habits rather than listening for meaning.

Nord (1978) called for a re-evaluation of the role of listening comprehension in the classroom. Listening comprehension drew new attention as part of a larger paradigm shift that considered language learning as acquisition of a meaningful system rather than acquisition of a set of verbal habits.

> Now may be the time to change the basic paradigm of language teaching. Now may be the time to shift from speaking to listening as the focal skill; to change from a response-oriented, production-focused methodology to a stimulus-oriented, problem-solving methodology; to move toward a paradigm concerned with competence and away from a paradigm concerned with performance. (p. 4)

3.1.1 Listening comprehension and language learning

Beginning with the Tan-Gau Natural Method (Gauthier, 1963), a number of methods emphasizing the primacy of listening comprehension in language acquisition began to appear. Their common tenets included the assumption that second language learning parallels first language acquisition and that instruction should allow for a "silent period" in which students verify comprehension without using the target language.

Postovsky found support for the Delayed Oral Method (1974, 1977) by comparing the progress of two groups learning Russian. A control group receiving intensive oral practice was compared to an experimental group receiving intensive exposure to aural material requiring a written response. After twelve weeks of classes, the experimental group outperformed the control group in tests of all four skills, and, more interestingly,

the experimental group scored significantly higher on the speaking scores.

Asher's Total Physical Response (TPR) Method (1969) emphasized listening comprehension through the use of commands which students learn to understand by imitating the actions of the teacher. Even though TPR students received fewer hours of instruction than in normal classroom situations, they performed significantly better on a number of language tests than did students exposed to the audio-lingual method. Perhaps Asher's most surprising discovery was that listening comprehension, followed by immediate physical response, resulted in language transfer to other skills such as reading and writing.

In Canada, LeBlanc (1986) demonstrated similar results for first year required language courses in the science and engineering faculties at the University of Ottawa. A combination of TPR activities and group listening to authentic oral texts was followed by instruction in speaking during the last third of the course. This resulted in higher exam scores for all language skills, compared to a control group. Strengthening listening skills as a first step in language learning seems to reap maximum benefits.

Simple exposure to the sounds of the language, however, is not enough to produce promising results such as those obtained by Postovsky, Asher and LeBlanc. A successful listening comprehension program must present material that is comprehensible to the learner from the beginning of instruction. According to Krashen's Input Hypothesis, program materials for each level should contain structures slightly beyond the student's competence, provide for student response to verify comprehension, and challenge students to problem-solve and guess at the meaning of unfamiliar elements (Krashen,

Terrell, Ehrman and Herzog, 1984). Although controversial with regard to its results in language learning or acquisition, the Input Hypothesis does acknowledge the salience of listening comprehension in language acquisition.

The theoretical underpinnings of a listening comprehension approach to language teaching/learning, and the research evidence for such an approach have been summarized by Daniels, Pringle, and Wood (1986):

> 1) A tendency toward better all-round performance has been noted in learners who have experienced a silent period than in those who have not.
>
> 2) Learners who are required to speak at too early a stage are likely to suffer from a phenomenon known as "task overload" which probably inhibits language acquisition and the exercise and development of discriminatory skills, creates anxiety and encourages interference from L1. Understanding or misunderstanding goes on in the intimacy of our own heads. If not called upon to perform, learners can come to grips with the new foreign language, under cover, without having to expose their sometimes vulnerable "language ego" to the censure of teachers or peers.
>
> 3) In natural circumstances both child and adult acquirers of foreign languages typically go through a "silent period."
>
> 4) The audio-lingual approach has laid great emphasis on the importance of speaking as a foreign language learning goal, to the extent that many language learners are able to "vocalize" (which presumably does not have the same status or manifest the same complexity of creativeness as "speaking"), while remaining ... "virtually incompetent in understanding the spoken language." Understanding competence is very possibly of more use to most learners of foreign languages than is speaking competence. It would therefore seem logical, given the impossibility of doing everything at once, to give priority to training in listening comprehension. (pp. 47-48)

While the audio-lingual movement has been most severely criticized for limiting the role of listening in language learning, in actual fact, audio-lingual theory stressed listening as the first skill to be developed but teachers chose to focus on the speaking skill. Furthermore, other "methods" such as the cognitive approach and grammar/

translation also ignored the active development of listening skills.

3.1.2 Advantages of an emphasis on listening comprehension

Gary (1975) presented four advantages to giving preeminence to listening comprehension in second language teaching/learning: cognitive, efficiency, utility and affective advantages.

The cognitive advantage of an initial emphasis on listening comprehension is its respect for a more natural way to begin learning a language. To place speaking before listening is to literally "put the cart before the horse." As Postovsky (1974) pointed out, processing and decoding auditory input requires recognition knowledge, whereas encoding and generating speech output requires retrieval knowledge. He concluded that "...it would appear to be more logical that in the natural learning process, development of recognition knowledge would precede, not follow, the development of retrieval knowledge." (p. 67)

Postovsky (1974, 1977) and Nord (1978) have shown how insisting that learners produce what is not yet assimilated in LTM leads to cognitive overload. This explains why beginning language learners have difficulty listening for accurate meaning and learning to produce correct sounds at the same time. The STM is not capable of retaining all of this information and consequently learners must resort to native language habits when forced to speak before they are ready to do so. As well as violating the natural process of language learning, the audio-lingual method deemphasized the natural and ultimate purpose of language learning as communication of meaning.

> Just as concentrating on overt production left little room for listening, it likewise left little room for comprehension, that is, the covert phenomenon of human

> thought based on cognitive structure. And here, perhaps, lies the more damaging omission associated with the audio-lingual method; its disregard for the fact that language, as a system of symbols, must depend on other shared knowledge if it is to serve its users for the purpose of communication. (Byrnes, *et al.*, 1982, p. 38)

Closely related to the cognitive advantage is the efficiency advantage. Language learning can be more efficient if learners are not required to produce all the language material to which they are exposed. This allows for more meaningful language use earlier in the program, since learners can use all of the limited attentional resources of STM to concentrate on meaning which, as Postovsky, Asher and LeBlanc discovered, enhances the acquisition of other language skills as well. Furthermore, listening comprehension-based classes are more efficient because they expose students only to good language models (the teacher and realistic recordings) instead of a lot of imperfect utterances of classmates. This makes more efficient use of everyone's time, in contrast to an oral class "où une bonne partie du temps est passée à attendre des réponses lentes à venir" (LeBlanc, 1986, p. 646).

This leads to the third advantage: the usefulness of the receptive skill, or the utility advantage. Research has demonstrated that adults spend 40-50% of communication time listening, 25-30% speaking, 11-16% reading and about 9% writing (Rivers in Gilman & Moody, 1984, p. 331). It follows then that language learners will make greater use of comprehension skills. Second, whereas speakers can, at their own pace, use paralinguistics to maintain communication, listeners must adjust to the speaker's tempo and active vocabulary. This, according to Mendelsohn (1984), is the most important reason for teaching listening comprehension:

> ...the ability to comprehend the spoken word is one of the most important skills a student must master in a second language setting. The reason that it is so important is that the second language learner has no control over the language coming at him by someone else---unlike speaking, in which he can use all kinds of avoidance strategies and circumlocutions, to convey what he wants to say. (p. 63)

This argument is also the rationale for the continuing inclusion of listening activities throughout a language program, even at advanced levels.

The final advantage of an emphasis on listening comprehension is the psychological advantage. Without the pressure of early oral production, there is less potential embarrassment about producing sounds that are difficult to master, especially for adults and teenagers. Students are afraid of sounding foolish, as noted by Daniels, Pringle and Wood (1986, p. 84), afraid of "exposing their sometimes vulnerable 'language ego' to the censure of teachers or peers." Once this pressure is eliminated, they can relax and focus on developing the listening skill, internalizing the rules which will facilitate the emergence of the other skills. Moreover, listening comprehension results in earlier achievement and a sense of success. The student has greater motivation to continue learning; as one student commented to Rubin (1983, p. 1): "I like this (exercise). It makes me feel smart."

Listening comprehension is no longer taken for granted in second language learning. With the emergence of communicative, experiential and proficiency-oriented approaches to language teaching, listening comprehension has been accorded a greater role at all levels of language learning.

While the place of listening comprehension in language learning is now readily acknowledged, the actual process of listening comprehension, however, is still not fully

understood. The next part of this chapter will attempt to synthesize what is presently known about this complex process.

3.2 Understanding listening comprehension

A clearer understanding of how language learners construct meaning from an oral text is essential. A review of the relevant literature reveals a growing body of knowledge about the processes involved in listening comprehension and the development of a conceptual framework within which to interpret the role and importance of listening comprehension strategies.

The goal of listening comprehension is to interpret correctly the intended meaning of an oral message. To realize this goal, a competent listener must concurrently: 1) identify and separate out the different linguistic elements in the incoming stream of language; 2) use any sociolinguistic clues to interpret the total message; and, 3) interact on the basis of what was processed and understood (Mendelsohn, 1984, p. 64). While this is a useful beginning for understanding the process of listening comprehension within a communicative framework of language teaching, the process by which the listener does all of the above needs further exploration. Furthermore, the tools and resources used by the listener to facilitate that process also need to be identified.

3.2.1. Listening comprehension as discerning sounds

James (1984) dissected the process of listening comprehension into six components. Sonic realization describes the actual hearing of the language as distinguished from other sounds. The listener must then be able to distinguish the phonemes of the language. Next, s/he recognizes the meaning associated with a

particular order of words and phrases, using previous knowledge of lexical phrasing. Verbal speech, tone, intonation, pitch and rhythm convey many subtleties that also influence the interpretation of the message (e.g., sarcasm or social status). All this is encompassed in the purpose of the speaker's message and finally results in the actualization of the message in the listener.

3.2.2 Listening comprehension as construction of meaning

In a seminal paper on the theory and teaching of listening comprehension, Richards (1983) drew upon a wide base of research in psycholinguistics, semantics, pragmatics, discourse analysis, and learning theory in first language listening to offer a theory of second language listening comprehension. Richards begins with a theoretical model of first language listening (Clark and Clark, 1977) that hypothesizes the following processes:

> 1) The listener takes in raw speech and holds an image of it in short-term memory;
>
> 2) an attempt is made to organize what was heard into constituents, identifying their content and function;
>
> 3) as constituents are identified, they are used to construct propositions, grouping the propositions together to form a coherent message; and,
>
> 4) once the listener has identified and reconstructed the propositional meanings, these are held in long-term memory, and the form in which the message was originally received is deleted. (p. 221)

As noted in Chapter II, LTM does not work with actual words or grammatical devices but encodes them into units of abstract meaning called propositions.

These processes are not invariable, however. Richards acknowledges that there are many contextual factors that make listening comprehension more than conversion of

sound to meaning. In that respect, he draws on pragmatics, speech act theory and interactional approaches to meaning, to elaborate on the processes posited in the above model as follows:

> 1) The type of interactional act or speech event in which the listener is involved is determined (e.g. conversation, lecture, discussion, debate);
>
> 2) Scripts relevant to the particular situation are recalled;
>
> 3) The goals of the speaker are inferred through reference to the situation, the script, and the sequential position of the utterance;
>
> 4) The propositional meaning (basic units of meaning) of the utterance is determined;
>
> 5) An illocutionary meaning (determining the speaker's intention) is assigned to the message; and,
>
> 6) This information is retained and acted upon, and the form in which it was originally received is deleted. (p. 223)

Richards' model expands our understanding of the central processes in listening by emphasizing that comprehension involves more than simple processing of surface features of language. Furthermore, it is not a linear process. Listening comprehension is a recursive process in which the listener moves back and forth between steps as needed, to interpret the intended message and to respond appropriately (Dunkel, 1986).

3.2.3 Listening comprehension: bottom-up and top-down processing

As suggested in the steps delineated above, meaning is constructed by using more than oral input alone. Central to any theory of comprehension is an understanding of two processing directions used to derive meaning (Byrnes, 1984). The first is a "top-down, schema-driven, holistic approach." Characteristic of this approach, used largely by native listeners, are a focus on content words and contextual clues to form hypotheses

in an exploratory fashion. Listeners who emphasize fluency over accuracy, i.e. those who persist even when they encounter elements they do not understand, tend to favour a top-down approach to comprehension. On the other hand, listeners who are less tolerant of ambiguity and who value accuracy over fluency, tend to favour a "bottom-up, data-driven, analytic approach," building up meaning from lower level phonemes/words. A heavy reliance on a "bottom-up" approach requires the listener to bring to conscious memory appropriate rules to aid understanding. This severely limits the capacity to hold meaning in STM since valuable processing capacity is taken up by declarative knowledge.

3.2.4 Listening comprehension and background knowledge

In both reading and listening comprehension, the use of an efficient "top-down, schema-driven, holistic approach" is facilitated when second language learners draw upon their world knowledge and life experiences to construct meaning. Referring to first language acquisition research, Long (1989) called attention to the potentially powerful influence of textual or content schemata (typical sequences around which world knowledge is organized in LTM) for the interpretation of meaning in second language listening texts. Second language listeners often do not realize that they have a vast body of world knowledge, gained in their first language, that they can use to understand an oral text in the target language.

Research on listening shows that the use of top-down processing is essential but not exclusive to successful comprehension. An examination of errors in listener perceptions of an oral text led Long (1990) to conclude that second language listeners

who over-rely on a word-by-word or "bottom-up" approach to construct meaning tend to be less effective listeners. At the same time, effective listeners, although relying primarily on schemata or "top-down" processing, also make effective use of bottom-up processing. How this is done, however, is still not clear, leading Long (1989, p. 38) to call for more research focusing on how learners at various age and proficiency levels activate existing knowledge during the listening process.

3.2.5 A purpose for listening

The purpose for listening affects the way in which a listener approaches a listening task. Richards (1990) differentiated between an interactional and a transactional purpose for communication. Interactional use of language is socially oriented, existing largely to satisfy the social needs of the participants; e.g small talk and casual conversations. A transactional use of language, on the other hand, is more message-oriented and is used primarily to communicate information; e.g. news broadcasts and lectures. In contrast to the highly contextualized and unstructured nature of interactional uses of language, transactional uses are characterized by accurate, coherent communication of a message and precision of meaning. The communicative purpose of a given oral text will determine which processes the listener uses to construct meaning most efficiently. For example, listening for gist involves primarily top-down processing, whereas listening for specific information, as in a weather broadcast, involves primarily bottom-up processing to comprehend all the desired details.

Lund (1990) expanded on Richard's analysis of different purposes for listening by identifying six functions for "real-world listening behaviours." These functions,

ranked by the degree of comprehension required, define how the learner will approach the text and how much s/he will be expected to understand (pp. 107-9): 1) identification (recognition of words or discrimination between minimal pairs); 2) orientation ("tuning in" to determine essential facts); 3) main idea comprehension (understanding main ideas); 4) detail comprehension (getting specific information or details supporting the main idea); 5) full comprehension (the main ideas and details); and 6) replication (faithfully reproducing the message). As argued above, listener function is important to a theoretical model of second language listening comprehension. In that regard, Lund also proposes nine different types of overt responses (verification formats) to demonstrate the various degrees of comprehension.

3.2.6 Phases in listening comprehension

If listening is a covert activity, introspection can help to unveil what a listener does while engaged in a listening activity. Using such a "think-aloud" procedure, O'Malley, Chamot and Küpper (1989) verified three interrelated and recursive phases of listening identified by Anderson (1985) in native language listening: perceptual processing, parsing and utilization. The following description of these phases underscores many of the processes discussed earlier.

During the perceptual processing phase, the listener maintains attention to the oral text. All sounds are retained briefly, and then some are retained in STM as intake and encoded into meaningful representation, before being replaced by new input. Factors involved in perceptual processing, which will dictate the nature of LLSs deployed, include paying attention to 1) the text over against other stimuli; 2) key words or phrases

important in the context; 3) pauses and acoustic emphases for clues to segmentation and meaning; and, 4) contextual elements that support the interpretation of meaning.

During the parsing phase, the listener decodes the incoming information to develop a meaningful representation which is held in STM. Words and phrases are used to construct propositions, so that a meaning-based representation of words can be retained in STM and be retrieved again to reconstruct its intended meaning. Meaning is the principal clue in segmentation (or chunking) when information is processed, the size of chunks depending on the learner's knowledge of the language and the topic. Meaning is constructed via the semantic features of a message (top-down processing), via syntactic or phonological features (bottom-up processing), or via any combination of these. Conrad (1985) found that with increased proficiency listeners tended to rely more on semantic, contextual cues. Syntactic cues tended to be used more with decreasing proficiency.

The utilisation phase involves the matching of propositions held in STM with two kinds of knowledge in LTM: linguistic knowledge and real world knowledge. World knowledge is stored in either propositions or schemata. Using linguistic and world knowledge, the listener elaborates on the new information and checks (monitors) the plausibility of the elaboration as often as necessary within the time available. This confirms Long's comments on the importance of schemata to help the learner predict, anticipate or inference in order to construct meaning from an oral text.

3.2.7 Listening comprehension and metacognition

As suggested in Chapter II, metacognition is essential to success in language

learning. The importance of metacognition in effective listening comprehension is accentuated by the integral role of monitoring in the process. Henner Stanchina (1987) demonstrated that *how* listeners use syntactic, semantic and schematic knowledge is a question of effective or ineffective strategy use. Effective listeners are constantly elaborating and transforming what they hear. They 1) use their stored knowledge and expectations to generate hypotheses on a text; 2) integrate new material into their on-going interpretations; 3) make inferences to fill gaps; 4) evaluate their interpretations; and, 5) revise their hypotheses when necessary.

Effective listeners must be able to recognize failure in comprehension and activate appropriate knowledge to repair the failure. Henner Stanchina concludes:

> Listeners must constantly be monitoring their own comprehension. Comprehension monitoring is an integral part of the comprehension process itself. Listening comprehension is, by nature, a reflective, metacognitive activity in that it requires awareness of one's own cognitive processes as well as the ability to regulate these processes. (p. 72)

The following section describes a theoretical model that attempts to incorporate what is known about language learning and listening comprehension. Other than the three phases of listening referred to above, this model incorporates many of the concepts presented earlier, as well as those discussed in Chapter II. However, it goes beyond them to provide a description (albeit mechanical) of the process as a whole.

3.3 A model of listening comprehension

Drawing on previously developed second language acquisition theories and models (Krashen, 1982; Bialystok, 1978; Lamendella, 1977; Tollefson, Jacobs, & Selipsky, 1983; McLaughlin, Rossman & Mcleod, 1983), and recent research in cognitive

psychology, Nagle and Sanders (1986) developed a theoretical model of listening comprehension which attempts to synthesize the theoretical positions held by these two disciplines. (See Figure 4.1)

In order to understand the processes incorporated in this model, it will be presented in a linear fashion. However, it must be understood that listening comprehension is not a linear process, but a recursive activity in which the listener moves back and forth in a process of building meaning.

1) Input heard by the listener is briefly held (for about one second) in sensory register (echoic memory, Call, 1985) during the perceptual processing phase. Here the listener segments the stream of sound into words or other meaningful units which are recognized and transferred to STM, whose capacity is limited to "about seven units, plus or minus two" (Call, p. 767). The units which are understood (called intake) are then interpreted by relating them to other information in LTM and then quickly dismissed in order to accommodate new intake. At this point, two factors may hinder retention of these units of meaning: a) trace decay (fading of the sensory input) and, b) interference from new information coming in. This is the parsing phase of listening.

2) The ability to overcome trace decay and interference will depend on whether the listener uses controlled or automatic processing to link what s/he has heard to knowledge in LTM (Shiffrin and Schneider, 1977; Schneider and Shiffrin, 1977). Because of the limited processing capacity of STM, the listener must be able to process larger chunks of information in order to avoid cognitive overload. Automatic processing, like procedural knowledge (discussed in Chapter II), involves activation of action

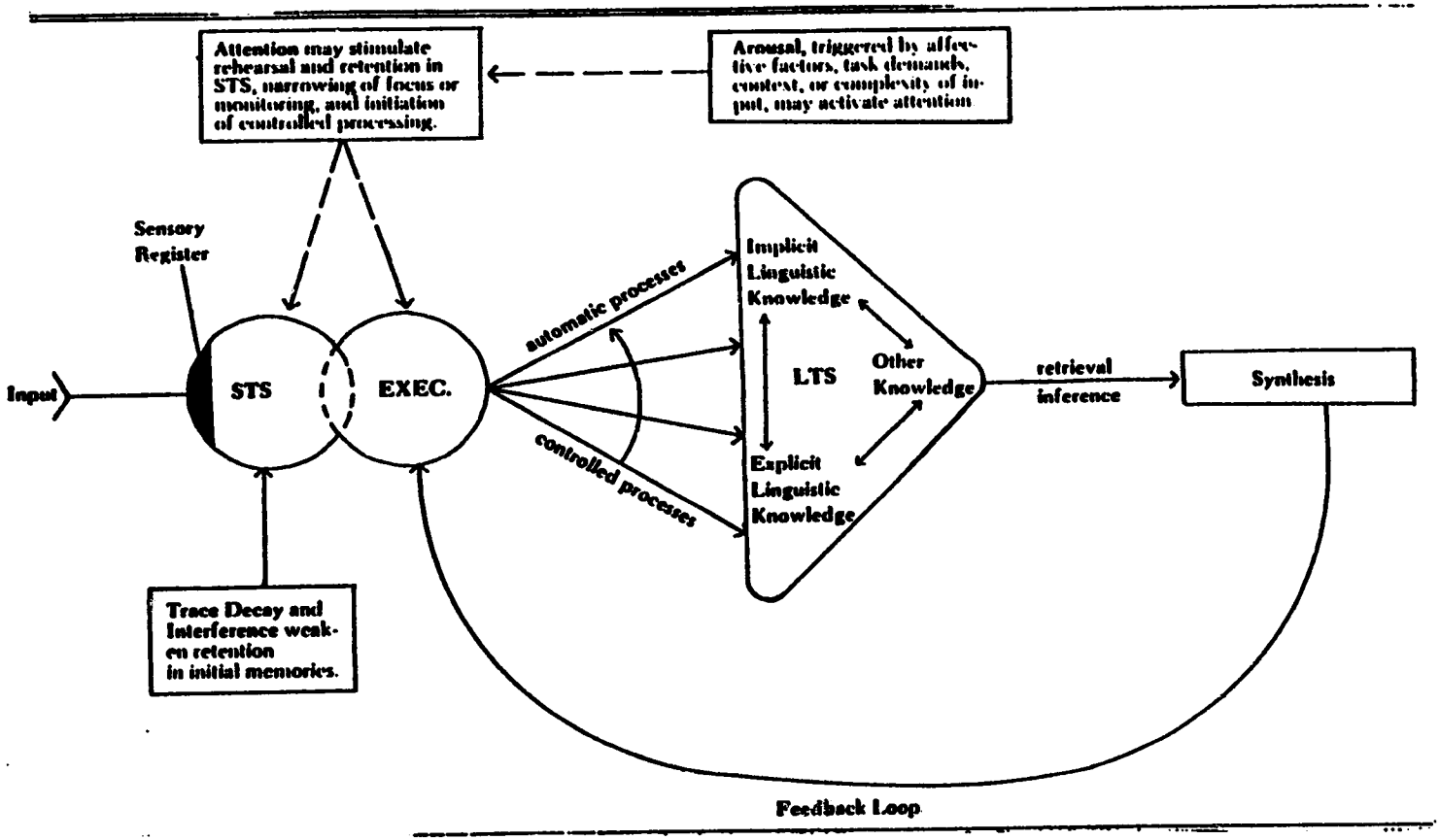

Figure 3.1 A model of listening comprehension processing in the adult language learner

From "Comprehension theory and second language pedagogy" by S. J. Nagle and S.L. Sanders, 1986, TESOL Quarterly, 20(1), p. 19. Copyright 1986 by TESOL, Inc. Reprinted by permission.

sequences (learned through practice) stored in nodes in LTM. The more information a listener can process without conscious attention, the more room is left in STM for more difficult information or attention to higher-level skills. On the other hand, controlled processing requires more attention from the listener to the incoming input, taking up precious processing capacity of STM. This mode of processing occurs when, for example, a proficient listener confronts unknown words or must adjust to a different accent. Controlled processing roughly corresponds to declarative knowledge (discussed in Chapter II).

3) In contrast to the limited capacity and time span of STM, LTM has a much greater storage capacity and retains knowledge for a much longer time. LTM has three knowledge stores, much like the Faerch and Kasper model discussed in Chapter II. Explicit and implicit linguistic knowledge interact with other knowledge, e.g. world knowledge and schemata, via the two processing directions. In this model, explicit (analyzed) linguistic knowledge can become implicit (unanalyzed) linguistic knowledge, and vice versa.

Although not accounted for in this model, the listening comprehension strategies in the conceptual framework discussed in Chapter II would be included in LTM as another variable interacting with the intake. Over time, learning strategies become represented in LTM in the same way as implicit linguistic knowledge; and, they become subject to controlled or automatic processing, depending on the difficulty of a text or noise disruption.

4) Attention is the mental energy a learner allocates to processing a given language task. The kind of attention allocated will depend on the complexity of the

input. The more familiar the material, the more automatic processing takes place, requiring less attention. Conversely, the less familiar the material, the more controlled processing will happen, requiring more attention. Attention makes up for lack of automatic processing by initiating controlled processing and greater focus on form to segment the input into smaller units of meaning.

5) Arousal compels learners to pay greater attention to language input. It is triggered by factors such as degree of interest in the material, context, and levels of anxiety.

6) An executive decision maker oversees the processing operations and controls the flow of information, making decisions regarding the activation and direction of attention, and the degree to which STM or LTM will be accessed. Decisions are influenced by factors such as difficulty of the task, familiarity of content, time constraints and affective factors as described in #5 above.

7) The resulting meaning is a synthesis of what was comprehended, combined with inferencing on what was not comprehended. This is not the end of the process, however.

8) A feedback loop denotes the recursiveness of the process. The resulting meaning is fed back to the executive for further processing or for storage in LTM.

Although this model is intended to represent only comprehension, it cannot really be separated from learning. Listening comprehension builds on previous learning and adds to future learning. This leads Nagle and Sanders to conclude that "comprehension and learning are interrelated, interdependent, but distinctive cognitive phenomena." (p.

20)

The last section of this chapter will examine the specific studies that have attempted to identify LLSs used in listening comprehension.

3.4 Listening comprehension strategy research

Henner Stanchina (1982) proposed error analysis as a "sensitizing technique" to make learners aware of their processing skills and how they could "learn how to learn" better. A recorded passage was played; learners were asked to transcribe what they heard and then, acknowledging the recursive nature of listening comprehension, they were encouraged to review their work. Errors were listed and classified as perceptive, syntactic or semantic. This exercise was useful for making listeners more aware of the different strategies that can be activated during listening. When listeners were forced to analyze their errors, they became more conscious of listening comprehension as a construction process, involving comprehension monitoring and further construction until a reasonable interpretation was confirmed.

Murphy (1985) used introspection to compare the LLSs of effective and less effective listeners. Working with adult ESL learners, Murphy asked participants to listen to a recorded academic lecture, to signal when they wanted to stop the tape, and then to think aloud (and write if they wished), summarizing what the speaker said and "include any thoughts you have running in your mind." Student responses were recorded and protocols were analyzed for type and frequency of strategy use. Effective listeners were more open and flexible, using more strategies and a greater variety of different strategies. Less effective learners, on the other hand, either concentrated too much on the text or

on their own world knowledge, or they elaborated on the text information "too late in the process." Murphy concludes that effective listeners use a wider variety of LLSs and engage in more active interaction with the text. Furthermore, the LLSs of effective listeners interconnect, leading him to observe that listening strategies are "...interweaving components to a single animated language process...each one feeds into the others because it is an interconnecting language process, not a series of subskills for listening." (p. 40)

The results of this research are open to question, however. A close analysis of the sample coded protocols in the research report leads this investigator to conclude that the research participants were encouraged to editorialize on the content of what they understood rather than report on the way in which they constructed meaning. Murphy appears to conclude that the major difference between successful and unsuccessful listeners lies in their ability to bring world knowledge to a listening task and elaborate on it personally: i.e., talk about the text, rather than limiting their protocols to what they were thinking and struggling with in order to understand the text. However, a definitive judgment cannot be made without examining all of the coded protocols.

Listening comprehension strategies were also specifically investigated in the longitudinal study introduced in Chapter II, (Chamot *et al.*, 1988a). Spanish students, nominated as effective or ineffective language learners, were asked to think aloud while working on a listening task, e.g. a monologue or dialogue. However, due to problems in text difficulty, only protocols of students at the intermediate level were analyzed. Findings showed that effective students at this level made greater use of LLSs such as

selective attention, self-evaluation, note-taking, and elaboration. There appeared to be little difference between effective and ineffective learners in the number of times strategies such as inferencing and self-monitoring were used, but "there were qualitative differences in how the two groups used these strategies, with the effective students using the strategies with greater persistence and purpose." (p. 64)

The same study also investigated the listening comprehension strategies of university students in their first year of Russian. An analysis of coded protocols revealed that for listening tasks 1) problem identification is an important LLS for effective learners; 2) the use of comprehension monitoring and summarization discriminated between effective and ineffective learners; and, 3) effective learners not only used inferencing and elaboration more frequently than ineffective learners; they also combined the use of these strategies in interesting ways to build meaning.

Two caveats need to be stated regarding the subjects chosen for the study. They were chosen by their teachers without clear working definitions of an effective and ineffective language learner. Was achievement the criterion? A learner with strong speaking skills, for example, may not be considered an effective learner in a class emphasizing grammar instruction. Furthermore, are effective language learners and successful listeners necessarily the same thing? These questions have serious implications for the generalizability of this study.

Listening comprehension strategies were examined in greater depth by the same research team, but within a different context (O'Malley, Chamot & Küpper, 1989). High school ESL learners, classified at an intermediate level of English proficiency, were

nominated as either effective or ineffective listeners by their teachers (on the basis of pre-established criteria); they were asked to think aloud while listening to academic texts. At predetermined pauses participants were asked to convey as much information as they could about their thoughts while they were listening. Researchers were looking for evidence of the three phases of listening, the strategies used during each phase, and any differences in strategy use between effective and ineffective listeners.

Qualitative analysis of the protocols demonstrated that strategies could be differentiated for each phase of the listening process. During the perceptual processing phase, strategies such as selective attention (deciding in advance what to attend to) and directed attention (maintaining attention) proved crucial. Effective listeners were able to maintain their attention or redirect it if they were distracted, whereas ineffective listeners were easily "thrown off" when they encountered anything unknown and failed to redirect their attention to the task. Selective attention appeared to be the important strategy during this phase.

During the parsing phase students segmented the academic passage into "chunks" to process. Then the two processing directions referred to earlier became evident. Effective listeners processed larger chunks and inferred the unknown from the context using a top-down approach; and, when that failed, they attended to individual words (a bottom-up approach) in order to construct meaning. Ineffective listeners, on the other hand, tended to segment on a word-by-word basis, using almost exclusively a bottom-up approach. Grouping (listening for larger chunks) and inferencing (see Carton, 1971) proved to be important strategies during this phase.

During the utilisation phase students made use of prior knowledge to assist comprehension and recall. Elaboration (relating new knowledge to prior knowledge) seemed to be the dominant strategy; and the degree to which students were able to use this strategy determined their effectiveness as listeners. Effective listeners elaborated on the basis of three kinds of knowledge: world knowledge, personal knowledge and self-questioning (asking oneself questions about what is being listened to). Elaborations were also used to support inferencing with unfamiliar words. Ineffective listeners tended to make fewer connections between the new information and their own lives. Although statistically significant differences were found between effective and ineffective listeners in the use of self-monitoring, elaboration and inferencing, a sample size of eight would lead one to question the robustness of these statistics.

More recently, Bacon (1992) also used a think-aloud methodology to examine strategies used by university students "in the first year beyond...FL requirement." Building on an earlier factor analytic study which found significant differences by gender in reported comprehension strategies (Bacon & Finneman, 1990), she investigated possible differences by gender for 1) level of comprehension of an authentic text; 2) types of strategies used; 3) affective response; and, 4) order of presentation of text. Her results revealed that females used a significantly higher proportion of metacognitive strategies than did the males who tended to favour a "direct and more varied cognitive approach." However, in spite of the difference in approach, there was no difference between males and females in level of comprehension.

All subjects, divided randomly into two groups, responded to two passages

differing in interest and difficulty. One group responded to one passage first, while the second group responded to the other passage first. Differences for order of presentation emerged between the two groups. Listening to the difficult passage first decreased comprehension of that passage (compared to the other group), and conversely, listening to the easy passage second, increased comprehension of that passage (compared to the other group). Finally, in order to assess affective response, at the end of the interview subjects were asked to rate their level of confidence regarding their level of comprehension and their level of comfort, using a scale of 1 to 10. Results indicated that males were generally more confident than females but females "gained in confidence and affect" when they heard the difficult passage first.

The above study adds to our knowledge of listening strategies by pointing to the effect of order of presentation of text. Furthermore, the conclusion that the comprehension level of males was equal to that of females, in spite of lesser metacognitive strategy use, demonstrates that there appears to be more than one path to success in listening comprehension. At the same time, the methodology was not pure "think-aloud." Students chose when to respond during the listening passage, and immediately afterwards they responded to a post-listening test. Based on the experience of this investigator, when students are allowed to choose when to think aloud (permitted during the second time through a passage) most thought processes are never brought to consciousness, and consequently the protocols would be incomplete. For the same reasons, the post-test in the Bacon study would not reveal thought processes in the same way as an "on-line" think-aloud procedure. Although closer to the actual listening act,

this post-test is little better than a structured retrospective interview.

While the above studies investigated listening strategies used in transactional listening, Rost and Ross (1991) investigated strategies used by listeners at different levels of language proficiency in interactional listening. In one-on-one interviews, Japanese students were told a story in English, during which they were encouraged to ask clarification questions. Analyses of protocols identified eight different "clarification" strategies, and discriminant analysis found that four of these were related to language proficiency. Rost and Ross concluded that "high" proficiency listeners could be identified by their use of forward inference and continuation signals (uptaking), whereas "low" proficiency listeners could be characterized by their use of lexical reprise and global reprise. By identifying these clarification strategies Rost and Ross have uncovered a body of listening comprehension strategies not previously discussed in the literature. Results of the second phase of this study suggest that training in the use of these strategies can influence subsequent interactions and comprehension ability.

3.5 Summary

This survey examined selected literature relevant to listening comprehension and LLSs in language learning. This review verifies that the critical role of listening comprehension in language learning has finally been acknowledged. An examination of the most recent literature has also provided a clearer understanding of the process of listening comprehension.

The small body of research dealing with listening comprehension strategies was examined. Knowledge about listening comprehension strategies is still cursory because

most LLS research attention has been devoted to reading, writing and speaking. While an understanding of the complex processes may be limited, the research literature points to some useful findings for both methodology and content:

1) A think-aloud procedure appears to be the most productive methodology for identifying LLSs as they are deployed by both successful and less successful listeners.

2) The tri-partite division of metacognitive, cognitive and socio-affective LLSs, grounded in theory, is a useful system for classifying listening comprehension strategies as reported by high school and university language learners studying ESL, Spanish and Russian.

3) LLSs such as selective attention, comprehension monitoring, elaboration and inferencing appear to be used more frequently and in more effective combinations by successful language learners.

4) A qualitative rather than a quantitative analysis of protocols appears to provide greater insight into the differences between effective and ineffective language learners.

5) The overt clarification strategies used by listeners in interactional listening can be identified and classified.

3.6 Concluding comments

Given what is presently known about listening comprehension strategies, this chapter will conclude with a review of the research questions posed in Chapter I. The present study hopes to advance understanding of listening comprehension strategies in second/foreign language learning by addressing the following questions:

1) What are the listening comprehension strategies used by high school students learning French (both successful and less successful listeners) at the Novice and Intermediate

levels of language proficiency? Very little work has been done with high school students, and nothing with French students. Very little is presently known about strategy use at different levels of language proficiency, particularly on communicative tasks and interactional listening.

2) What effect do variables such as language proficiency, listening ability, gender and learning style have on the choice of LLSs? Oxford (1992) points to the apparent interaction effects of these variables on LLS choice by university students, but they have not been examined in a high school population.

3) How and when in the listening process do learners at different levels of language proficiency activate world knowledge (schemata), and how do they make connections or misconnections between linguistic input and activated schemata? Examination of these questions in the context of LLS research has great potential for understanding the role and timing of elaboration in the listening process.

The next chapter will outline the methods used to examine the research questions of this study.

Chapter IV

Methods

4.0 Overview

In this study three forms of verbal report were used to investigate strategy use by high school Core French students at different levels of language proficiency. This chapter will describe the participants and the procedure for their selection, the instruments and the procedure for identifying oral texts, the research procedures, the data collection procedures, and the data analysis plan. Given the complexity of these research factors and exploratory nature of this relatively new field of research, a pilot study was conducted to test and confirm these procedures.

Before describing the study itself, however, several criticisms of verbal report methodology should be examined. By taking account of these concerns in the design of this study, research procedures were formulated to eliminate the risks to validity and reliability most often directed at studies using verbal report.

4.1 Issues in methodology

Verbal report as a research tool can take the form of either interviews or "think-alouds." During a think-aloud procedure, research subjects are encouraged to "verbalize their thoughts as they emerge, without trying to explain, analyze, or interpret those thoughts." (Ericsson and Simon, 1984, p. 262) The reliability of verbal report as a research tool, however, is a debated issue. The arguments against the veridicality of such data which jeopardize its validity centre around its incompleteness and inaccuracy

and the potential for researcher bias.

It is argued that the disruption of mental processes to generate verbal reports alters the thought processes, resulting in "depressed verbalizing." Following this line of argument, verbal reports are not valid since they are "both quantitatively and qualitatively poor reflections of processing." (Cavanaugh & Perlmutter in Garner, 1988, p.70) Critics of think-aloud data contend that these procedures are open to researcher bias because subjects may be led, consciously or unconsciously, to report what they perceive the researcher may want to hear.

There is, however, a growing body of literature which accepts verbal reports as a useful research tool *under certain conditions and within certain limits* (see Ericsson and Simon, 1980, 1984, 1987; White, 1980; Faerch and Kasper, 1987). In a seminal article arguing for the acceptability of verbal reports as data, Ericsson and Simon (1980) conclude that,

> ...verbal reports, elicited with care and interpreted with full understanding of the circumstances under which they were obtained, are a valuable and thoroughly reliable source of information about cognitive processes.... They describe human behaviour that is as readily interpreted as any other human behaviour. (p. 247)

Using an information-processing model of cognition, they argue that research subjects can only vocalize the information to which they are attending, along with any other information brought to STM by on-going cognitive processes. Based on their own research, Ericsson and Simon (1987) contend that a think-aloud procedure did not interfere with the thought processes, but only slowed them down. In response to some of the more serious arguments directed at the validity of verbal report data, Norris (1990)

reports evidence that thinking aloud while working on a multiple-choice critical thinking test "did not alter the subjects' performance and, by inference, did not alter their thinking" (p. 47) compared to paper-and-pencil test taking. Phillips (in Norris, 1989) reports similar results for an inference test in reading comprehension.

It appears then that the argument against verbal report is not so much a rejection of the methodology itself, but more a question of *how* it is conducted. Based on a synthesis of the literature arguing for and against verbal report, Garner (1988) suggests a number of guidelines to enhance the reliability and validity of research using such data. In order to address concerns and prevent potential weaknesses, these guidelines have been used to refine the research procedures of this study. Table 4.1 summarizes these guidelines and the requisite measures taken in this study.

Table 4.1 *Guidelines for Enhancing Validity and Reliability of Verbal Report Data and Requisite Measures Taken in this Study*

Guideline (directions):	Measure(s) taken:
1. Tap information available in the short term memory; responses will be more accurate and will not diminish processing capacity.	1. Used a think-aloud procedure.
2. Minimize disruption by using unobtrusive introspection methods and infrequent interruptions.	2. Incorporated pauses in the tape, keeping in mind appropriate thought points and natural breaks in the text.
3. Ask participants to report on specific events, not hypothetical situations.	3. Used a think-aloud and a stimulated recall procedure in addition to the structured interview.
4. Ask participants what they do and think, not why.	4. Encouraged students to respond on their own immediately. When necessary, only noncueing prompts were used as explained below.
5. Recognize that verbal reports may contain useful information even if they are incomplete.	5. Acknowledged in limitations of this study, as discussed in Chapter I.
6. Prompt reporting in a noncueing manner.	6. "Fishing" for specific strategies was not done. Probing was limited to the questions listed below.
7. Assess the reliability of responses.	7. Spontaneous responses exceeded prompted responses by a ratio of 2:1
8. Use multimethod assessment to collect convergent data.	8. Three different methodologies were used.

Having responded to the arguments directed against the use of verbal report data as a research tool, the research design of this study will be described.

4.2 Pilot study

Before proceeding with the full study, a small-scale pilot study was conducted to confirm procedures and instruments for the full study. The objectives were:

1) To make the investigator thoroughly familiar with the details and procedures of the proposed methodologies and to resolve any difficulties so that he, in turn, could put the participants at ease during the data collection sessions of the main study.

2) To test different methods and materials for training students to think aloud.

3) To experiment with different level oral texts in order to validate a repertoire of texts that would be adequately challenging but not too difficult for each of the different levels of language proficiency to be studied.

4) To confirm that the proposed methodologies would indeed elicit evidence of LLSs from participants. Particular attention was focused on methods that would elicit use of socio-affective strategies.

4.2.1 Pilot study participants

Nine French students at three different levels of language proficiency, nominated by their FSL teacher on the basis of pre-established criteria as effective or ineffective listeners, agreed to participate. The three groups were distributed as follows:

1) three females (two successful and one less successful listener) from a French 30S class (at approximately the same level as the French 20N students in the main study);

2) four students from a French 20S class (two females and two males, one successful and one less successful listener of each gender); and,

3) two males (one successful and one less successful listener) from a French 10S class (at approximately the same level as the French 20 students in the main study).

Participants were enroled at a local high school in Grades 12, 11, and 10 respectively.

4.2.2 Pilot study phases and feedback

Each participant reported for a number of data collection sessions over a three week period. First, a 15-20 minute structured individual interview on LLS use was recorded, and a transcript presented to the student the following day for validation. This phase produced abundant data. Second, think-aloud training sessions were conducted in groups, at each level of language proficiency, followed the next day by individual think-aloud data collection sessions which were recorded. This phase also produced abundant

data. The materials chosen to help students practise thinking aloud proved to be useful for that purpose. Most importantly, a number of appropriate oral texts at different levels of language proficiency were identified for use in the main study.

This pilot study proved to be most valuable in identifying a third research procedure. In order to strengthen the validity of the main study, a process of multimethod assessment was proposed. The proposed third methodology for eliciting strategy use was "stimulated recall." The basic features of stimulated recall involve videotaping participants engaged in an activity, subsequent viewing of the videotape, and stopping of the videotape at regular intervals for participants to recall thought processes occurring at that time.

This pilot study experimented with two variations of this methodology. In the first attempt at using stimulated recall, students were videotaped while engaged in a typical classroom listening activity with an accompanying response format. In the subsequent review of the tape, participants were not able to recall what they were thinking at specific points. In another attempt, participants were videotaped individually while listening to an oral text with a tape recorder. During the videotaping, participants were asked to write down the main ideas of the oral text along with as many supporting details as they could understand; they were free to stop and rewind the audiotape as often as necessary. Once again, when reviewing the videotape later, participants were not able to recall their thought processes. Stopping the videotape at the point of any body movement, stopping or rewinding of the audiotape, or note taking did not produce any useful results.

In a third attempt at using stimulated recall, participants were videotaped while participating in a proficiency interview. Since all participants had to be interviewed to establish their level of language proficiency, each interview was videotaped and reviewed with participants immediately afterwards. During this review, the tape was stopped each time the participant indicated either directly, or indirectly through body language, that s/he did not understand the interviewer. This version of the stimulated recall, although not as useful as the first two data collection phases, was more productive in eliciting LLS use than the earlier trials. Therefore, based on the pilot study, the proficiency interview was incorporated into the stimulated recall phase.

Even though the stimulated recall phase was less productive in terms of reported strategy use, the selection of a proficiency interview proved to be a sound decision for a number of reasons. First of all, it was the most productive of the various attempts at eliciting LLS use under stimulated recall conditions. Second, because of the interactive nature of an interview, participants were able to report some use of socio-affective strategies. Third, the interview provided a vehicle for tapping another category of listening comprehension strategies, i.e. LLSs used in interaction with an interlocutor. Whereas the first two research procedures sought to identify LLSs used in transactional or non-participatory listening (the means by which listening skills are generally fostered in classroom learning), this procedure could identify LLSs used in interactional or participatory listening. The latter is characterized by the opportunity for the listener to seek clarification from the speaker, whereas the former normally does not lend itself to aural-oral interaction. In interactional listening, the listener can activate an entirely

different corpus of strategies to derive and clarify meaning. These receptive repair strategies (Faerch, Haastrup and Phillipson, 1984) are a subcategory of communication strategies.

4.3 The Main Study

In order to enhance validity and reliability, this study utilized a multimethod assessment in a triangulation approach. Methodological triangulation (Grotjahn, 1987), the use of multiple methods to examine the same problem, is a common research strategy for minimizing bias and examining the research problem more thoroughly. If evidence of strategy use can be confirmed by different methods using verbal report, then findings can be considered more conclusive. Therefore, three different categories of verbal report (Cohen, 1987), each one closer to the actual listening event, were used to elicit data on listening comprehension strategies: 1) self-report through delayed retrospection with a structured interview; 2) self-observation through immediate retrospection with a "stimulated recall"; and, 3) self-revealment through introspection with a "think-aloud" procedure.

4.3.1 Recruitment of participants

Permission was obtained from a large urban school district to carry out this study. Subsequently, designated teachers were consulted and participants were recruited from two large public high schools. School A is one of the few schools in this city where one is still able to find "pure" language learners (those who have had no previous French instruction in junior high) in their first (French 10) and second year (French 20) of language study. Students in their first, second and fifth (French 20S) years of language

study were studied here. Since School A does not offer a nine-year FSL program, students in their eighth year of language study (French 20N) were studied at School B. The study was explained to all students by their teachers, and the investigator subsequently met with selected participants to explain research plans in greater detail. Students were given an information/permission letter to present to their parents/guardians (see Appendix A). Participation was strictly voluntary. One female in French 20 declined to participate; all other selected students agreed to be part of the study.

Since this study proposed to examine LLS use by students in their first, second, fifth and eighth year of language study, it was important to work with a "pure" sample at each language level. This entailed a careful screening of potential participants for any previous Core French instruction in junior high school (French 10 and French 20) or French immersion (French 20N). Consequently, a process of systematic sampling in the French 10, French 20 and 20N was impossible. In the first two cases, over half the class had received some Core French instruction in junior high, and in the latter case, most students were French immersion "drop-outs." In fact, in order to obtain an adequate "pure" sample at the French 20 level, it was necessary to recruit more female participants from another French 20 class. Only in the French 20S class was it possible to select participants through a systematic sample. In this case, every third name on the class list was selected, with one adjustment so that an equal number of males and females were included.

4.3.2 Phase I

The first phase of this study involved a structured interview. The purpose of this

interview was two-fold: 1) to determine the range and types of language learning strategies used by high school French students, and 2) to ascertain whether strategies varied by course level and gender. Since it was impossible to study all participants intensively, the results of this interview were also used to identify participants for the next two phases.

4.3.2.1 Phase I participants

A total of 36 students, drawn from four different course levels, participated in the structured interview. They were distributed as follows: French 10, ten students (seven females, three males); French 20, eleven students (six females; five males); French 20S, eleven students (six females, five males); and, French 20N four students (three females, one male).

4.3.2.2. Phase I instruments and procedures

Retrospective self-reports, elicited by means of a structured interview (adapted from Zimmerman and Pons, 1986), were conducted on an individual basis so that strategies suggested by one participant would not inadvertently prompt another participant. Interviewees were asked to recall the strategies they used to comprehend spoken French in a number of different contexts. An interview rather than a multiple choice format was chosen to avoid suggesting any LLSs to the participants. Although this interview was structured around prepared questions (see Appendix A), it was sufficiently open for the investigator to pursue different avenues as prompted by the responses of the participants, or to probe the less verbal participants for more information. Interviews were audio-recorded, responses transcribed and protocols

presented to each participant for validation (see Appendix A for an example). Participants were encouraged to make changes and/or additions as needed, so that the transcript would accurately reflect their conscious use of LLSs. Protocols were coded according to a pre-determined classification scheme, introduced in the section on data analysis (4.3.5).

4.3.3 Phases II and III

4.3.3.1 Participants in Phases II and III

Based on the results of the retrospective interviews (Phase I), participants were chosen for the stimulated recall (Phase II) and think-aloud (Phase III) sessions. Selection for participation in these two intensive phases of the study was based on both reported LLS use in Phase I and consultation with the teacher. Those reporting the greatest frequency, variety and sophistication of LLS use were classified as more successful listeners. Conversely, those at the other end of the continuum, those reporting the least frequency, variety and sophistication of LLS use were classified as less successful listeners. This selection and subsequent grouping was corroborated by the participants' teachers on the basis of pre-established criteria for identifying a successful second language listener, as defined in Chapter I (p. 4).

All students invited to continue with the more intensive phases of this study agreed to do so. Students agreed, and were given permission to miss other classes for data collection sessions. Many gave up a "spare". Participants in Phases II and III were distributed as follows:

1) French 10: one successful listener (female) and four less successful listeners (three females and one male). One other less successful male listener was identified and agreed

to participate but dropped out of school before Phases II and III.

2) French 20: three successful listeners (two male and one female) and two less successful listeners (one male and one female).

3) French 20S: three successful listeners (two females and one male) and four less successful listeners (two females and two males).

4) French 20N: three successful listeners (all females) and one less successful listener (male). Because of the small number, all participants continued from Phase I.

These participants now constituted a purposive sampling (Cohen and Hosenfeld, 1981) in that they were selected on the basis of the knowledge that the investigator and participating teachers have, and the kinds of learners to be studied. The distribution of participants in all three phases is summarized in Table 4.2.

TABLE 4.2 *Distribution of Participants by Course Level, Gender and Listening Ability*

	Phase I		Phases II and III			
			Successful listeners		Less successful listeners	
Class	Males	Females	Males	Females	Males	Females
Fr. 10	3	7	0	1	1	3
Fr. 20	5	6	2	1	1	1
Fr. 20S	6	5	1	2	2	2
Fr. 20N	1	3	0	3	1	0
Totals	15	21	3	7	5	6

4.3.3.2 Phase II procedures

In the second phase of this study, involving delayed retrospective self-observation, participants took part in a stimulated-recall session. Each participant was interviewed individually in French in order to determine his/her level of language proficiency. This

interview was videotaped. Based on a research procedure used by Hawkins (1985), the videotape was played back to the participant immediately following the interview. The participant or the investigator stopped the videotape at any time for the participant to comment on what s/he was thinking at that point in the conversation. Prompts by the investigator were general and non-directive; e.g. "What were you thinking about?" "Tell me more about it." "What do you mean?" "What happened there?" In the meantime, an audiotape recorder was left on, recording both the interview and retrospection comments. These comments (given in English) were transcribed for later coding.

Coding of protocols for this phase was done in concert with the videotape of the proficiency interview, paying special attention to all non-verbal, indirect strategies used by the listener to clarify meaning or solicit further input.

4.3.3.3. Phase III materials and procedures

Finally, participants in the stimulated recall phase also took part in the introspective, self-revealment phase through a think-aloud procedure. This procedure, adapted from O'Malley, Chamot and Küpper (1989) and Rankin (1988), had two separate phases: a training phase and a data collection phase.

4.3.3.3.1. Training phase

The training phase was vital for preparing participants to think aloud rather than retrospect on what they are doing. Hosenfeld (Cohen and Hosenfeld, 1981) found that unless students were prodded to think aloud, they tended to retrospect. A training session was conducted prior to the data collection sessions so that participants had a good understanding of how to think aloud and lots of opportunity to practise. Eight different

training sessions were administered; one session each for the successful and less successful groups in each class.

Each group met with the investigator for one session of approximately 30-40 minutes. First, the purpose of the study was explained again (briefly), with particular emphasis on the importance of this phase. Participants were informed of the importance of their contributions; revelation of their mental processes would be useful in helping other students understand and learn French. They were reminded that there were no correct answers; they would only have to answer honestly and completely.

The think-aloud procedure was then described and demonstrated by the investigator using a math problem. More examples of think-aloud were demonstrated using different problem-solving questions from the student booklet (Level 5) of the Test of Cognitive Skills (McGraw-Hill, 1981). Participants then practised thinking out loud, using math problems or any other section(s) of the test booklet, based on personal preference. Finally, participants listened to a taped oral text with predetermined pauses. At each pause the tape was stopped and participants were asked to think aloud. This was first demonstrated by the investigator and then performed by the participants with two or three different texts. Participants were asked to report what they were thinking; i.e. how they were making sense of what they heard, what they could not figure out, how they were dealing with unfamiliar words, what pictures or memories came to mind, etc. A chart (see Appendix A) with these very general reminders was prepared for review before each data collection phase. Students were told that this was exactly what they would be expected to do during the data collection phase.

4.3.3.3.2. Data collection materials

Determining which texts to use for each language level proved to be a challenge, since formulae for determining the difficulty of an oral text (unlike those created for rating written texts) were not known to the investigator. Texts which are too easy will be processed unconsciously and the LLSs used will be unavailable for verbal report. At the same time, texts that are too difficult will not activate LLS use, which also leaves the participant with nothing to report. This is exactly what happened to Chamot *et al.* (1988a) and it resulted in protocols that were not substantive enough to be worth analyzing. Oral texts need to be sufficiently challenging so that LLSs which have become automatic can be brought to consciousness in STM and reported, but not so difficult as to lose the student.

Two methods were used to determine level of difficulty for the oral texts. First, observations from the pilot study were used to identify a number of very suitable texts, particularly at the more difficult end of the scale. In order to identify a range of easier, yet suitable texts, a series of 25 potentially useful texts were rated informally by a group of six students from a French 10S class whose achievement in French was ranked as average by their teacher. Students listened to each text once, and immediately afterwards, independently ranked it according to the following criteria:

1) I can catch almost everything right away;
2) I understand, except for the details;
3) I could catch most, given a couple of tries;
4) I can catch bits and pieces; and
5) I can only catch occasional words. Forget it!

On the basis of the student responses, which were quite consistent, texts were classified

as follows: 1) Texts rated as "I can catch almost everything right away" were ranked as Level I texts; 2) Texts rated as "I can understand, except for the details" were ranked as Level II texts; and, 3) Texts rated as "I can catch bits and pieces" were ranked as Level III texts. Texts identified during the pilot study with French 20S and 30S students were ranked as Level IV texts.

Four sets of listening passages, each at a higher level of difficulty, were then recorded on separate cassette tapes. Each tape contained six or seven different authentic oral texts such as advertisements, announcements, interviews, dialogues; all texts closely related to the life experience and interests of adolescents. For purposes of this research, the term "authentic" is used to refer to oral texts that "...reflect a naturalness of form, and an appropriateness of cultural and situational context that would be found in the language as used by native speakers" (Rogers & Medley, 1988, p. 468). Easier texts (Levels I-III), taken from A la radio (Porter & Pellerin, 1989), contained language samples that were at a natural speed, but clear and accompanied by appropriate real-life sound effects. Level I texts were administered to French 10 participants, Level II texts to French 20 participants and Level III texts to participants in French 20S classified as less successful listeners. The most difficult texts (Level IV), taken from Communication + 3 (Boucher & Ladouceur, 1988), contained language samples characterized by a Québécois accent and accompanied by real-life sound effects. These texts were also much longer. Level IV texts were administered to participants in French 20S classified as successful listeners and all participants in French 20N.

Appendix B contains tape scripts of all oral texts by level. Natural discourse

boundaries were chosen as appropriate points at which to stop the tape for thinking aloud. These points were preselected and identified on the tape scripts.

4.3.3.3.3. Data collection procedures

All data collection sessions were conducted on an individual basis and were audio recorded for later verbatim transcription and coding. Sessions, lasting from 30-40 minutes each, took place within a week after the training session.

Each session included three stages: warm-up, transition and verbal report. The warm-up stage, consisting of appropriate questions and humour, put participants at ease and established a good working relationship. As suggested by Cavalcanti (1982), rapport and feelings of confidence between participant and investigator are crucial to the success of a think-aloud procedure. In the following transition stage, participants practised thinking aloud, using the materials from the training session. When they felt satisfied themselves that their reports accurately reflected the completeness of their thoughts (about five minutes) participants completed the transition to the verbal report stage by a trial run with the first text on the tape. This trial run, which was not recorded, proved to be useful for coaching participants on their verbalizing, for verifying the choice of text level, and for rehearsing before recording.

During the verbal report itself, think-aloud data were recorded for at least three different texts. For each text, the tape was stopped at the breaks indicated on the tape script, and participants attempted to verbalize what they were thinking. If the participant was unsure of what to say or how to continue, the investigator used noncueing probes such as "What are you thinking now?"; "What didn't you understand?"; "How did you

figure that out?; "What's going on in the back of your mind?"; "Can you be more specific?"; etc. Great care was taken not to inadvertently plant strategies in the participant's mind. A second tape recorder was left on, recording the text, the think-aloud data and any investigator prompts.

Participants approached each text "cold"; that is, they had no idea what the text was going to be about. This was done deliberately so that no schemata were activated before listening began. Any advance preparation would preclude an investigation of the interplay between linguistic knowledge and world knowledge (in the form of schema) in the comprehension process.

4.3.4 Other research instruments

A number of research instruments were used to classify participants according to the different variables that were investigated.

4.3.4.1 ACTFL/ETS Oral Proficiency Interview

The ACTFL/ETS Oral Proficiency Interview (Lowe, 1982) is a conversational, yet structured procedure for eliciting speech samples in order to rate the interviewee's level of language proficiency. Interviews were administered by the investigator who studied the appropriate manuals and practised the interview procedure with students in classes similar to those of the participants in this study. Interviews were rated by the investigator and then rated independently by a trained tester. Interrater reliability was .85. Disagreements were resolved through discussion and input from a third party.

4.3.4.2 Learning-Style Inventory (LSI)

The relationship between learning style and strategy use has been explored by

Ehrman and Oxford (1989, 1990) with adult language learners, using a personality test (Myers-Briggs Type Indicator). They discovered that

> ...psychological type (style) appears to have a strong influence on the way learners use strategies and how they progress in their language program. Greater understanding of such style variables may help program administrators determine who should enter which kinds of language training and how to deal with different learners during training. (Ehrman and Oxford, 1990, p. 324)

In order to examine any possible relationship between a language learner's use of LLSs and his/her personal learning style, all participants in Phases II and III completed the Learning-Style Inventory (LSI) (Kolb, 1985). The LSI measures both how people perceive reality (sensing/feeling vs. thinking) and how they process information (doing vs. watching/reflecting). When these two dimensions of learning are superimposed, four learning style categories result.

There are a number of advantages to using the LSI. First of all, the learning constructs it measures closely approximate other salient cognitive variables in language learning such as field dependence/independence, right/left brain functioning, tolerance of ambiguity, etc. (for example, see Naiman *et al.*, 1978). Second, it is a "quick, reliable self-report inventory" (Conoley and Kramer, 1989, p.442). Third, it has been applied to classroom learning in the 4MAT System (McCarthy 1980), a curricular cycle designed to meet the learning style preferences of all students. Building on the work of Kolb and other learning style researchers, McCarthy identified the four quadrants as 1) innovative learners or intuitors; 2) analytic learners or intellectuals; 3) common sense learners or implementers; and, 4) dynamic learners or inventors.

Participant responses on the LSI were scored and the results plotted onto a grid,

placing each participant into one of the four quadrants. LLS profiles of participants were then grouped by their respective quadrants for inter-quadrant comparisons.

4.3.4.3 Communicative Orientation of Language Teaching (COLT)

The investigator observed at least one class of each of the teachers from which participants were recruited. Classes, which included at least one listening activity, were characterized by the teacher as "typical." The instructional features of each class were analyzed for their potential usefulness in interpreting data, and/or accounting for any variation in LLS use by participants from different classes.

To note the instructional features of each class, the investigator used the Communicative Orientation of Language Teaching (COLT) observation scheme, Part A (Allen, Fröhlich and Spada, 1984). The COLT scheme, "a descriptive tool to provide information about what actually goes on between teachers and students in pedagogical and, in some cases, linguistic interactional terms," has been validated in a number of different instructional settings (Spada, 1990, p. 293). It is, therefore, a useful tool for differentiating between different types of instruction. Instructional features were coded in real time onto an observation form and notes were taken.

4.3.5 Data analysis plan

4.3.5.1 Categories of analysis

Protocols were analyzed using pre-defined categories of LLSs identified, validated and refined by Chamot, *et al.* (1987, 1988a, 1988b) and O'Malley, *et al.* (1989), as summarized and defined in Table 4.3. Although coding was guided by this classification scheme, it was not limited by these categories. Following Mann (1982), any LLSs which

did not fit these categories of analysis were formally defined with an accompanying example for reference in continued coding.

TABLE 4.3 *Language Learning Strategies and their Definitions*

Metacognitive strategies involve thinking about the learning process, planning for learning, monitoring the learning task, and evaluating how well one has learned.	
1. Planning:	Previewing the organizing concept or principle of an anticipated learning task (advance organization).
2. Directed attention:	Deciding in advance to attend in general to a learning task and to ignore irrelevant distracters; maintaining attention during task execution.
3. Selective attention:	Deciding in advance to attend to specific aspects of language input or situational details that assist in performance of a task.
4. Self-management:	Understanding the conditions that help one successfully accomplish language tasks and arranging for the presence of those conditions.
5. Self-monitoring:	Checking, verifying, or correcting one's comprehension in the course of a language task.
a. Comprehension mon:	Checking, verifying, or correcting one's understanding.
b. Auditory mon:	Using one's "ear" for the language (how something sounds) to make decisions.
c. Strategy mon:	Tracking use of how well a strategy is working.
d. Double-check mon:	Tracking, across the task, previously undertaken acts or possibilities considered.
6. Problem identification:	Explicitly identifying the central point needing resolution in a task or identifying an aspect of the task that hinders its successful completion.
7. Self-evaluation:	Checking the outcomes of one's own language performance against an internal measure of completeness and accuracy.
a. Performance eval:	Judging one's overall ability to perform the task.
b. Ability eval:	Judging one's ability to perform the task.
c. Strategy eval:	Judging one's strategy use when the task is completed.
d. Language repertoire eval:	Judging how much one knows of the L2, at the word, phrase, sentence, or concept level.

Cognitive strategies involve interacting with the material to be learned, manipulating the material mentally or physically, or applying a specific technique to a learning task.

1. Repetition:	Repeating a chunk of language (a word or phrase) in the course of performing a language task.
2. Resourcing:	Using available reference sources of information about the target language, including dictionaries, textbooks, and prior work.
3. Grouping:	Ordering, classifying or labelling material used in a language task based on common attributes; recalling information based on grouping previously done.
4. Note taking:	Writing down key words and concepts in abbreviated verbal, graphic, or numerical form to assist performance of a language task.
5. Deduction/induction:	Consciously applying learned or self-developed rules to produce or understand the target language.
6. Substitution:	Selecting alternative approaches, revised plans, or different words or phrases to accomplish a language task.
7. Elaboration:	Relating new information to prior knowledge.
a. Personal elab:	Making judgments about or reacting personally to the material presented.
b. World elab:	Using knowledge gained from experience in the world.
c. Academic elab:	Using knowledge gained in academic situations.
d. Between parts elab:	Relating parts of the task to each other.
e. Questioning elab:	Using a combination of questions and world knowledge to brainstorm logical solutions to a task.
f. Creative elab:	Making up a story line, or adopting a clever perspective.
g. Imagery:	Using mental or actual pictures or visuals to represent information; coded as a separate category but viewed as a form of elaboration.
8. Summarization:	Making a mental or written summary of language and information presented in a task.
9. Translation:	Rendering ideas from one language to another in a relatively verbatim manner.
10. Transfer:	Using previously acquired linguistic knowledge to facilitate a language task.
11. Inferencing:	Using available information to guess the meanings or usage of unfamiliar language items associated with a language task, to predict outcomes, or to fill in missing information.

Social and affective strategies involve interacting with another person to assist learning or using affective control to assist a learning task.

1. Questioning for clarification:	Asking for explanation, verification, rephrasing, or examples about the material; asking for clarification or verification about the task; posing questions to the self.
2. Cooperation:	Working together with peers to solve a problem, pool information , check a learning task, model a language activity, or get feedback on oral or written performance.
3. Self-talk:	Reducing anxiety by using mental techniques that make one feel competent to do the learning task.
4. Self-reinforcement:	Providing personal motivation by arranging rewards for oneself when a language learning activity has been successfully completed.

Repair strategies involve soliciting further input or clarification when comprehension has broken down in interaction with an interlocutor.

1. Direct appeals:	Overt requests for clarification through the use of native or target language.
a. Global reprise:	Listener asks for outright repetition, rephrasing or simplification of preceding utterance. This may be a statement that nothing was understood.
b. Specific reprise:	Listener asks a question referring to a specific word, term or fragment that was not understood in the preceding utterance.
c. Hypothesis testing:	Listener asks specific questions about facts in the preceding utterance, to verify that s/he has understood and/or what s/he is expected to do.
d. Forward inference:	Listener indicates current understanding of the utterance/narration by asking questions or making statements that infer/hypothesize what might be coming.
2. Indirect appeals	Non-verbal requests for clarification or continued narration.
a. Kinesics:	Listener uses hand gestures, raised eyebrows, confused look, blank stare to indicate to the interlocutor that comprehension has broken down.
b. Continuation signals (uptaking):	Listener gives affirmative nods, continued attention, paralinguistic "Mmms, yes, O.K." etc. to indicate "Yes, I understand. Go on."

Source: Adapted from O'Malley and Chamot (1990, pp. 137-39); Ellis (1986, p.185); Rost and Ross (1991, p. 250) Reprinted here with permission of Dr. Anna U. Chamot and Interstate Research Associates, McLean, Virginia.

4.3.5.2 Coding

For Phase I, after validation by participants, transcripts were coded independently by the investigator and a trained assistant. Interrater reliability was .88. Almost all discrepancies were due to confusion between directed attention and selective attention. These discrepancies were resolved through discussion.

Verbal reports from Phases II and III were transcribed verbatim. Coding consisted of indicating each separate incidence of strategy use in the margin, alongside its occurrence (see Appendix A for a sample page). All protocols were coded independently by the investigator and the same trained assistant who met regularly to review all coded protocols for reliability checks and for discussing difficulties in coding; questions and discrepancies were resolved through discussion.

In addition, a checklist was prepared to record observable uses of repair strategies during the proficiency interview of Phase II (see Appendix A). Each incidence of a particular strategy was recorded in the appropriate category. A checklist was completed for each participant by the trained assistant. The investigator independently reviewed the interviews and checklists for one half of the participants at each level of language proficiency. Differences in recording were discussed and resolved before the assistant continued with the next level.

4.3.5.3 Approach to analysis

When coding was completed, a "listening comprehension strategy profile" was developed for all participants in each phase.

For Phase I, a profile was generated on the basis of a mention or application of

a LLS. Because some of the questions were repeated for different contexts (e.g. What do you do when you don't understand a word?), when a LLS was mentioned once, it was not counted again. The purpose of Phase I was to identify the different types of LLSs used by participants. Profiles would then reveal, for example, the percentage of metacognitive strategies reported out of the total number of individual LLSs reported. Profiles were also generated for each level of language proficiency by averaging the number of strategies reported by participants at each level. These were then categorized by LLS group and analyzed for any emerging patterns or trends.

For Phase II, a profile was generated on the basis of each mention or observed use of a listening comprehension strategy. The purpose of this phase was to identify the use and frequency of listening comprehension strategies deployed during interactional (participatory) listening at each level of language proficiency. Each strategy identified during the stimulated recall session (covert strategies related to thought processes) was counted and a profile created for each participant. Profiles were then grouped by proficiency level for comparison purposes. From the videotaped recording of the interview, each occurrence of an identified strategy (overt manifestations of listener strategic behavior) was counted and tallied. Profiles were then grouped by proficiency level for further analysis.

For Phase III, each new application of a LLS was coded and tabulated. In contrast to Phase I, in this phase a particular LLS was counted for each new application, since participants were now actually engaged in a listening task. A LLS profile for each participant was created by representing each strategy and strategy group as a percentage

of total LLS use by that participant. Profiles were then grouped according to the different variables to be examined.

Analysis of LLS profiles was exploratory-interpretive in nature, with the aim of hypothesis formation. Separate analyses were made for each of the variables: 1) successful and less successful listeners; 2) level of language proficiency; 3) gender; and, 4) learning style. Grouped data for each variable was analyzed for any emerging patterns or trends in the nature and frequency of LLS use.

Continuing within a exploratory-interpretive method of analysis, using a procedure called "qualitative content analysis" (Grotjahn, 1987), think-aloud protocols were analyzed for the unique ways in which listeners deployed strategies to encode meaning. As observed by previous researchers, noting *how* a participant used a specific LLS was often more important for capturing differences in use than counting the *frequency* of use. The qualitative analysis was also used to investigate differences in use of personal and world knowledge in constructing meaning, comparing differences by language proficiency and listening ability.

4.4 Conclusion

This chapter has described the methods used to investigate the research questions proposed in Chapter I. Methodological issues were addressed, the participant sample described, instruments defined and research procedures outlined. Finally, the data analysis plan was presented. The next chapter will present the results of both the quantitative and qualitative analyses of the collected data. This will be followed by a discussion of these results.

Chapter V

Results

5.0 Overview

The purpose of this study was to identify the comprehension strategies used by Core French students in both transactional and interactional listening tasks, and to examine possible relationships between strategy use and 1) language proficiency, 2) gender, 3) personal learning style, and 4) listening ability. The relationship between the respective roles of world knowledge and linguistic knowledge was also examined.

This chapter will present the data relevant to this study and the results of the analyses used to examine these data. The results of each research phase will be presented separately, using the research questions which directed the analysis of that phase. The chapter will conclude with a qualitative analysis of protocols of Phase III, examining differences not discernible through a quantitative analysis.

5.1 Phase I

5.1.1 Purpose of Phase I

In this phase of the study participants were asked to report retrospectively on their listening comprehension strategies. It was directed by the following research questions:

1) What are the types of listening comprehension strategies used by high school students learning French in the Core Program?

2) Do strategy choices vary according to (a) the course level, or (b) the gender of the students?

Furthermore, the results of these interviews were used to identify students to participate in the more intensive second and third phases of this study.

Structured interviews were utilized to discover the listening comprehension strategies used by students in different contexts. Participants were asked to describe the particular techniques they use to comprehend what the teacher says, to facilitate comprehension of classroom listening activities and to understand any French they may listen to outside of class. Interviews were recorded, responses transcribed and protocols presented to participants for validation. The coding of protocols was guided by the categories of analysis presented in Chapter IV, with appropriate adjustments made for listening comprehension. Since the purpose of this phase was to identify the range and types of strategies used by the participants, an identified discrete strategy was counted only once, even if it was reported a number of times. Identified strategies were tallied by groups of males and females within four different course levels, resulting in strategy profiles for eight different groups. This was done to allow for an analysis of strategy choices by course level and gender; however, since there was only one male participant at the French 20N level, seven groups formed the basis for subsequent analysis.

5.1.2 Findings of Phase I

Generally, the categories of analysis presented in Chapter IV proved to be a useful guide for coding the listening comprehension strategies reported by the participants. However, a few additions and revisions were made to reflect strategy use specific to listening and to distinguish more clearly between strategies whose boundaries seemed rather fluid.

The category of inferencing was broken down into different types to reflect the different sources used by participants to infer meaning. In order to add to our understanding of what language learners do when they use inferencing, it is important to identify the sources that are cited. A closer analysis of the inferencing protocols revealed four more or less mutually exclusive sources: linguistic, voice/paralinguistic, kinesic and extra-linguistic. Linguistic inferencing refers to use of other words, the linguistic context, in order to infer the meaning of unknown words. Voice/paralinguistic inferencing refers to use of tone of voice, sound effects and other paralinguistic hints (e.g. audible sighs) in order to understand a speaker. Kinesic inferencing refers to use of facial expressions, body language, hand movements, etc. in order to understand a speaker. Finally, extra-linguistic inferencing refers to use of non-linguistic information such as background sounds, relationships between speakers as well as information in the response format (e.g. questions) to infer what one does not understand. In addition, between parts elaboration was changed to between parts inferencing since it really is based on information within the text or context rather than prior knowledge outside of the text/context.

Second, some definitions were refined to reflect particular features of listening comprehension strategies, as compared to strategies for communication or for reading. Some strategies in the original list were removed because they did not pertain to listening and others were clarified so that coding could be done clearly and consistently.

Third, a number of affective strategies were identified. Building on the work of Oxford (1990), these strategies were identified as lowering anxiety (use of mental

techniques to make one feel more competent to do a task), self-encouragement (providing personal motivation through positive self-talk [a combination of what O'Malley and Chamot called self-talk and self-reinforcement]) and taking emotional temperature (getting in touch with one's feelings and voicing them). These strategies reflect some of the ways in which language learners gain control over their emotions and attitudes about learning.

Fourth, another category of strategies was isolated to group those strategies used to deal with breakdown in comprehension while interacting with an interlocutor. These repair strategies, commonly associated with the literature on communication strategies, are important in achieving comprehension while interacting with a target language speaker (Faerch, Haastrup & Phillipson, 1984; Faerch, 1984; Rost & Ross, 1991). Repair strategies can be divided into two distinct types: direct appeals and indirect appeals for assistance (Ellis, 1986, p. 185). Since these strategies are largely socio-affective in nature, they have been included under the major rubric of socio-affective strategies. For a list of listening comprehension strategies and their definitions with representative examples see Appendix C.

5.1.2.1 Overall reported strategy use

The following presentation of the results of the quantitative analysis must be understood as suggestive of trends and patterns in strategy use rather than definitive. The numbers within each grouping are too small to provide any power for statistical analyses, particularly in Phases II and III where group sizes are smaller yet and participants are dispersed into an even wider range of groups. As such, the following

results should be interpreted as distinct possibilities that will need to be validated with a larger sample.

The data presented in Table 5.1 shows the average number of distinct metacognitive, cognitive and socio-affective strategies reported by males and females for each course level, as well as composite totals. The data in Table 5.2 shows the total number of distinct strategies reported by all participants within each strategy category, with a representation of that number as a percentage of the total number of distinct strategies reported for each course level. On the whole, Table 5.1 reveals that there is an increase by course level in the mean number of distinct strategies reported (11.40; 10.47; 13.55; 16.0), except for a slight drop in French 20. Except for French 10, females reported using more distinct strategies than their male classmates (5.57 to 8.0; 11.16 to 9.6; 15.6 to 11.82; 17 to 13).

Reporting of distinct metacognitive strategies steadily increased with each course level. Table 5.1 shows that, if each course level is compared to the previous level, the mean number of distinct metacognitive strategies reported by all participants is higher (3.20; 3.46; 4.73; 5.75). Furthermore, females reported using a greater variety of metacognitive strategies than their male counterparts at each course level (3.28 to 3.0; 3.83 to 3.0; 5.4 to 4.16; 6 to 5). When metacognitive strategies are represented in terms of a percentage of total strategies reported (Table 5.2), the previously observed increase in metacognitive strategy use is still evident (28.07; 33.04; 34.90; 35.94 per cent).

Both tables show that cognitive strategies are the most prominent for all course levels (between 42 and 55 per cent). Comparison between course levels (Table 5.2)

Table 5.1 *Mean Number of Distinct Strategies by Category, Course Level and Gender Reported in the Phase I Interviews*

Strategy Category	French 10			French 20			French 20S			French 20N		
	M n=3	F n=7	Total	M n=5	F n=6	Total	M n=6	F n=5	Total	M n=1	F n=3	Total
Metacognitive	3	3.28	3.20	3	3.83	3.46	4.16	5.4	4.73	5	6	5.75
Cognitive	8	5.57	6.30	3.8	5.16	4.55	4.83	7.0	5.82	4	7.67	6.75
Socio-affective	2.67	1.57	1.90	2.8	2.17	2.46	2.83	3.2	3.0	4	3.33	3.5
Totals	13.67	10.42	11.40	9.6	11.16	10.47	11.82	15.6	13.55	13.0	17.0	16.0

Table 5.2 *Percentage of Total Number of Distinct Strategies by Category and Course Level Reported in the Phase I Interviews*

Strategy Category	French 10		French 20		French 20S		French 20N	
	n=10	%	n=11	%	n=11	%	n=4	%
Metacognitive	32	28.07	38	33.04	52	34.90	23	35.94
Cognitive	63	55.26	50	43.48	64	42.95	27	42.18
Socio-affective	19	16.67	27	23.48	33	22.15	14	21.88
Totals	114	100	115	100	149	100	64	100

indicates that the use of cognitive strategies, as a percentage of total strategies, appears to level off after a marked drop between French 10 and French 20 (55.26; 43.48; 42.95; 42.18 per cent). After French 20, the mean number of cognitive strategies by course level gradually decreases. Other than at the French 10 level, females reported using a greater variety of cognitive strategies than males (5.57 to 8.0; 5.16 to 3.8; 7.0 to 4.83; 7.67 to 4). A decrease in percentage of distinct cognitive strategies mentioned by course level is counterbalanced by a gradual increase in percentage of distinct metacognitive strategies reported.

A pattern also emerges in the reporting of socio-affective strategies. Table 5.1 shows that the average number of distinct socio-affective strategies reported increased for each course level (1.9 to 3.5). However, when represented as a percentage of total number of all strategies reported, the percentage of socio-affective strategies reported rises markedly after French 10 and then tapers off slowly (16.67; 23.48; 22.15; 21.88 per cent). It appears that the increase in reporting of metacognitive strategies overtakes the increase in reporting of socio-affective strategies.

5.1.2.2 Metacognitive strategies reported

Metacognitive strategies, the mental activities for directing the learning process, include planning, self-monitoring and self-evaluation. Table 5.3 breaks down metacognitive strategies into these three specific categories and their composite sub-strategies. The data presented in this table indicate the number of participants who reported using a given metacognitive strategy; this number is also represented as a percentage of participants for each course level and gender who reported using this

Table 5.3a *Number of Distinct Metacognitive Strategies by Course Level and Gender Reported in the Phase I Interviews*

Metacognitive Strategies	French 10				French 20				French 20S				French 20N			
	Males		Females		Males		Females		Males		Females		Males		Females	
	n=3	%	n=7	%	n=5	%	n=6	%	n=6	%	n=5	%	n=1	%	n=3	%
Planning																
—Advance organiz.	2	67	4	57	4	80	3	50	4	67	4	80	1		2	67
—Directed attention	2	67	3	43	3	60	5	83	3	50	5	100	1		3	100
—Selective attention	2	67	5	71	3	60	3	50	6	100	5	100	1		3	100
—Self-management	0	00	4	57	4	80	5	83	6	100	5	100	1		3	100
Self-Monitoring																
—Comprehension	2	67	3	43	0	00	1	17	2	33	3	60	0		3	100
—Auditory	1	33	3	43	0	00	2	33	2	33	2	40	0		1	33
—Double-check	0	00	0	00	1	20	2	33	2	33	2	40	0		1	33
Self-evaluation																
—performance	0	00	0	00	0	00	2	33	0	00	0	00	0		1	33
—strategy	0	00	1	14	0	00	0	00	0	00	1	20	1		1	33

(Percentage column represents a percentage of participants from that course/gender group who reported the strategy)

Table 5.3b *Percentage of Total Number of Distinct Metacognitive Strategies by Category Reported in the Phase I Interviews*

Planning	6	67	16	70	14	93	16	69	19	76	19	70	4		11	61
Self-monitoring	3	33	6	26	1	07	5	22	6	24	7	26	0		5	28
Self-evaluation	0	00	1	04	0	00	2	09	0	00	1	04	1		2	11
Totals	9	100	23	100	15	100	23	100	25	100	27	100	5		18	100

(Percentage column represents a percentage of total strategy use for that strategy group)

particular strategy. Planning strategies appear to be the most familiar metacognitive strategy for all course levels. Except in the case of French 20 males, planning strategies represent 60 to 70 per cent of total number of distinct metacognitive strategies reported. Most participants in French 10 and 20 and all participants (100 per cent) at the more advanced course levels (French 20S and 20N), reported using planning strategies such as directed attention, selective attention and self-management. The fourth planning strategy, advance organization, tended to be somewhat less familiar than the others. Females generally took the lead in reporting a particular strategy, with males reporting more at the next course level.

When each category of metacognitive strategies is calculated in terms of percentage of total number of distinct metacognitive strategies reported (lower part of Table 5.3), it becomes evident that participants across all course levels are very familiar with planning strategies, representing about two-thirds of the total number of distinct metacognitive strategies reported. Self-monitoring strategies represent 20 to 30 per cent of total metacognitive strategies reported across all course levels. The number of participants reporting self-evaluation strategies was minimal, but increased gradually by course level, and included more females than males.

5.1.2.3 Cognitive strategies reported

Whereas metacognitive strategies direct the learning process, cognitive strategies involve manipulation of the target language in order to accomplish a given task. The data presented in Table 5.4 indicate the different cognitive strategies reported and the number of participants reporting each strategy, also represented as a percentage of all

Table 5.4 *Number of Distinct Cognitive Strategies by Course Level and Gender Reported in the Phase I Interviews*

Cognitive Strategy	French 10				French 20				French 20S				French 20N			
	Males		Females		Males		Females		Males		Females		Males		Females	
	n=3	%	n=7	%	n=5	%	n=6	%	n=6	%	n=5	%	n=1	%	n=3	%
Repetition	2	67	4	57	2	40	0	00	3	50	2	40	0		2	67
Resourcing	3	100	5	71	5	100	6	100	5	83	4	80	0		1	33
Grouping	1	33	1	14	0	00	1	17	0	00	0	00	0		2	67
Note-taking	2	67	3	43	1	20	0	00	1	17	1	20	1		1	33
Deduction/induct'n	0	00	1	14	0	00	2	33	1	17	4	80	0		0	00
Substitution	2	67	2	29	0	00	1	17	1	17	1	20	0		0	00
Elaboration	3	100	3	43	3	60	3	50	2	33	4	80	0		3	100
Summarization	0	00	0	00	0	00	0	00	0	00	2	40	0		1	33
Translation	2	67	2	29	1	20	2	33	4	67	1	20	1		0	00
Transfer	0	00	2	29	1	20	3	50	1	17	3	60	0		1	33
Inferencing ---*linguistic*	2	67	6	86	4	80	6	100	6	100	5	100	1		3	100
---*voice/paraling.*	2	67	3	43	1	20	3	50	1	17	1	20	0		3	100
---*kinesic*	3	100	5	71	1	20	3	50	2	33	4	80	0		3	100
---*extralinguistic*	2	67	2	29	0	00	1	17	2	33	3	60	1		3	100
Totals	24		39		19		31		29		35		4		23	

(Percentage column represents a percentage of participants from that course/gender group who reported the strategy)

participants within each course level. As discussed earlier, in order to gain a clearer understanding of inferencing in listening comprehension, this strategy was broken down to differentiate between the different types of information students use to guide their guessing. Both males and females reported heavy use of linguistic inferencing (67 to 100 per cent); all participants (100 per cent) at the two advanced course levels reported this strategy. Kinesic inferencing was reported by a large number of students, interestingly most often at the French 10 and 20N course levels. Resourcing is also used heavily by all (71 to 100 per cent), but appears to taper off at upper levels (33 per cent).

Although elaboration appears to be an important strategy for most participants (100, 43; 60, 50; 33, 80; --, 100 per cent), no consistent trend by course level is evident. Transfer tends to be reported more by females (29 to 00; 50 to 20; 60 to 17 per cent), while translation appears mostly to be favoured by males (67 to 29; 20 to 33; 67 to 20 per cent). Mention of summarization, although minimal, begins to appear at advanced course levels.

5.1.2.4 Socio-affective strategies reported

Socio-affective strategies enhance the effectiveness of cognitive strategy use and make language learning less frustrating. The data presented in Table 5.5 shows the number of participants reporting each socio-affective strategy, also represented as a percentage of all participants within each course level.

The most popular strategies here were questioning for clarification, cooperation and self-encouragement. All males (100 per cent) and almost all females (71 to 100 per cent) reported using questioning for clarification; almost all males and females were

Table 5.5 *Number of Distinct Socio-Affective Strategies by Course Level and Gender Reported in the Phase I Interviews*

Socio-affective Strategy	French 10				French 20				French 20S				French 20N			
	Males		Females		Males		Females		Males		Females		Males		Females	
	n=3	%	n=7	%	n=5	%	n=6	%	n=6	%	n=5	%	n=1	%	n=3	%
Lowering anxiety	1	33	0	00	1	20	1	17	3	50	2	40	0		0	00
Questioning clar.	3	100	5	71	5	100	5	83	6	100	5	100	1		3	100
Cooperation	1	33	3	43	5	100	4	67	5	83	4	80	1		3	100
Self-encouragem't	3	100	2	29	3	60	2	33	2	33	3	60	1		3	100
Emotional temp.	0	00	1	14	0	00	1	17	0	00	0	00	0		0	00
Repairs	0	00	0	00	0	00	0	00	1	17	2	40	1		1	33
Totals	8		11		14		13		17		16		4		10	

(Percentage column represents a percentage of participants from that course/gender group who reported the strategy)

familiar with cooperation, with generally greater numbers reporting this strategy at advanced course levels (33; 43; 100; 67; 83; 80; 100 per cent). Self-encouragement was also reported by many participants, with no particular pattern by course level or gender. Few participants reported using emotional temperature, and those who did so were females. Repair strategies, not reported by many students, were present at advanced course levels only.

5.1.3 Summary of Phase I

In Phase I, students reported retrospectively on the conscious strategies they used in listening comprehension. The results, as presented above, outline the various distinct strategies and their patterns of use by course level and gender as reported by students in a Core French program. In answer to the research questions posited at the beginning of this section, the evidence shows that Core French students use a wide range of identifiable strategies while engaged in listening comprehension, and that there are variations by course level and gender in the choice of strategies. Information provided by the students led to refinements in definitions of strategies and clearer distinctions of subcategories within a broad strategy such as inferencing. Finally, the information provided by the participants of Phase I helped identify students for further participation in the more intensive second and third phases of this study.

5.2 Phase II

5.2.1 Purpose of Phase II

This phase of the study endeavoured to identify the strategies used by language learners in interactional (participatory) listening; i.e. in interaction with another speaker.

Participants took part in an oral interview to determine their level of language proficiency. At the same time, this interview was videorecorded for later analysis of the nature and frequency of observable comprehension strategies used in such a listening task. This videotape was played back to the participant immediately after the interview. During the review, the tape was stopped at points where the participant was experiencing difficulty in comprehension. The interviewee was encouraged to reflect on what s/he was thinking at that point and how comprehension was finally verified. In the meantime, an audiotape recorder was left on, recording both the interview and the retrospection comments. The stimulated recall sessions were transcribed verbatim and coded using the categories of analysis presented in Chapter IV. The videotaped interviews were later reviewed to 1) identify the proficiency level of participants, and 2) identify and record all verbal and non-verbal strategies used to achieve comprehension and/or solicit further input. Observed strategies were recorded and tallied on a checklist prepared on the basis of the categories of analysis noted above and an initial overview of the interviews to ensure that the checklist was sufficiently comprehensive.

The research questions guiding the analysis were the following:

1) What types of strategies are used by language learners while engaged in an interactional listening task and what is the frequency of their use?

2) Are there any differences in strategy use by proficiency level? If so, what are those differences?

5.2.2 Grouping of participants for Phases II and III

The twenty-one students identified for participation in this phase and Phase III of

the study agreed to do so. As described in Chapter IV, these participants were interviewed in French using the ACTFL/ETS Oral Proficiency Interview in order to ascertain their level of language proficiency. The oral interview (which also tests listening indirectly) was used for placement purposes since it is a standard instrument for ranking students at levels of language proficiency that are commonly understood. Interviews were videorecorded and rated by the investigator and then rated independently by a trained tester. Interrater reliability was .85; disagreements were resolved through discussion and an independent rating of the interviews in question by a third party.

Results of these interviews generated the following groupings of participants for comparison purposes, also summarized in Table 5.6 below:

a) Novice I: Three females and one male (all less successful listeners);

b) Novice II: Three females (two successful and one less successful listener), three males (two successful and one less successful listener). Since all students from the French 20 class placed at the Novice II level, the French 20 student who was absent for the interview was also ranked at this level for comparison purposes in Phase III;

c) Novice III: Two females and two males (all less successful listeners);

d) Intermediate I: No one placed at this level;

e) Intermediate II: Two females (successful listeners) and two males (one successful and one less successful listener); and,

f) Intermediate III: Three females (all successful listeners).

Table 5.6 *Grouping of Participants by Proficiency Level, Gender and Listening Ability*

Proficiency Level	Successful listeners		Less successful listeners	
	Males	Females	Males	Females
Novice I	—	—	1	3
Novice II	2	2	1	1
Novice III	—	—	2	2
Intermediate I	—	—	—	—
Intermediate II	1	2	1	—
Intermediate III	—	3	—	—
Totals	3	7	5	6

Not all participants completed every part of Phase II. As explained above, student F202 was absent on the day he was scheduled for his oral interview. Since this was the last day of the research project in his school he is not included, leaving only twenty participants for Phase II. Furthermore, since the interviews with the French 20N students were very long (in excess of twenty minutes) and these students rarely had difficulty understanding the interviewer, the stimulated recall session was pointless. This became apparent during the stimulated recall sessions with French 20S students who ranked at the Intermediate level and rarely had difficulty understanding the interviewer. This, in addition to the inaudible audiorecording of one of these students (F20S6), resulted in stimulated recall protocols for only two participants at Intermediate II, and none at Intermediate III level.

5.2.3 Findings of Phase II

5.2.3.1 Strategies observed during the proficiency interview

The categories of analysis presented in Chapter IV proved to be a useful starting

point for coding the observable strategies used by participants during the proficiency interviews. A few adjustments were made to reflect the use of strategies observed. Although no instances of forward inferencing were observed, it became clear that participants were sending messages that prompted further input from their interlocutor. These continuation signals, although not really repair strategies, are an important dimension of interactional listening. These continuation signals, also referred to as backchannelling cues, were coded either as uptakes (nods, "mmm," "uh huh," etc.) or faking (a non-commital response in spite of obvious non-comprehension). Second, in order to reflect the emerging use of the target language, global reprise and hypothesis testing were coded separately for English and French.

The data provided in Table 5.7 presents the average number of times each strategy was observed at each proficiency level. It is clear that Novice learners rely largely on kinesics such as shaking head, shrugging shoulders, waving arms, cocking the head, raising eyebrows, furrowing the brow, etc. to convey to their interlocutor their need for clarification or further input. Predictably, there is a gradual decline in the number of times kinesics were used at the three Novice sublevels (35.25, 31.80 and 22.0 respectively), and a marked difference in the use of this strategy between Novice and Intermediate learners (29.85 to 6.43 times respectively). The use of this strategy was also qualitatively different at each successive proficiency level. Novice learners were more overt in conveying their inability to comprehend, whereas the more advanced learners conveyed lack of comprehension in much more subtle, almost imperceptible ways.

Table 5.7 *Mean Number of Interactional Strategies by Proficiency Level Observed During the Phase II Interviews*

Strategy	Novice				Intermediate		
	I n=4	II n=5	III n=4	Total	II n=4	III n=3	Total
Global reprise (English)	6.5	2.4	2.5	3.69	0.25	0.00	0.14
Global reprise (French)	0.75	2.4	2.0	1.77	2.0	0.00	1.14
Specific reprise	0.50	0.80	0.25	0.54	0.50	0.33	0.43
Hypothesis test. (English)	5.5	3.2	1.5	3.38	0.0	0.0	0.0
Hypothesis test. (French)	0.75	1.8	1.25	1.31	3.25	1.33	2.43
Uptakes	7.0	8.6	17.25	10.77	51.0	27.67	41.0
Faking	1.0	3.4	2.5	2.38	2.0	0.33	1.28
Kinesics	35.25	31.80	22.0	29.85	10.75	0.67	6.43

The pattern of strategy use observed for kinesics is also true for global reprise and hypothesis testing. As learners become more proficient, there is less need to seek clarification (6.5; 2.4; 2.5; 0.25 and 0 times respectively in English) or to verify comprehension (5.5; 3.2; 1.5; 0; and 0 times respectively in English). Furthermore, if and when the more advanced language learners need to verify comprehension, they are more likely to use the target language to do so (0.75, 1.8, 1.25, 3.25, and 1.33 times respectively).

A pattern also emerged for observed use of continuation signals. Uptaking was observed more often at the Intermediate level, about four times as often as the average for the Novice level. It appears that the more proficient the language learner, the more s/he is able to relax and become involved in the conversation. Faking was observed most often at the Novice II level (3.4 times) and then it gradually decreased as the participants were able to comprehend more fully and be less apprehensive about responding to the interlocutor.

5.2.3.2 Strategies elicited during the stimulated recall session

During the stimulated recall session, the videotape was stopped whenever it appeared that the participant was having difficulty understanding. Therefore, the strategies elicited are those that the participant remembered using to resolve comprehension difficulties at that time. Table 5.8 presents the mean number of strategies elicited, grouped by strategy category and proficiency level. In the case of the stimulated recall, since strategies were elicited only when participants experienced comprehension difficulties, strategy use decreased with each rise in proficiency level.

Table 5.8 *Mean Number of Strategies by Category and Proficiency Level Elicited During the Stimulated Recall Sessions on the Phase II Proficiency Interviews*

Strategy	Novice			Intermediate
	I n=4	II n=5	III n=4	II n=2
Directed attention	0.25	0.20	0.25	0.0
Comprehension monitoring	0.0	0.60	0.25	2.0
Problem identification	0.0	0.60	1.0	2.0
Metacognitive (% total)	**1.82**	**15.90**	**20.0**	**32.0**
Translation	1.25	2.0	1.50	0.0
Transfer	4.25	1.40	0.50	1.0
Elaboration	1.0	0.40	0.25	3.0
Inferencing	5.25	3.40	3.75	4.50
Cognitive (% total)	**85.45**	**81.82**	**80.0**	**68.0**
Self-encouragement	1.75	0.20	0.0	0.0
Socio-affective (% total)	**12.73**	**2.28**		

Cognitive strategies were used most by interviewees to resolve comprehension difficulties. However, with each increase in proficiency level, the percentage of cognitive strategy use decreased (85.45, 81.82, 80 and 68 per cent respectively). Inferencing was the strategy used by most participants at all levels (5.25, 3.40, 3.75, 4.50 times respectively). Transfer was the next most used strategy by learners at the Novice I level (4.25 times) whereas translation was more popular with Novice II and III learners (2.0 and 1.50 times respectively). Considering the highly contextualized nature of the interview, it is curious that elaboration was the strategy most used after inferencing by Intermediate II learners. The small sample size (n=2), however, may make this only a spurious outcome.

The noted decrease in percentage of cognitive strategies used by proficiency level was offset by an increase in use of metacognitive strategies (1.82, 15.90, 20 and 32 per cent respectively). Comprehension monitoring and problem identification appear to be the most used strategies within this category.

Only Novice I learners appeared to use a socio-affective strategy with any degree of relevance (an average of 1.75 times). These participants used self-encouragement, largely to explain their inability to understand a particular question.

5.2.4 Summary of Phase II

In Phase II, participants were engaged in interactional listening with a target language speaker and then subsequently involved in a stimulated recall. The observed strategies used by listeners and subsequent analysis of the listener profiles led to the identification of a group of observable listening comprehension strategies. In answer to

the research questions posed earlier, evidence has been presented to show that the use of these strategies varies by proficiency level. At the same time, the retrospective protocols reported during the stimulated recall session revealed the operation of another more covert body of cognitive listening comprehension strategies corresponding to those reported in Phase I.

5.3 Phase III

5.3.1 Purpose of Phase III

This phase of the study went beyond the use of instruments such as interviews and questionnaires, directly to the language learner engaged in the act of listening. By means of a think-aloud procedure (described in Chapter IV), the listener was encouraged to report as completely as possible his/her thought processes while listening to an oral text in French. These think-aloud sessions were audiorecorded and transcribed verbatim; the resulting protocols were coded using the categories of analysis already described in the documentation on Phase I. Each occurrence of a strategy was counted, totals for each strategy were tallied and then each strategy was represented as a percentage of the total strategy use for that participant. This resulted in a strategy profile for each participant. These profiles, presenting the frequency of use for each strategy (as a percentage of total strategy use), appear in Tables 8.1, 8.2, 8.3, 8.4 in Appendix D. Table 8.5 in the same Appendix also presents a summary of strategy use by strategy category for each participant.

The subsequent analysis and comparison of these profiles were directed by the research questions for this particular phase of the study:

1) What types of strategies are used by language learners while engaged in transactional, non-participatory listening and what is the frequency of their use?

2) Are there differences in strategy use by level of language proficiency? If so, what are those differences?

3) Are there differences in strategy use by gender? If so, what are these differences?

4) Are there differences in strategy use by learning style? If so, what are those differences?

5) Are there differences in strategy use by listening ability? If so, what are those differences?

5.3.2 Grouping of participants for Phase III

Grouping of participants for this phase was explained earlier under Phase II (see 5.2.2). All participants completed this phase.

5.3.3 Findings of Phase III

5.3.3.1 Strategies used

5.3.3.1.1 Overview

The data presented in Table 5.9 provides an overview of strategy use for all participants by major categories and for each strategy within a category. Cognitive strategies are used most by all participants (an average of 87.54 per cent), followed by metacognitive strategies (an average of 12.10 per cent). When strategy use by Novice listeners is compared to that of Intermediate listeners, a greater range of strategy use by proficiency level becomes apparent. As metacognitive strategy use increases by proficiency level (8.62 to 19.05 per cent) cognitive strategy use decreases (91.08 to

Table 5.9 *Mean Number of Strategies* by Category for Novice and Intermediate Listeners (Totals for All Participants) Used During the Phase III Think-Aloud Sessions*

Strategy	Novice n=14	Intermediate n=7	Total n=21
Planning	1.62	2.45	1.90
Comprehension monitoring	4.53	10.41	6.49
Problem identification	2.30	4.79	3.13
Self-evaluation	0.17	1.40	0.58
Metacognitive (Total)	**8.62**	**19.05**	**12.10**
Repetition	8.67	5.04	7.46
Grouping	0.59	0.00	0.39
Deduction/induction	1.01	0.37	0.80
Elaboration	20.46	21.71	20.88
Summarization	20.38	29.87	23.54
Transfer	11.38	2.90	8.55
Translation	13.09	4.73	10.30
Inferencing	15.50	15.84	15.61
Cognitive (Total)	**91.08**	**80.46**	**87.54**
Socio-affective (Total)	**0.30**	**0.49**	**0.36**

(*Number represents a percentage of total strategy use)

80.46 per cent). Since the nature of a think-aloud procedure is not conducive to eliciting the use of socio-affective strategies, this category of strategies appeared as less than one per cent of total strategy use. For that reason, incidence of use of these strategies is presented here only and will not be discussed further in the results of this phase of the study.

The most interesting pattern of strategy use emerging from these data is the gradual increase in use of metacognitive strategies by proficiency level. Although there is some variation within each proficiency level, Intermediate listeners used more than twice as many metacognitive strategies as Novice listeners. It appears that the higher the level of language proficiency, the greater the amount of metacognitive strategy use.

5.3.3.1.2 Metacognitive strategies used

The data presented in Table 5.9 also indicate the mean number of times each specific metacognitive strategy was used. Almost all participants evidenced use of strategies such as planning, listening comprehension, and problem identification; demonstrated use of self-evaluation was sporadic.

The metacognitive strategy most heavily used in listening comprehension appears to be, understandably, comprehension monitoring (6.49 per cent of all strategies used). Intermediate listeners depended on this strategy more than Novice listeners (10.41 to 4.53 per cent). In fact, even though the dominant use of cognitive strategies tends to mask any evidence of metacognitive strategy use, comprehension monitoring actually becomes the fourth most important strategy for Intermediate listeners, bypassing the use of cognitive strategies such as translation, transfer and repetition which were used more

frequently by Novice listeners.

Planning strategies were used at every level, with a general overall increase from Novice to Intermediate (1.62 to 2.45 per cent of total strategy use). Demonstrated use of this strategy was rather surprising since there was no opportunity for planning before each listening task. As mentioned earlier, participants began each task "cold"; that is, they were not prepared in any way (e.g. vocabulary, questions, title, introductory statement, etc.) for what they were about to hear. Therefore, the strategies evidenced which relate to planning tended to be "on-line," predicting what might happen on the basis of what was just said or what was understood so far, as illustrated in the following examples:

> I'm thinking of this guy is phoning up this girl and it sounds like both start a conversation, maybe he's going to ask her out or something. (F101)

> Doesn't sound like what...the guy had a good weekend. He's about to tell the girl why. (F20S6)

> I don't know just the, I don't know. He was saying what kind of special it's gonna be. I'm just waiting for it to come. (F203)

This kind of prediction was coded as selective attention. An examination of Tables 8.1 and 8.2 (Appendix D) reveals that this was the most widely used planning strategy.

Finally, problem identification was used by most participants, but use clearly increased from the Novice to the Intermediate level. In fact, Intermediate listeners tended to use this strategy also with twice the frequency of Novice listeners.

5.3.3.1.3 Cognitive strategies used

A scrutiny of Table 5.9 reveals eight different cognitive strategies used by participants. In particular, three strategies appear to be important for all listeners:

summarization, elaboration and inferencing (23.54, 20.88, 15.61 per cent). This is followed by the use of strategies such as translation, transfer and repetition (10.30, 8.55, 7.46 per cent). Grouping was used only at the Novice level and induction/deduction was used sporadically at both levels.

The most interesting information conveyed by this table is the difference between Novice and Intermediate listeners in use of cognitive strategies. Whereas summarization is the predominant strategy for Intermediate listeners (29.87 per cent) followed by elaboration (21.71 per cent), both of these strategies are used equally by Novice listeners (20.38 and 20.47 per cent respectively). Inferencing appears to be the third most popular strategy, with use by both Novice and Intermediate listeners being about equal (15.50 and 15.84 per cent). The major difference between these groups appears in the strategies used most frequently after the three most salient strategies cited above. Whereas Novice listeners relied on more surface-processing strategies such as translation, transfer and repetition (13.09, 11.38, 8.67 per cent respectively), Intermediate listeners relied more heavily on deep-processing, metacognitive strategies such as comprehension monitoring (10.41 per cent) and problem identification, followed by the use of cognitive strategies such as repetition and translation (4.79, 5.04, 4.73 per cent respectively). It appears that a shift in depth of processing is a critical distinction between Novice and Intermediate listeners.

5.3.3.2 Correlations between strategy use and the variables under investigation

Metacognitive and cognitive strategies used during the Phase III think-aloud sessions have been presented and discussed with regard to their frequency of use. The

following sections scrutinize the data for evidence of possible relationships between the strategies used and the variables under investigation: proficiency level, gender, learning style and listening ability.

5.3.3.2.1 Proficiency level

Some basic differences have already been established regarding the listening comprehension strategies used by listeners at the Novice and Intermediate levels of language proficiency. This section will examine data presented in Table 5.10 for more subtle shifts in strategy use between sublevels within each of these two proficiency levels.

Within the Novice level there is an interesting shift from one sublevel to another with regard to the use of cognitive strategies such as elaboration, summarization, transfer, translation and inferencing. Novice I listeners indicated a strong preference for elaboration, inferencing and transfer (25.38, 20.39, 16.47 per cent respectively). At the Novice II level, strategy preference shifted to an almost equal use of elaboration, translation and summarization (18.67, 17.47, 16.79 per cent respectively). It is also interesting to note that at this sublevel, listeners do not appear to favour any strategy strongly; use of the five cognitive strategies mentioned above is more evenly distributed than at any other sublevel. At the Novice III level, listeners exhibited a strong preference for summarization, followed by elaboration and inferencing (33.22, 18.23, 16.31 per cent respectively). This pattern of heavy use of summarization, elaboration and inferencing seems to stabilize at the Intermediate level, where an increase in metacognitive strategies is counterbalanced by a decrease in surface processing strategies such as transfer, translation and repetition.

Table 5.10 *Mean Number of Strategies* by Gender and Proficiency Level Used during Phase III Think-Aloud Sessions*

Strategy	Novice I			Novice II			Novice III			Intermediate II			Intermediate III		
	M n=1	F n=3	Total	M n=3	F n=3	Total	M n=2	F n=2	Total	M n=2	F n=2	Total	M n=0	F n=3	Total
Metacognitive (total)			6.46			9.53			9.36			18.23			20.16
Planning	3.16	1.36	1.81	1.67	1.28	1.48	1.76	1.52	1.64	2.04	1.63	1.84	---	3.27	3.27
Comp. Mon.	0.00	3.88	2.91	6.52	5.48	5.96	4.44	3.43	3.93	10.94	10.82	10.88	---	9.79	9.79
Problem id.	3.16	0.77	1.37	2.36	1.48	1.92	4.36	3.23	3.79	3.94	6.57	5.28	---	4.13	4.13
Self-evaluation	0.00	0.49	0.37	0.00	0.35	0.17	0.00	0.00	0.00	0.47	0.00	0.23	---	2.97	2.97
Cognitive (total)			92.50			88.40			90.64			80.46			78.98
Repetition	2.11	5.57	4.71	8.75	15.06	9.90	16.26	5.33	10.79	6.07	5.37	5.72	---	4.13	4.13
Grouping	1.05	1.97	1.74	0.00	0.44	0.22	0.00	0.00	0.00	0.00	0.00	0.00	---	0.00	0.00
Deduction/ind.	3.16	0.49	1.16	1.28	0.49	0.89	1.71	0.38	1.04	0.00	0.86	0.43	---	0.30	0.30
Elaboration	29.47	24.01	25.38	21.12	16.22	18.67	14.76	21.70	18.23	24.38	19.99	22.18	---	21.08	21.08
Summarization	8.42	14.41	12.91	19.48	14.11	16.79	30.44	36.00	33.22	24.43	33.48	28.95	---	31.10	31.10
Transfer	13.68	17.40	16.47	12.97	12.53	12.75	2.60	5.91	4.25	3.15	3.72	3.43	---	2.19	2.19
Translation	7.37	10.53	9.74	12.80	22.13	17.47	9.98	3.62	6.80	3.67	4.10	3.88	---	4.37	4.37
Inferencing	26.32	18.41	20.39	12.99	10.44	11.71	13.71	18.92	16.31	17.84	13.49	15.87	---	15.81	15.81

(*Number represents a percentage of total strategy use)

Although grouping does not appear to be an important strategy overall, it is worth noting the sublevel at which it is used. All Novice I listeners used grouping and one learner in Novice II did so as well. All of these participants came from the same French 10 class, the Novice II listener being ranked at one sublevel higher than her classmates.

The shifts in metacognitive strategy use between sublevels is less dramatic than the shifts in cognitive strategy use. Comprehension monitoring tends to increase by sublevel, levelling off at the Intermediate level (2.91, 5.96, 3.93, 10.88, 9.79) at which point the use of other metacognitive strategies such as planning and self-evaluation also increases. The rather significant drop at Novice III can be explained by the listening ability of the members of this group, all less successful listeners. In fact, two members of this group (F20S5; F20S7) would be better classified as ineffective listeners.

In conclusion, elaboration and inferencing appear to be the most important cognitive strategies for listeners over all levels of language proficiency. Summarization becomes increasingly important by proficiency level. Most interestingly, the less efficient processing strategies of transfer, translation and repetition, adopted by Novice listeners, tend to give way to higher level processing, metacognitive strategies such as comprehension monitoring and problem identification which are used more by Intermediate level listeners.

5.3.3.2.2 Gender

The data presented in Table 5.11 show that when strategy use for all male and female participants is compared, very few differences emerge in strategy use by gender. Although females used slightly more metacognitive strategies than males (12.32 to 11.75

Table 5.11 *Mean Number* of Strategies by Gender and Listening Ability Used During the Phase III Think-Aloud Sessions*

Strategy	Male n=8	Female n=13	Successful n=10	Less Succ. n=11
Planning	1.97	1.85	2.04	1.76
Comprehension mon.	6.29	6.61	8.91	4.28
Problem identification	3.37	2.98	4.22	2.13
Self-evaluation	0.12	0.88	1.00	0.22
Metacognitive (Total)	11.75	12.32	16.17	8.39
Repetition	9.12	7.36	8.26	7.86
Grouping	0.13	0.19	0.13	0.63
Deduction/induction	1.30	0.49	0.26	1.28
Elaboration	21.39	20.56	19.71	21.93
Summarization	22.07	24.45	24.88	22.32
Transfer	8.01	8.90	6.49	10.44
Translation	9.13	9.73	9.56	9.45
Inferencing	16.04	15.29	13.62	17.36
Cognitive (Total)	87.19	86.97	82.91	91.27

(*Number represents a percentage of total strategy use)

per cent), this difference of one per cent and can largely be attributed to the almost exclusive use of self-evaluation strategies by females. Overall, the pattern of strategy use presented in Table 5.9 is manifest again for both males and females. The same six cognitive strategies; i.e. summarization, elaboration, inferencing, translation, transfer and repetition continue to be the strategies used most often, followed by the metacognitive strategy of comprehension monitoring. The only difference lies in the use of repetition; males used it more than females (9.12 to 7.36 per cent), resulting in males ranking it higher than transfer, which was preferred by females.

The data presented in Table 5.10 breaks down strategy use by males and females at each sublevel of language proficiency. Since there is only one male at Novice I and no males at Intermediate III, comparisons will only be made for Novice II, III and Intermediate II.

At the Novice II level, males showed a strong preference for elaboration and summarization (21.12 and 19.48 per cent) followed by an apparently equal reliance on transfer, translation and inferencing (12.97, 12.80, 12.99 per cent). On the other hand, females demonstrated a strong preference for translation (22.13 per cent) followed by elaboration, repetition, summarization, transfer and inferencing (16.22, 15.06, 14.11, 12.53, 10.44 per cent). The rather significant differences between males and females at this level are curious and hard to explain. This either reflects an aberration in the sample, a period of instability in strategy choice, or a combination of both.

At Novice III, the females depended almost exclusively on summarization, elaboration and inferencing (36.00, 21.70 and 18.92 per cent of their total strategy use),

whereas the males, who also used primarily summarization (30.44 per cent), relied more on repetition, and then on elaboration and inferencing (16.26, 14.76, 13.71 per cent respectively). The high use of repetition here may just be an aberration in the sample, since one male did an extraordinary amount of repeating (22.69 per cent of total strategy use), even repeating under his breath while listening to the oral texts. At Intermediate II, females continued to show a strong preference for summarization (33.48 per cent) followed by elaboration and inferencing (19.99 and 13.49 per cent). Males also relied most on these same strategies, but more evenly so (24.43, 24.38 and 17.84 per cent respectively).

The data presented in Table 5.12 breaks down the use of important strategies such as comprehension monitoring, elaboration and inferencing into their respective subcategories. Once again, very few differences emerge. Worthy of note are two of the subcategories in inferencing. Whereas females tend to make greater use of voice/ paralinguistic cues to guide their guessing (4.04 to 2.76 per cent respectively), males appear to use between parts inferencing more (5.16 to 2.64 per cent respectively).

In conclusion, it is hard to make any credible assertions about gender differences in strategy use at each sublevel of language proficiency because of the small sample, and the diverse makeup of each group (for example, in Intermediate II two successful females were compared to one successful and one less successful male listener). Therefore, analysis of the data in Table 5.11, comparing the strategy use of *all* male and female participants, offers greater potential for any valid claims regarding differences in strategy use by gender, than the analysis at specific sublevels presented in Table 5.10.

Table 5.12 *Breakdown of Use of Monitoring, Elaboration and Inferencing Strategies by Listening Ability and Gender During Phase III Think-Aloud Sessions*

Strategy	Successful n=10	Less Successful n=11	Male n=8	Female n=13
Comprehension Monitoring				
—Word	0.97	0.43	0.34	0.91
—Sentence	0.13	0.07	0.08	0.12
—Schema	1.94	1.37	1.84	1.43
Auditory Monitoring	0.63	0.27	0.36	0.50
Double Check Monitoring				
—Word	1.86	0.75	1.48	1.22
—Sentence	0.27	0.20	0.26	0.22
—Schema	3.25	1.16	1.93	2.16
Elaboration				
—personal	1.16	0.36	0.77	0.72
—world	7.45	8.98	8.65	8.01
—academic	0.14	0.30	0.32	0.16
—questioning	10.40	10.78	10.28	10.79
—creative	0.13	1.21	0.96	0.53
—imagery	0.44	0.29	0.39	0.34
Inferencing				
—linguistic	2.11	8.48	5.92	7.26
—voice/paralinguistic	3.97	2.97	2.76	4.04
—extralinguistic	2.10	2.56	2.21	2.42
—between parts	3.89	2.59	5.16	2.64

5.3.3.2.3 Learning style

In addition to gender, this study also examined the possible relationship between learning style and use of listening comprehension strategies. It is reasonable to hypothesize a close relationship between cognitive style and pattern of strategy use (e.g., Ely, 1989; Skehan, 1989, 1991).

5.3.3.2.3.1 Grouping of participants

Each participant completed the Learning-Style Inventory (LSI). Scores were tabulated and plotted on a grid which placed each participant in one of four quadrants: 1) Type 1 learners: innovative, divergent intuitors; 2) Type 2 learners: analytical, assimilating intellectuals; 3) Type 3 learners: commonsense, convergent implementors; and, 4) Type 4 learners: dynamic, accommodating inventors. Of the 21 participants, 12 were identified as Type 2 learners; all males, except one, fell into this quadrant. Of the remaining participants, two were identified as Type 1 learners, another 2 identified as Type 3 learners and 3 participants identified as Type 4 learners. Two participants completed the inventory incorrectly, resulting in invalid scores. In calculating the mean strategy use for each quadrant, only valid outliers were used; i.e. scores which fell close to dividing lines between quadrants were not included. This meant that the scores of three more participants were not used, one Type 1, one Type 2 and one Type 4 learner.

Because the numbers within each quadrant were so small, comparisons were also made by hemisphere. In this case, scores that were considered invalid for calculation within a quadrant could still be used as valid scores for a hemisphere. For example, the score for Participant F205 fell almost squarely on the dividing line between Type 1 and

Type 2 learners, making it an invalid score for calculating means for Type 1 learners. However, this score could still be considered valid in calculating a mean score for quadrants 1 and 2 (learners who process information in a more reflective manner) because it was still a valid outlier for this grouping.

5.3.3.2.3.2 Findings

The data presented in Table 5.13 give the mean number of strategies used by both learning style (quadrant) and learning style grouping (hemisphere). Because the small numbers within each category make comparisons difficult, the following analysis will make comparisons between the larger groupings (ways of perceiving reality and of processing information) rather than quadrants.

Learners who perceive language experiences more intuitively, by sensing and feeling (Type 4 and Type 1 learners), appear to exhibit the same pattern of strategy use as successful listeners (see 5.3.3.2.4). They monitor more (8.67 to 5.81), elaborate in more personal ways (1.44 to 0.47) and infer more (20.11 to 15.47). Moreover, in contrast to the Type 2 and Type 3 learners who tend to analyze language experiences by thinking and reasoning about them, Type 4 and 1 learners repeat less (5.58 to 8.11), use less world and creative elaboration (7.09 to 9.25 and 0.29 to 0.86 respectively) and use transfer less (5.91 to 8.45). It appears that learners who take a more sensing, feeling approach to listening tasks tend to use metacognitive strategies more frequently.

When strategy use by learners who differ in the way in which they process information is compared, further distinctions become apparent. Learners who actively involve themselves in language experiences (Type 3 and 4 learners) appear to engage in

Table 5.13 *Mean Number* of Strategies by Learning Style Used in Phase III Think-Aloud Sessions*

Strategy	Learning Style Dimension				Learning Style Groupings			
	1 n=1	2 n=12	3 n=2	4 n=2	1&4 n=4	1&2 n=14	2&3 n=14	3&4 n=4
Planning	2.73	2.09	2.24	1.45	2.12	2.06	2.11	1.85
Comprehension mon.	9.10	5.72	6.38	7.80	8.67	6.23	5.81	7.09
Problem identification	3.64	3.77	3.19	2.12	2.50	3.78	3.69	2.66
Self-evaluation	5.46	0.36	0.75	0.00	1.37	0.77	0.42	0.38
Repetition	8.18	8.89	3.42	6.35	5.58	9.77	8.11	4.88
Grouping	0.00	0.32	0.00	1.15	0.57	0.27	0.27	0.58
Deduction/induction	0.91	1.05	0.00	0.87	0.66	0.97	0.90	0.43
Elaboration	14.55	22.45	18.52	22.76	20.73	21.03	21.89	20.64
—personal	0.91	0.55	0.00	0.29	1.44	0.61	0.47	0.14
—world	4.55	9.69	6.61	8.35	7.09	8.71	9.25	7.48
—academic	0.00	0.39	0.00	0.00	0.00	0.33	0.33	0.00
—questioning	7.27	10.32	11.92	13.58	11.45	9.96	10.55	12.75
—creative	0.00	1.00	0.00	0.58	0.29	0.86	0.86	0.29
—imagery	1.82	0.45	0.00	0.00	0.46	0.52	0.38	0.00
Summarization	29.09	23.33	34.23	21.06	22.44	23.04	24.89	27.65
Translation	5.45	8.04	3.59	6.05	8.67	9.22	7.40	4.82
Transfer	1.82	9.25	3.62	6.62	5.91	8.51	8.45	5.12
Inferencing	16.36	14.10	23.70	23.75	20.11	13.70	15.47	23.73
—linguistic	5.45	5.41	7.99	10.93	8.61	5.10	5.78	9.46
—voice/paraling.	6.36	2.94	3.83	6.06	5.33	3.12	3.04	4.95
—extralinguistic	1.82	2.23	4.00	2.88	2.61	2.12	2.48	3.44
—between parts	2.73	3.53	7.78	2.89	3.56	3.37	4.14	5.34

(*Number represents a percentage of total strategy use)

Learning Style Dimensions
1 innovative, divergent intuitors
2 analytical, assimilating intellectuals
3 common sense, convergent implementors
4 dynamic, accommodating inventors

Learning Style Groupings
4&1 sensing/feeling
1&2 reflecting
2&3 thinking
3&4 doing

more questioning for elaboration (12.75 to 9.96) and more inferencing (23.73 to 13.70), particularly linguistic inferencing (9.46 to 5.10). In contrast, their more reflective, observing counterparts (Type 1 and 2 learners) appear to repeat more (9.77 to 4.88), translate more (9.22 to 4.82) and use transfer more (8.51 to 5.12). It seems that learners who prefer to reflect and observe, rather than actively involve themselves in language learning experiences, tend to favour strategies such as translation, transfer and repetition when engaged in a listening activity.

In conclusion, although there appear to be some differences in listening comprehension strategies by language learners with different learning styles, it is curious that these differences are not greater. Considering the rather substantial difference in size between groups and the sometimes considerable variation in strategy use within the same group, it would not be justifiable to draw any firm conclusions.

5.3.3.2.4 Listening ability

Participants chosen for investigation in Phase III on the basis of criteria explained in Chapter IV, were classified as either successful and unsuccessful listeners so that differences in strategy use between these two groups could be examined.

Table 5.14 presents data on the differences in strategy use between successful and less successful listeners by proficiency level. An examination of this table quickly reveals that only two of the proficiency levels contain both types of listeners. Furthermore, one of those levels (Intermediate II) is unsuitable for comparison purposes since it contains only one unsuccessful listener. Finally, the one group remaining (Novice II) where some comparisons might be made, evidences very little difference

Table 5.14 *Mean Number* of Strategies by Proficiency Level and Listening Ability Used During Phase III Think-Aloud Sessions*

Strategy	Novice I			Novice II			Novice III			Intermediate II			Intermediate III		
	S n=0	LS n=4	Total	S n=4	LS n=2	Total	S n=0	LS n=4	Total	S n=3	LS n=1	Total	S n=3	LS n=0	Total
Planning	---	1.82	1.82	1.53	1.37	1.48	---	1.64	1.64	1.52	2.78	1.84	3.27	---	3.27
Comp. Mon.	---	2.91	2.91	6.61	4.67	5.96	---	3.93	3.93	11.11	10.18	10.88	9.79	---	9.79
Problem id.	---	1.37	1.37	2.88	0.00	1.92	---	3.79	3.79	6.11	2.78	5.28	4.13	---	4.13
Self-evaluation	---	0.37	0.37	0.26	0.00	0.17	---	0.00	0.00	0.00	0.93	0.23	2.97	---	2.97
Repetition	---	4.71	4.71	12.76	10.18	11.90	---	10.79	10.79	6.39	3.70	5.72	4.13	---	4.13
Grouping	---	1.74	1.74	0.33	0.00	0.22	---	0.00	0.00	0.00	0.00	0.00	0.00	---	0.00
Deduction/ind.	---	1.16	1.16	0.00	2.66	0.89	---	1.04	1.04	0.58	0.00	0.43	0.30	---	0.30
Elaboration	---	25.38	25.38	18.29	19.43	18.67	---	18.23	18.23	20.25	27.98	22.18	21.08	---	21.08
Summarization	---	12.91	12.91	16.42	17.53	16.79	---	33.22	33.22	29.96	25.93	28.95	31.10	---	31.10
Transfer	---	16.47	16.47	12.07	14.12	12.75	---	4.25	4.25	3.35	3.70	3.43	2.19	---	2.19
Translation	---	9.74	9.74	17.43	17.53	17.47	---	6.80	6.80	4.25	2.78	3.88	4.37	---	4.37
Inferencing	---	20.39	20.39	11.37	12.38	11.71	---	16.31	16.31	14.41	19.44	15.67	15.81	---	15.81

S = Successful listener
LS = Less successful listener

(*Number represents a percentage of total strategy use)

between the two types of listeners. When strategies are ranked by degree of use, the following cognitive strategies appear for both groups, with slight differences in order of ranking: elaboration, summarization, inferencing, translation, repetition and transfer. An examination of differences among the less used strategies shows that successful listeners at the Novice II level have a slight edge over less successful listeners in their use of metacognitive strategies such as comprehension monitoring and problem identification. However, because of these small group sizes, rather than comparing listeners by proficiency level, any further analyses will be made using Table 5.11, comparing all listeners.

An examination of the data presented in Table 5.11 (p. 123) reveals that the biggest difference between successful and less successful listeners appears to lie in the use of metacognitive strategies (16.17 and 8.39 per cent respectively). Successful listeners tend to use two times the number of metacognitive strategies than less successful listeners. A closer examination of individual strategies reveals that the most notable differences lie in the use of comprehension monitoring (8.91 to 4.28 per cent) and problem identification (4.22 to 2.13 per cent).

Differences between successful and less successful listeners in cognitive strategy use are not as marked as differences in metacognitive strategy use. The most striking difference lies in the use of transfer; less successful listeners use this strategy almost twice as much as their more successful counterparts (10.44 to 6.49 per cent). Less successful listeners also tend to use inferencing more (17.36 to 13.62 per cent) as well as induction/deduction (1.28 to 0.26 per cent). Surprisingly, both repetition and

translation were used almost equally by both successful and less successful listeners. One would assume that the more successful listeners would use these strategies less frequently than their less successful classmates, with approximately the same degree of difference as noted for transfer. This unexpected result may be explained by the two successful listeners at Novice II who used a great deal of repetition (14.47 and 21.88 per cent) and translation (15.79 and 27.08 per cent). In this case, it appears that the averages for repetition and translation may have been skewed by the sample at the Novice II level which, as noted earlier, represents either a period of instability in strategy choice or an aberration in the sample.

An examination of the data presented in Table 5.12 (p. 126) shows some interesting differences between successful and less successful listeners in their use of comprehension monitoring, elaboration and inferencing, once these strategies have been broken down into their subcategories. The difference in comprehension monitoring between successful and less successful listeners appears to be most significant for double check monitoring (1.86 to 0.75 per cent respectively at the word level and 3.25 to 1.16 per cent respectively at the schema level). Successful listeners appear to check more across the task, keeping in mind what they know and/or think they know and then verify this information as they continue to listen, or listen for a second time. The differences in types of elaboration used are less marked but no less interesting. Successful listeners appear to personalize their elaborations slightly more (1.16 to 0.36 per cent), whereas less successful listeners appear to elaborate in more creative ways (1.21 to 0.13 per cent). Finally, less successful listeners also tend to use general world elaboration more

(8.98 to 7.45 per cent) and they appear to do considerably more word level inferencing than successful listeners (8.48 vs 2.11 per cent).

In conclusion, from a quantitative perspective, the major difference between successful and less successful listeners appears to lie in their use of metacognitive strategies, primarily comprehension monitoring. This ability to monitor is complemented by a facility to pinpoint what needs more attention or greater clarification.

5.3.3.3 Qualitative analysis of Phase III protocols

A quantitative representation of the differences in listening success can offer only a superficial picture of those differences. Such a representation cannot capture how a strategy is used or the particular combinations of strategies deployed by a listener that "trigger" the meaning of an oral text. Neither can it capture the effective use of a strategy, such as the accuracy of an inference or an appropriate connection to prior knowledge. Furthermore, a simple strategy count cannot convey the level of meaning at which a strategy was deployed, e.g. whether monitoring is done at a local level or a more global level. Therefore, a qualitative analysis was done to strengthen the quantitative results and to scrutinize protocols for variations in strategy use not discernable through a simple strategy count.

The following discussion will examine participant protocols for a more comprehensive understanding of how different listeners interact with an oral text. This qualitative analysis will begin with an examination of effective prediction skills as evidenced in the use of selective attention by successful listeners. Then protocols of successful and less successful listeners will be compared. This will be followed by an

examination of representative protocols for differences in use of world and linguistic knowledge at different levels of language proficiency.

5.3.3.3.1 Use of selective attention

Selective attention, as a manifestation of prediction skills, appears to be an important strategy leading to success in listening comprehension. The successful use of this strategy, not apparent in the quantitative results presented earlier, could only be made through a qualitative scrutiny of the protocols. Most successful listeners in this study made predictions, anticipating what they might expect to hear. Even though they were given no advance organizers, very early in the listening task these listeners developed hypotheses about what was going to happen. Evidence of these predictions point to an active approach to the task, a dimension of planning which provides a focus for listening. Such a stance helped these listeners to selectively attend to the upcoming language input so that they could verify their predictions.

The nature of these predictions varied greatly but they were all characterized by an element of anticipation. A given prediction could be highly specific, such as the following protocol, the first response Evan gave to a baseball advertisement which started with "Hé, tous les amateurs de baseball!":

> There is a baseball game or something. And the scores. I heard something about baseball, I don't know if it's going to be scores or if he is going to announce a game or something. (Novice II)

Another participant anticipated in a much more open-ended manner, nonetheless indicating an determined approach to understanding what he would hear next. Responding to the opening line of a very upbeat advertisement about a new magazine for

adolescents, Art responded as follows:

> Art: An announcement of a special. I don't know.
> Int: What's going on in your mind?
> Art: I don't know, just that, I don't know. He was saying what kind of saying what kind of special it's gonna be. I'm just waiting for it to come. (Novice II)

At more advanced levels of language proficiency, participants became more specific about what they would expect to hear, as the following protocol by Paula demonstrates. In responding to the opening lines of a dialogue about three Québecois adolescents discussing their weekend she says:

> Doesn't sound like what...the guy had a good weekend. He's about to tell the girl why. (Int. II)

These predictions could also appear further on in the think-aloud data, as evidenced in the protocols of Janet, a very successful listener. In the same dialogue of the adolescents discussing their weekend and the excuses they can give for not having done their homework, Janet responds:

> Uh, well, I'm thinking ahead and I'm thinking maybe his teacher will let him off because he told the truth or whatever, perhaps, I don't know. (Int. III)

When predictions were made further on in the text, they were often accompanied by comprehension monitoring as evidenced in the following protocol given by Janet responding to an excerpt from a weather broadcast:

> Janet: O.K. Uh, it's the humidity outside. Um, it's 47%, so um, this could just be a, a weather broadcast, but I don't think so. From the beginning it sounded like it's more important than that.
> Int: Uh huh.
> Janet: Um, I'll have to listen further to find out. (Int. III)

Predictions were occasionally exhibited by less successful listeners. In response to the opening lines of a telephone conversation in which a girl phones a radio disk

jockey to request a song for a friend, John responds as follows:

> I'm thinking of this guy is phoning up this girl and it sounds like both start a conversation, maybe he's going to ask her out or something. (Novice I)

This prediction was not verified, however. Either John did not have the necessary lexical knowledge to adequately monitor the elaboration made at the beginning of the text and/or he maintained an inflexible approach to the input which followed. Although it is hard to be certain, the protocols which followed indicated that John probably did not have the linguistic knowledge to adequately monitor his prediction. This last protocol demonstrates how use of prediction skills by itself does not necessarily lead to success in listening. It must be accompanied by comprehension monitoring, which, according to the quantitative picture presented earlier, appears to be one of the key strategies discriminating between the successful and less successful listener.

Based on the above discussion, it would appear that the deployment of an seemingly productive strategy does not, by itself, lead to success. However, when used in combination with another metacognitive strategy, deployment of a particular strategy can be very powerful.

5.3.3.3.2 Analysis of sample protocols

In an attempt to understand how students use a strategy or a combination of strategies, sample protocols of different participants working through the same oral text will be compared. Analyses will be made at three different levels of language proficiency, at the Novice I, Novice II/III and Intermediate II levels.

5.3.3.3.2.1 Novice I comparison

The following analysis compares the thought processes of two participants

listening to an advertisement for an Italian restaurant. Although Bea and Ann come from the same French 10 class, Bea, the only successful listener from this group, was placed at the Novice II level.[1]

(Italian music) ***Vous aimez les mets italiens? Eh bien, venez au restaurant Santa Lucia au 3261, boulevard St. Denis.***

Int: What's going through your mind? Did you hear anything?

Ann: No

Int: What are you thinking?

Ann: It's a day of the week. I'm not sure. It's a restaurant, I did get that part.

Int: Any other ideas going on in your mind right now?

Ann: Well, my first idea was that little part, it sounds like maybe a, like what's going to be for that moment, whatever. What's happening in the restaurant.

Int: Uh, uh. Anything else?

Ann: No.

Bea: They have something Italian...

Int: How do you know that?

Bea: Eh, I know that "vous avez" part something Italian, probably something Italian, I don't know, that sounds like the word Italian. That's just what I thought.

Int: O.K.

Bea: Sounds like a restaurant, I forgot the name now, Santa...

Int: What are you thinking?

Bea: The music. Sounds like an advertisement. Italian restaurant. I think...

Int: What else are you thinking? Any ideas?

Bea: I expect them to talk about a menu or something.

Int: Anything more?

Bea: No.

Even though this text is very difficult for both listeners, these opening protocols already demonstrate a clear difference in approach. Ann is quite jumbled in her thoughts, needs to be prompted to share what she is thinking and then only advances the idea of the restaurant (transfer). At the same time, Bea picks up on both "italien" and

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[1] While Bea (F104) placed at the Novice II level of language proficiency, her protocols more closely resembled those of her less successful French 10 classmates. Therefore, her protocols were compared with Novice I protocols.

"restaurant" (transfer), supports her transfer by pointing to the music (extra-linguistic inferencing), speculates on the structure of the text (elaboration of textual schemata), and on that basis anticipates what she might hear next (selective attention). She also attempts to get at greater detail by struggling with the verb "vous avez" (which she has misunderstood) and the name of the restaurant. Presumably, cognitive constraints do not allow her to deal with such detail.

Là vous allez trouver votre repas préféré...spaghetti, lasagne, ravioli et, bien sûr, la meilleure pizza en ville!

Ann: The menu.

Int: O.K. Anything else?

Ann: No, just like the pizza, ravioli, spaghetti and whatever. Pizza.

Bea: Obviously he is listing spaghetti, ravioli, and of course, pizza, just listing off what they serve at this wonderful Italian restarant.

Int: How do you know it is wonderful?

Bea: I don't know.

Int: Anything else? Anymore ideas?

Bea: No.

Both listeners use food names (transfer) to suggest that the menu of the restaurant is being presented. Bea attempts to get at more detail by suggesting it is a wonderful restaurant, but she can not recall why. Presumably "meilleur" flashed through her mind, but it described the pizza. Although both listeners are using their established conceptual framework to interpret what they hear, Bea is attempting more bottom-up processing to arrive at more detailed comprehension.

Chaque semaine au restaurant Santa Lucia il y a un bon spécial.

Ann: No.

Int: Nothing that you picked up? Any words you're linking in to?

Bea: Something, let me think, il y a something, there is something, I don't know.

Int: No ideas as to what he said?

Ann: No.	Bea: Not really. Bon...He said bon. I'm not sure.

Neither listener picks up on "spécial" here, surprisingly. Whereas Ann is lost, Bea recognized "il y a" and "bon," focused there and missed what came after. Speed of the dialogue and limited linguistic knowledge appear to impede understanding for detail at this level, and furthermore, any attempts to focus on grammatical detail appear to interfere with the perception of semantic cues.

Cette semaine on offre une lasagne au gratin avec salade pour 3,50$ seulement.

Ann: There is a salad. And an appetizer or something. That's all I picked up.	Bea: Something with cheese, salad, I think he said, croissant, but I'm not too sure. Drinks.

Both listeners use "salade" (transfer) to elaborate further on the menu and inference on what they did not understand. Whereas Ann only suggests a broad category of appetizers, Bea is more actively engaged with the text, using her conceptual framework (elaboration and inferencing) to suggest more specific possibilities such as cheese and croissants (both from "gratin"?) and drinks.

En plus, tous les lundis entre 17h et 20h on dine au spaghetti pour seulement 2$---à volonté!

Ann: The spaghetti, main course may be, I don't know, that's all I could remember.	Bea: I thought I heard lundi in there, spaghetti again now.
Int: What are you thinking?	Int: So what are you thinking?
	Bea: The way they're talking about some sort of special that goes on Mondays or something.
	Int: Anything else?
	Bea: No.

Both listeners now link into "spaghetti" (transfer) and elaborate further on that, and Bea picks up on more detail again ("lundi"). Bea's understanding goes beyond the surface transfer, processing at a deeper level in order to tie together what she thinks she

knows. In this case, she ties together the food, the day and the idea of a special. This between parts inferencing seems to be a preliminary step to the crucial strategy of comprehension monitoring.

Vous ne voulez pas sortir? Alors, pour une délicieuse pizza chaude, téléphonez au restaurant Santa Lucia au numéro 385-9318...livraison rapide et gratuite!

Ann: It says for reservations to phone and he gives the phone number and also the name of the restaurant and that's all I got.

Int: How did you pick up on the reservations?

Ann: No, it's, call the restaurant, something like that. He gave the number.

Int: Anything else?

Ann: No.

Bea: He said an address, and he said something was hot, I think.

Int: What are you thinking?

Bea: They are talking about this store and he said to go to this place and then they just give you the address and the name again, and that's it.

Int: Anything else?

Bea: It's got to be a commercial.

On the basis of these protocols alone, it appears that Ann may have a better understanding of the text than Bea. Both listeners elaborate on the string of numbers, Ann inferring a telephone number and Bea inferring an address. Bea adds, but does not tie in more detail with her comprehension of "chaud". Although she does not appear to have all the details straight (she seems to have forgotten about the restaurant schema for the moment), she does confirm that this is an advertisement (comprehension monitoring).

On her second time through the text, Bea immediately picks up on the restaurant schema again, whereas Ann adds nothing new to her understanding of the text. This time Bea changes her understanding of the numbers to a telephone number, based on her comprehension of "téléphonez" (transfer). She also amplifies her understanding of the text through further instances of transfer (mets=meals, préféré=favorite,

spécial = special).

In conclusion, both Ann and Bea have very little linguistic knowledge and language experience by which to understand a rapid oral text. Yet they both use their knowledge of English to parse out cognates (transfer) which help them conceptualize a schema (elaboration). This conceptualization guides their interpretation (inferencing) of this text in which they comprehend very few words. Whereas Ann mostly uses top-down processing in order to elaborate and infer from her conceptual framework, Bea, in addition, parses the text for additional linguistic cues (bottom-up processing) that will further support her inferences and elaborations, and verify predictions made through top-down processing. Although it appears that Bea's attempts at bottom-up processing are not necessarily all that helpful at this level (in fact they sometimes hinder her perception of other, more important semantic cues), the ability to also engage in bottom-up processing becomes increasingly important to successful listening comprehension at more advanced levels of language proficiency. Furthermore, Bea gives evidence of an active approach in her attempts to predict (selective attention) and to monitor comprehension; these two directing strategies are crucial to continued success in listening comprehension. From a quantitative perspective, Ann (F103) and Bea's (F104) respective learning strategy profiles do not differ substantially (see Tables 8.1 and 8.3 in Appendix D). However, a qualitative analysis of protocols, particularly at this level, reveals differences in thought processes and approach that are imperceptible through a quantitative analysis.

5.3.3.3.2.2 Novice II/III comparison

The following analysis compares the thought processes of three listeners who have

a broader linguistic base than Ann and Bea. Julie and Evan are both Novice II learners (a less successful and successful listener respectively), whereas Jill is an ineffective listener at the Novice III level.

C'est une annonce spéciale. Attention les jeunes! Formidable! fait ses débuts! Vous attendez ce magazine depuis longtemps, et le voilà enfin!

Julie: Eh, he is talking to les jeunes, I guess, younger people, he is saying Attention which is listen.	Evan: He is asking for the attention of all the young people, attention les jeunes;	Jill: Eh, a special announcement, music, he said young kids, maybe some kind of attraction or something,
Int.: Mmm,	Int.: O.K.	Int.: Some kind of a what?
Julie: Eh, a magazine, for children..	Evan: He says something about attention to the youth or something.	Jill: Attraction, some...
Int.: So what is going through your mind? What are you thinking now?	Int.: So, what are you thinking?	Int.: Attraction, o.k. I get the word. O.k, anything else?
Julie: The thing is, I guess, a magazine for younger children, and children, that's all I got.	Evan: He just wants to talk about something that appeals to young people, I didn't get it.	Jill: It's for young kids so eh, eh,
	Int.: O.K., no ideas what it is that he is getting at?	
	Evan: No.	

All three listeners use bottom-up processing to quickly cue into the audience for this particular text, but only Julie has understood at this point that it is a magazine. Jill is more alert to all the cues in the text (extra-linguistic inferencing). Even though Evan missed the word "magazine," his protocol demonstrates an awareness of the type of text this might be and what he has to listen for (problem identification). Julie's protocol indicates evidence of surface processing; i.e. translation.

Aujourd'hui, chez votre marchand de journaux, vous trouvez Formidable! le magazine fait spécialement pour vous, les jeunes.

Julie: Something about a special, it's for, I know he said vous in there, so that must mean	Evan: Something about a magazine, he is trying to plug in on a magazine for young people.	Jill: O.K. A special magazine for young kids.

for just about everybody.	Int.: How do you know that?	Int.: Anything else?
Int.: Uh, Uh.	Evan: Well, maybe a store; a magazine, could be in a store too.	Jill: Eh, so if it is a new magazine coming out or something like that.
Julie: That's really all I can tell.	Int.: What are you thinking about that?	Int.: Yeah, how do you know that?
	Evan: I'm trying to think about a store for youth, I don't know. For young people, I don't know.	Jill: Because they're announcing it so it is the beginning of something.

Both Evan and Jill now quickly identify that a magazine is being talked about. On the other hand, Julie just focuses on the "special" (transfer from spécialement) and further surface processing (analysis of "vous"); she does not tie this in with earlier information. Evan considers the possibility of the often-confused "magasin/magazine," checks out the plausibility of both, and decides that there is not yet enough information to make a definite decision (comprehension monitoring).

Dans <u>Formidable!</u> on vous parle de vos personnalités préférées---chanteurs, groupes, vedettes de cinéma et de la télé, athlètes, etc.

Julie: He is saying there's like great conversation, parle, that's speaking so, there's movies, tele fund raising, that must be magazine, so I got that. Like listings to movies, conversations, that's about all I got.	Evan: It's specially suited, I think it's a magazine especially suited for the athletes, the singers and there is something for every one in it.	Jill: Eh, he says, television, it will appear on television or something and maybe it's about things kids can do, a magazine in a group or television. Eh, special announcement about that.
	Int.: Uh huh.	
	Evan: It says prefer, préfère is prefer.	
	Int.: Uh, uh.	
	Evan: What you prefer, singing, athletes, or acting. Athletes, or athletic groups.	

All three listeners have used cognates such as télé, athlèthes, cinéma (transfer) to elaborate further on their understanding. Although Evan, like Julie, engages in some

surface analysis here (prefer=préfère) he is still focused on what this text is about (top-down processing); he appears to have decided that it concerns a magazine. On the other hand, both Julie and Jill appear to be heading off into tangents. With no solid conceptual framework into which they can fit new information, these listeners lack the sense of direction necessary for differentiating between information that is congruent or incongruent with the framework. Therefore their summarization, which contains elements of truth, is incomplete and disjointed.

Beaucoup de bons articles, de belles photos et de bandes illustrées.

Julie: With great photos, and articles, well...

Int.: So what are you thinking?

Julie: Eh, he is talking, I don't know, about like a magazine for young people I guess they can get involved with maybe, I'm not really sure.

Int.: mmm

Evan: Yeah, there is good photography in it, so I think altogether he is kind of selling this magazine to young people, and trying to make it appeal to young people because there is all kind of things in it interesting to young people.

Jill: Des bons photos, so, it distribuer or something like that,

Int.: Oui, any ideas going through your mind right now? What are you puzzled over?

Jill: Eh, how everything ties together, I guess.

All three listeners appear to be trying to tie things together. Julie is back to her magazine schema but does not seem too certain about it. Julie's apparent lack of self-confidence (manifest in all three sessions) may explain her hesitant and passive approach. Jill appears to be involved in more surface processing, but in spite of her confusion, she is attempting to monitor her comprehension. Evan has now clearly decided that this is a promotional offer for a magazine for young people. This allows him to confidently interpret the upcoming input within the conceptual framework which he has activated and verified. Jill and Julie continue to be lost.

Il y a des coupons pour des offres spéciales et un concours à tous les mois. Ce mois-ci vous pouvez gagner un voyage au Carnaval de Québec!

Julie: I guess there is a trip to the Carnival in Quebec, so maybe it is like something for them to enter a date, to write, or draw,

Int.: How do you know that?

Julie: Eh, because just by the way he explained to them what can be done so I guess if they write an article or draw a picture or I don't know what else.

Int.: Mmm, mmm.

Julie: Maybe they can win a trip to the Carnival or something if that's what they write about.

Int.: Mmm, mmm. Anything else going on in your mind?

Julie: No.

Evan: There is coupons in it for special offers, I heard that, and there is contests in it, that you can win a trip to the Quebec Carnival, gagner, for to win.

Int.: How do you know there's a contest?

Evan: Well, something, he said something about you can win a trip to the Quebec Carnival.

Int.: So ..

Evan: So, this magazine has all these things in it and he's just trying to make it interesting.

Jill: So he has coupons for a carnival so maybe all those are included in the carnival. He's telling the kids about this carnival in a special announcement, he is saying that you can get, special coupons for it, and that this is going to be half TV and everything.

Evan continues to systematically accommodate the new information into the conceptual framework he established earlier. Even though he does not know the word for contest (concours) he is able to infer its meaning on the basis of the schema and new linguistic input. Meanwhile Julie and Jill appear to have forgotten about the idea of a magazine and just attempt to understand what they are presently hearing without connecting it with what they already know. Using the jigsaw puzzle metaphor (Long, 1989), Julie and Jill have lost the sense of the overall picture (the final product) so they no longer know where they can fit the pieces that they are able to comprehend. Cognitive style may also help to explain the difference in approach that is evident at this point. Julie and Jill may be too field independent, failing to perceive the whole picture;

whereas Evan may be more field dependent, allowing him to sort out the pieces without losing track of the whole picture.

Et <u>Formidable!</u> n'est pas cher! Seulement 1,50$ par mois. Oui, c'est vrai, mes amis! Vous ne payez que 1,50$ par mois. Formidable? Oui, c'est <u>Formidable!</u>

Julie: He is saying that's true. I guess they were talking about that before, that's really great, and it's true, it's great, that's what I caught the second part, the ending.

Int.: Mmm. Anything more that you think is going on in your mind about this thing?

Julie: No.

Evan: Well, the magazine is $1.50, and this person, he's trying to sell it to, I don't know if he's like accepting it or not, I heard a couple words that I didn't quite understand, like after he said 'Formidable' and I missed the word after that.

Int.: Uh, uh. Any more ideas? ... No?

Jill: O.K. he is saying that carnival will be wonderful, should be fun for the kids to do, and he explained it what is there, and he has coupons for it and you have to buy coupons or something.

Int.: What else do you think?

Jill: The woman said special announcement and he came on with music so it must be fun and he described what's there ...Quebec then he said carnival, so it must be a carnival from Quebec.

These final protocols reinforce what has already been noted. Although the price is repeated, neither Julie nor Jill pick up on it. This may be due to a deficient conceptual framework and/or an inability to anticipate the logical components of a magazine advertisement. Therefore, Jill continues to reason in a circular fashion while Julie just picks up on individual words ("vrai" and "formidable"), but never really interacts with the text as a whole. On the other hand, Evan picks up on the price as a natural component of a promotional offer, and even speculates (selective attention) on whether the offer will be accepted, hinting that that may be the meaning of the words he did not get (problem identification).

At the Novice II level, more differences between successful and less successful listeners begin to appear. Novice I learners, regardless of listening ability, were forced

to rely almost entirely on top-down processing in order to arrive at some kind of meaningful interpretation of the text. In contrast, Novice II/III listeners recognize more words because they have more linguistic knowledge. This compels them to use more text-based strategies, involving word-for-word bottom-up processing, and results in an inability to keep up with the speed of the input. The less successful listener at this level appears to shift often in establishing a conceptual framework, resulting in a less cohesive and unstable framework. Consequently, the listener has greater difficulty holding meaning in memory and suppressing irrelevant information. This is manifest in incomplete summarization and a disjointed understanding of the text.

Whereas an active approach to the task and the use of predicting strategies appear to be the characteristics that distinguish the successful Novice I listener from the less successful listener, there appear to be more distinctions at the Novice II/III level. Less successful listeners at this level appear to translate more, which "...because it involves surface mappping between languages, generally fails to activate...conceptual processes" (Swaffar, 1988, p. 138). Furthermore, an inability by the listener to monitor new linguistic input and to provide direction to the listening process evidences a deficiency in metacognitive strategies. All of this put together results in sparse and disjointed summarization. This illustrates, once again, how a quantitative picture reveals only an indistinct picture of strategy use. With regard to the use of summarization, the percentage use of this strategy was 23.53 (Julie), 28.32 (Evan) and 35.63 (Jill) per cent of total strategy use. Yet, the summarization of Julie and Jill is qualitatively different from that of Evan.

In conclusion, the above protocols confirm the crucial role of metacognitive strategies in listening comprehension. Jill and Julie lack the direction of strategies such as monitoring and selective attention, relying heavily on decoding surface features of the language (translation) rather than interacting with the text. In contrast, Evan interacts with the text in a dynamic way, predicting, interpreting and monitoring new linguistic input through the conceptual framework which he actively sought to establish from the start.

5.3.3.3.2.3. Intermediate II comparison

This final analysis compares the protocols of a successful and a less successful listener, both ranked at Intermediate II level of language proficiency. Paula comes from a French 20S class and Tom comes from a French 20N class.

(Background noises) ***Bonjour Sylvain.***
Salut Philippe! Salut Christine!
Ca va, toi?
Plus au moins.
Pourquoi? Tu n'as pas passé une bonne fin de semaine?
Oh oui! C'est ça le problème.

Paula: There's, there's friends talking and uh, they're talking about a weekend. Doesn't sound like what, the guy had a good weekend. He's about to tell the girl why.

Int.: How do you know he didn't have a good weekend? What makes you think that way?

Paula: He sounded disappointed, in his voice was disappointing and uh, I heard her ask "Why not? Didn't you have a good weekend?" or something like that. So, obviously something happened, something like that.

Tom: Ah, didn't hear much there, I heard a problem, so I guess that uh, this guy's got a problem because um, by the tone of his voice, he sounds very depressed. Ah...

Int.: Anything else going on in your mind?

Tom: They're about, they're about, um, I hear like, I think there's three people. This looks like some kind of school situation because the voices. They are not very uh, they don't sound like adults.

Int.: What makes you think that?

Tom: Well, um, well usually uh, I mean, they, uh, it sounds like that these people are friends. Like, uh, by the way, you know they address each other by their names, so. Uh, usually when

adults have their problems I guess, they probably talk to their um, like wives or uh, someone close to them. These, I guess, these like, these people sound like friends and the voices, they don't sound like you know, adults.

Both listeners make effective use of voice and extra-linguistic inferencing (tone of voice and background noises) along with word inferencing ("problème," "fin de semaine") to elaborate on the topic of this text. Both are creating a conceptual framework (friends talking about a weekend and something happened) within which they will interpret the upcoming language input. However, only the effective listener (Paula) gives evidence that she is anticipating what she might hear next.

Tu sais, mon frère Francis, le grand de vingt ans, il a loué un appartement avec sa blonde. Il est parti de chez nous en fin de semaine et je l'ai aidé à démenager.

Paula: He helped his friend do something. Uh, I don't know what it was, but I heard him say helping his friend. Whatever happened, it was with his friend.

Int.: O.k. Anything else that you'd like to say about it? What are you thinking now?

Paula: Uh, I don't know what his friend was doing. I missed it, but, he said that he, he helped him do something.

Tom: Uh, just that I heard "blonde", so um, must be something to uh, be associated with a girlfriend because um, well, she wouldn't talk about another guy, so I mean, usually, probably, it's probably another girl, so they're, they're probably having a fight or some, some, something like that.

Int.: How do you know that? What's going on in your mind?

Tom: Um, well, um, I don't see any other kind of problems that uh, these, uh, two, a boy and a girlfriend can sort of experience besides a personal relationship. And that's about it.

Even though both listeners had difficulty with this excerpt, their protocols demonstrate a distinct difference in how they are handling this new input. Paula is using the framework she created earlier, along with a key verb (aider) to venture that "he helped his friend do something" (problem identification), something she will continue to listen for. On the other hand, Tom has missed everything except "blonde," which he tries to tie in with what he learned earlier. Because he has missed so much new

information, Tom appears to be in a "deficit position" already with regard to interpreting upcoming linguistic input.

Puis après, on a commencé la peinture de son appartement.
Ah! C'est le fun ça!
C'est amusant, mais avec tout ça, je n'ai pas fait mon travail de français et c'est aujourd'hui qu'il faut le remetrre. Comment est-ce que je vais expliquer ça à mon prof?

Paula: Uh, he said he started, probably fixing up his apartment, something about his apartment. Probably just moved in um, because they're fixing it up.

Int.: O.k. Anything else?

Paula: Uh, she said "It must have been fun". Uh, he didn't finish his French homework um, because he was helping with his friend move in. Uh, he doesn't know how to explain to his teacher.

Int.: O.k. How did you arrive at that?

Paula: Uh, I just knew. I missed something in between but I could tell that he didn't know what to tell his teacher so he obviously didn't do it because of the apartment.

Tom: O.k. Um. I heard that uh, they were going to something about an apartment to have, I assume to have fun or something like that. And uh, as a result he uh, he probably couldn't do, he couldn't do his uh, French homework, that, which was due in today and so he has to talk to his uh, teacher. So uh, maybe it's related to this uh, this blond girl. Maybe she's like uh, diverting him away from his work or something like that by uh, you know uh, taking him to places, having fun.

Int.: Anything else?

Tom: Uh, no.

Both listeners pick up on "apartment," "fun" and "not doing French homework." However, Tom is desperately attempting to bring some meaning to this new input so that he can fill in the details of the conceptual framework he actuated earlier. However, his inability to process larger chunks of language results in cognitive overload. The limited capacity of STM does not allow for very much word by word processing (translation), in addition to higher order processes such as monitoring and anticipation. It is clear that this text is too difficult for Tom, and the situation is further exacerbated by Tom's almost exclusive use of bottom-up processing.

On the other hand, Paula is able to process larger chunks of linguistic input

because she has automated more lower level linguistic processes. This allows her to also focus on higher level metacognitive strategies. Because she knew what kind of information she needed to listen for after the last excerpt, Paula could selectively attend to the upcoming input and, using top-down processing, make pertinent elaborations and inferences on what she understood.

Dis-lui que tu ne peux pas lui remettre parce que tu as été malade, c'est tout! Ou tiens! Tu pourrais lui dire que tu n'as pas trouvé assez de références sur le sujet.

Paula: Uh, she said something about being sick, I think. Uh, something about difference, the subject, but I don't know what she's talking about.

Int.: What's going on in your mind? What are you thinking now?

Paula: I think he also said, she also said something about his mother. I thought I heard "mère" but I'm not sure. Don't...I just know that something she said something about him being sick and being a difference. I don't know.

Int.: O.k. What are you thinking?

Paula: To me it doesn't fit in.

Tom: Uh, didn't get much there. I heard "subject". I don't think I can relate anything out of this.

Int.: What's going on in the back of your mind?

Tom: Um, well, uh, I was thinking about the uh, other, other, other sentence, other phrase that I was hearing before you paused it and I was thinking whether this had any relationship to this thing. So I wasn't really, uh, I wasn't really concentrating on this one, but rather I was thinking about the other phrase that we were stopped, when you stopped.

Int.: Any other ideas?

Tom: I just, I just uh, caught "subject". Maybe that's, maybe that's has something to do with the, the his, uh, homework or his um, or his uh, progress in school or something like that. Um...

Paula executes a bad transfer at this point, but monitors her assumption, recognizing that this transfer is incongruent with her current understanding of the text. Meanwhile, Tom's protocols reveal that he is so far behind that he is virtually lost. He is only picking up on the occasional word due to his use of an inefficient strategy such as translation. This analysis is further supported by Tom's self-reported strategy use in the Phase I interviews where he stated "A little voice inside me is translating," and, in

explaining what he does when he has difficulty, "I think about the meaning but consequently miss a lot that comes afterwards." Tom does attempt to match what he understands with the conceptual framework established earlier; however, because he appears to be translating word for word instead of processing units of meaning as propositions, he cannot keep up with the velocity of the linguistic input, compounded by a Québécois accent. As suggested earlier, an overreliance on bottom-up processing precludes the use of metacognitive strategies such as selective attention and subsequent monitoring.

Pas très fort, ton histoire.
Dis-lui...que tu es allé à la campagne avec tes parents [illegible] que tu as oublié ton travail à la maison.

Paula: I think she's saying that, she's giving him some sort of excuse to give the teacher, I think. Uh...

Int.: How do you know that?

Paula: She said, uh, to tell dit or whatever um, that she was with his parents and he forgot his homework. Something about being with his parents and forgetting his homework. So sounds like she's making him an excuse.

Tom: Um, I heard uh, that uh, like he's probably going to uh, the uh, country with his uh, parents or something like that. But uh, let's see, I heard something about uh, "travail a la maison", so maybe uh, he probably couldn't go because he had to uh, do work, do his work at home or something like that.

Int.: Anything else you want to say there?

Tom: Um, not much. Maybe uh, because he, he has to maybe working at home. That could relate to not like, uh, completing his homework, his French homework or something like that.

Int.: What makes you think that?

Tom: Uh, well, he first, he like uh, he said that, uh, he didn't do his French homework which is due today. Maybe his French teacher assigned him some, some large task that he didn't do like over the week, maybe over the, during the evening or something like that.

Tom picks up more details here, but he has difficulty connecting this new information with what he already knows. Because he has missed so much input earlier, the framework into which he is attempting to slot this new knowledge is not sufficiently

defined for him to monitor this information for congruency. On the other hand, Paula's more clearly defined conceptual framework helps her to interpret new input, even though it is apparent that she does not understand every word.

Non et non. Je ne veux pas mentir. Je veux lui dire la vérité mais...m'arranger pour éviter les ennuis.

Paula: He doesn't want to lie. He wants to say the truth, but he's not too happy about it or something. He said "mais" but I missed what was after that.

Int.: O.k. How do you know that?

Paula: Because, "Non, non. Je ne veux mentir". I could understand that, didn't want to lie.

Tom: Couldn't catch anything there.

Int.: What are you thinking?

Tom: Uh, well, I was trying to catch like, I was trying to um, catch the first few words, trying to like uh, translate, just repeating them over and over again seeing if they uh, they really meant anything, but I couldn't catch anything.

Tom appears to be totally lost and his protocols also reveal that he tends to repeat what he does not understand. Repetition is another inefficient surface-level processing strategy. Paula understands "mentir," which matches and further refines the conceptual framework she has adopted. Furthermore, she recognizes that she missed something that is relevant to a complete understanding of this excerpt (problem identification).

Dis-lui que ton frère n'a pas beaucoup d'argent et qu'il comptait sur toi pour l'aider. C'est vrai, non! Puis, tous ces travaux ont pris plus de temps que tu l'imaginais.

Paula: Uh, I totally didn't, I didn't know that one. Said something about imagination I think, imagining at the end. I don't know any...

Int.: What's going on in your mind?

Paula: Well. I missed that one. Sorry.

Tom: Oh, I caught a word, caught a few words but I forgot what they were. Something like um, oh, um, I forgot them.

Int.: O.k. Anything else that's going on in your mind?

Tom: Uh, well. The same thing as before. I'm just trying...

Ca, ça a plus de bon sens. Puis, pour compenser mon retard, je pourrais lui faire une page de plus. Il verrait ma bonne volonté. Pas vrai?

Paula: Something about making a page or something. Writing a page or something. I don't. I don't know. Um, he asked if it wasn't because of the (unintelligible). She agrees with

Tom: Um, I think I heard uh, something like um, um, um...

Int.: Which way are you thinking? What's

him probably about what he's saying. I don't know what he said.

going on in your mind?

Tom: Um, well, I'm, I was uh, trying to think of um, the mean, the um, the other, like the things I did know before and how just trying to sort of like, how it ties in with this thing, but can't find any, I just can't find any words that um, sort of relate to a topic of this thing.

Int.: Anything else?

Tom: No.

Both listeners are now experiencing difficulty. The impact of the speed of the dialogue is unmistakable here. In the top excerpt, Paula is left with only the last word that she can consciously process. Tom is completely bogged down; in fact, he is overwhelmed. This text is obviously too difficult for him. Paula does not understand much, but picks up on other cues, using voice inferencing to hypothesize about the interaction between the speakers.

Bien sûr. De toute façon, c'est un professeur très compréhensif. Tu vas voir!
OK les amis. Merci de vos bons conseils. Je me sens mieux.

Paula: He thanked his friends for the good advice. Um, they're the best or something. Thanked, just thanked them.

Int.: What's going on in your mind now?

Paula: Uh, he probably, they probably told him what to do about his situation and uh, he took the advice, so he's probably gonna' do something what they said. But I don't know...

Tom: O.k. Well, uh, I heard something about um, uh, "teachers" really, um, something like uh. I think I heard "comprehensive". I don't know, I'm not really sure. I think uh, it might be uh, strict or something, I'm not sure. But uh, he thanks his friends for his advice so he was probably um, seeking the advice of his friends. Um, that's about it.

Int.: O.k. Anything else?

Tom: No.

Both listeners are able to match this conclusion with the conceptual framework they used to interpret this text. Tom makes a good effort at inferring the meaning of "compréhensif," but his understanding of the text is not rich enough for him to infer the meaning of this word correctly.

In conclusion, although Paula has not identified all the details for a comprehensive understanding of this text (in fact, her comprehension of the last third of the text is minimal), she has a clear notion of the content schema which she has verified throughout her first listening effort. Furthermore, she has identified areas that need further clarification. She now has the requisite background information and planning strategies to direct her second listening effort and make it as productive as possible. In addition, her simultaneous use of top-down and bottom-up processing strategies will enable her to allocate attentional resources to comprehension monitoring.

On the other hand, Tom has a very sketchy idea of this text since he could not embellish the conceptual framework he had instantiated. This was due to either an inadequate lexical base, a compulsion to translate, an inability to process language as meaningful chunks, and/or an almost exclusive bottom-up approach to processing input. At this level, a successful bottom-up approach (necessary for detailed comprehension) requires listeners to process linguistic units as meaningful propositions and not to allocate precious attentional resources to inefficient strategies such as translation and repetition. At the same time, the efficient processing of linguistic units is facilitated by a solid conceptual framework used by the listener in a top-down manner to predict and monitor those linguistic units. However, when confronted with a very difficult text, Tom did not forego a bottom-up approach in favor of a more efficient top-down approach where he could use prediction strategies such as selected attention. Judging that this text was too difficult, the investigator switched Tom to an easier level where he continued to exhibit the same patterns of strategy use.

5.3.3.3.3 Use of linguistic knowledge and world knowledge

The previous discussion of differences in approach to listening comprehension illustrates how the listening process is more than just surface decoding of speech. The world knowledge and life experience that the listener brings to the text is as important as the linguistic input provided by the text for constructing a meaningful interpretation of the intended message. The following discussion will argue for an interactive view of listening comprehension, using a case study approach to examine more closely the interplay between linguistic and world knowledge. Representative protocols from both Novice and Intermediate levels will be examined.

The questions guiding the analysis are those posited by Long (1990, p. 73):

1) How do L2 listeners make connections between linguistic input and relevant schemata? What causes them to make misconnections?

2) How is L2 proficiency related to instantiation of schemata during listening comprehension? Are schemata activated on a conscious level by L2 learners? Do beginners or less proficient learners rely more on schemata than those with more advanced linguistic skills? At what point does reliance on schemata become an impediment to the comprehension process?

5.3.3.3.3.1 Evan, a successful listener

The following think aloud session by Evan demonstrates the interplay between world knowledge and linguistic knowledge at the Novice level. Evan is in his second year of French (French 20) and was classified as a Novice II successful listener. As the following protocol demonstrates, Evan skilfully uses world knowledge to his advantage

to compensate for an inadequate linguistic base and lack of language experience.

Allô, est-ce que je peux parler à mademoiselle Hélène Petit, s'il vous plaît.
C'est moi-même, monsieur.

Evan: I think he says can I talk to mademoiselle, something like that.

Int.: O.K.

Ah, bonjour et Joyeuse Saint-Valentin, Hélène. Ici Robert Belair de CKAC. J'ai une très bonne nouvelle à vous annoncer aujourd'hui.
Oui.

Evan: It's really quick.

Int.: Right. Anything that you picked up there? Any idea of what it is about?

Evan: No.

Mais oui, Hélène. La bonne nouvelle est que vous êtes la gagnante du premier prix de notre tirage "Le coeur en fête."

Evan: None of the words are familiar.

Int.: O.K. Nothing that you are picking up or else you know it's about that helps you.

Evan: No.

Up to now Evan has not been able to actuate a schema that will help him to interpret the linguistic input which presently appears to overwhelm him. He is actively parsing the stream of sound (exclusively bottom-up processing at this point) for any word he can recognize (directed attention) that will trigger a plausible schema. All he knows, is that someone is speaking to a mademoiselle.

C'est vrai? Mais, c'est formidable! Quelle belle surprise!

Evan: She thinks it's great, you know, and something is great, something that's happened before and he said to her is good and she is surprised.

Recognition of the words "formidable" and "surprise" (transfer) and Hélène's tone of voice (voice inferencing) have helped Evan to activate a preliminary schema of mademoiselle being excited by a surprise announcement made by the other speaker.

Evan can now listen for more specific information (selective attention) to confirm and/or fill in this rudimentary conceptual framework.

C'est bien vrai! Félicitations de nous tous à CKAC! Vous gagnez un weekend de ski pour deux personnes à L'auberge nordique dans les Laurentides.

Evan: O.K. From what he said now I picked up that she won a weekend, a free weekend to something that I didn't get that she won, a weekend somewhere, so he probably doesn't, he called just to let her know that she won it.

Int.: O.K. How do you know all that?

Evan: O.K. He said something about you win a vacation, I think I heard Nordique, I can't get that out of the words, I know a weekend or something, somewhere, probably somewhere to ski.

Int.: O.K.

When Evan hears "vous gagnez un weekend" and "nordique," (transfer) he is able to clearly define the conceptual framework within which he will interpret further input. It is not certain which word triggered the schema for Evan but it appears that he needed to parse the input, using his linguistic knowledge in order to actuate a schema ("I think I heard nordique...I can't get that out of the words...I know a weekend or something...probably somewhere to ski"). This schema will not only facilitate the ensuing comprehension process, but also enables Evan to interpret (elaboration and inferencing) what he had earlier heard ("he called just to let her know that she won it").

Evan's statement "I can't get that out of the words" is telling. Evan may be saying that it is more than just the words that help him to create a meaningful representation of what he has understood. Through elaboration and inferencing he has used his listener-based knowledge to expedite the interpretation process.

Fantastique! J'aime beaucoup skier.
Alors, je suis certain que vous allez bien vous amuser.

Evan: She likes to ski a lot, she says, and she is really happy, she says, she like to ski, and then there is something listening to music.

Int.: O.K. How do you know all this now?

Evan: She said that, you know, j'aime and ski, that what she means, she likes to ski, and she feels happy that she won it because, you know, something that she likes to do.

This excerpt further confirms the schema that was actuated. Interestingly, Evan executes a bad transfer here (amuser=music), but his framework is sufficiently strong for him to suppress this information as apparently irrelevant to the framework.

Bien sûr! Je peux y aller avec ma soeur Emilie? Elle aussi, elle aime skier.
Bonne idée!

Evan: She is wondering if she can bring her little sister with her, I heard something about a small, petite soeur, little sister.

Donc, encore une fois, félicitations et au revoir.
Au revoir, Robert, et merci, merci beaucoup.

Evan: What I got of that some sort of a radio station, and goes, keep listening, he gave her the prize and he just told her to keep listening to the radio station, like they do on TV or something.

Int.: O.K. How did you put it together? When did it all become clear to you?

Evan: Well, when he said, you won a trip to go skiing.

Int.: O.K.

Evan: I picked up ski from Nordique.

On these last two excerpts, one can see both processing directions at work, demonstrating the truly interactive nature of listening. On the first excerpt Evan recognizes "sister" (bottom-up processing) and then elaborates on his conceptual framework to infer that the winner wants to take her sister along. On the second excerpt, Evan apparently does not recognize enough words to really understand the verbal exchange. Nevertheless, he uses his established conceptual framework or schema, elaborates on what he knows about these kind of situations (textual schema) and then inferences on what is being said (top-down processing).

In conclusion, the above protocols point to the crucial role of textual and content

schemata in the listening comprehension process at the Novice level of language proficiency. In the absence of a critical mass of linguistic knowledge, Novice listeners must rely extensively on world and text knowledge to build meaning from oral texts. Evan's protocols demonstrate how his understanding of the text was virtually nil until he was able to recognize one or two key words. These cues triggered a plausible schema through which he could interpret further linguistic input, even though he did not recognize those words. This is evident at the end of the above protocols and reoccurs several times during Evan's second time through the text. For example, in the opening lines of the text (of which Evan had understood nothing the first time) he responds: O.K., for that, I didn't quite pick up on...I heard a bunch of names, they had a contest or something that she played because of the word 'jouer,' to play." It appears that he heard the word "joyeuse" and made a logical inference based on the schema he had earlier proposed and confirmed. Evan's protocols demonstrate that Novice listeners can arrive at an orientation or main idea level of comprehension (Lund, 1990) of authentic or semi-authentic oral texts related to their life experience, providing that the teacher makes those texts accessible "cognitively and affectively" (Rogers and Medley, 1988, p. 468) to students through appropriate preparation activities and comprehension tasks. By using their world (prior) knowledge, students can make effective connections between that knowledge base, their limited linguistic knowledge and any extra-linguistic cues.

At this level of language proficiency, it is important for listeners to be flexible in deciding on a conceptual framework. They must constantly verify that the framework chosen continues to be valid for the new input and then, if necessary, make any

necessary adjustments. Refusing to do so in the light of new conflicting information can result in a lot of confusion and frustration, as Angela discovered. While listening to the text about the new magazine for young people called Formidable (presented earlier), she became entangled in the often-confused "magasin/magazine" (store/magazine) dilemma. Even though her early protocols showed that she, like Evan (see above), considered both possibilities, Angela chose the incorrect alternative. She steadfastly maintained this schema throughout both listening efforts, becoming increasingly frustrated by the lack of fit between her framework and the linguistic input. At the end of the session, when asked why she remained so tenacious in her conceptual framework, in spite of conflicting linguistic evidence, Angela replied:

> Well, in class when I learned about what a "magasin" was, I always thought it was a magazine...so I tried to tell myself that no, it's not a magazine, it's a store, it's always a store. Everytime you hear magazine, it's a store, it's not a magazine.

Since Novice listeners create a conceptual framework on the basis of an extremely limited linguistic base, an openness to continually reevaluate (i.e. monitor) this framework in the light of new cues is crucial to listening success. Continuing to rely on schemata alone to the exclusion of linguistic input will impede successful comprehension.

5.3.3.3.3.2 John, a less successful listener

At the Novice I level, because of limited linguistic knowledge, it is possible to make a misconnection between linguistic input and relevant schemata and still make plausible interpretations of the text. The following protocols by John, a Novice I learner, demonstrate what happens when a listener has an inadequate linguistic base to appropriately monitor subsequent linguistic input against a feasible conceptual

framework.

Ecoutez bien, tous les amateurs de hockey.

John: Sounded like Arcade something

(Russian national anthem)***Au Forum, c'est un match de hockey extraordinaire entre les Etoiles soviétiques et les Canadiens! Retenez la date! C'est vendredi, le 31 décembre, à 19h au Forum de Montréal!***

John: Okay, it sounded like the Olympics or something, I got Olympics and it's saying Canada is in the Olympics. Can't remember all the countries but they're saying several countries are in these Olympics, could be one event and it says it was on (inaudible).

Int.: How do you know that?

John: It sounded like they were going versus each other and it sounded like and they were going just with two people. They were going countries kind of thing and I've would countries go against each other, you're thinking of something big and just because of the music, it sounded like there is something like Olympics or something.

La vente des billets commence lundi à 9h du matin. Voici les prix des billets:

John: I didn't catch anything.

Int.: Any ideas what it might be? What are you thinking?

John: Sounded like introducing something - like it says here is something but I can't figure out what it is, it could be like .....one of the athletes, like introducing some person or something.

Blancs---13,50$;
Bleus---8$;
Bleus du centre---11,50$
Places debout---8$

John: Sounds like they're saying like these people can get second or third or something, I think.

Int.: O.k.

John: Sounds like they're ordering something, this person is first, this person is second.

John: It said cinquante, I didn't catch very much of that.

On peut les acheter aux guichets du Forum et à tous les comptoirs Ticketron.
A ne pas oublier---il y a une limite de six billets par personne.

John: CBA or something, it sounded like it's being broadcasted on a TV station and CBA is probably a TV station there or something

---

John parses the stream of sound for any word he can recognize. As noted earlier,

Novice I listeners appear to rely primarily on transfer and extra-linguistic inferencing in order to bring some meaning to the stream of sound that meets their ears. Several instances of transfer are found throughout the above protocols. John begins with amateurs=arcade. However, after the second excerpt he makes a shift in framework. At this point it is not clear whether the music (extra-linguistic inferencing), the transfers (soviétique=olympique, Canadiens=Canada) or a combination of both has triggered the Olympics conceptual framework. Although John understands nothing of the next excerpt, he elaborates from his conceptual framework and uses voice inferencing to suggest that athletes are being introduced. On the basis of having understood a number ("cinquante") he continues to use voice inferencing along with elaboration (knowledge of Olympic events instantiated by his conceptual framework) to suggest a plausible interpretation of what he has just heard. The last excerpt prompts John to transfer from "six billets" to CBA, which triggers another plausible supporting detail to his conceptual framework.

John's protocols are interesting in what they reveal about a misconnection between linguistic input and relevant schemata, which is never perceived as such by the listener. Although John recognized very few words and appeared not to be very confident about his interpretation of the text, he was always able to make some plausible connection between each excerpt and his established conceptual framework. From his point of view, there was no misconnection. It is not clear whether he ever entertained another conceptual framework; presumably he did not. Because of his limited linguistic knowledge, the few items in the input that were salient never prompted him to consider other possibilities.

John's protocols also raise interesting questions about what is salient to Novice I listeners. For example, why does John not make a transfer from "hockey?" Did the music instantly trigger an Olympic presentation ceremony, or was the music so powerful that the word "hockey" was lost? Although one can only speculate, how would John have interpreted the remainder of the text if he had first perceived the word "hockey?"

5.3.3.3.3.3 Ron, a less successful listener

In contrast to John's protocols, which demonstrate an overreliance on world knowledge to build meaning, the following protocols by Ron demonstrate what happens when a listener relies almost exclusively on linguistic knowledge without making effective connections with relevant schema (world knowledge). Ron is in his fifth year of French (20S) and was classified as an ineffective listener at the Novice III level.

Bon, madame Frappefort...voulez-vous nous raconter ce qui est arrivé à la banque hier matin?
Eh bien! Je suis allée à la banque hier vers 10h30. J'avais besoin d'argent.

Ron: Oh, it's like...Sounds like a man and a woman. I don't know. Husband and wife talking about money. Talking about going out somewhere or something like that. Talking about money, because she said something about "l'argent". I got that key idea. He's inquiring about something she wanted or something she had or something.

Int.: O.k. Anything else?

Ron: That's about all. Sounds like an older couple, older couple because the voices are a little bit deeper and a little bit, not higher pitched or anything.

Vous avez dû attendre longtemps?
Pas trop longtemps, non. Environ 10 minutes, peut-être. Là, j'étais en ligne, j'attendais devant le guichet et il y avait un homme devant moi.
Oui.

Int.: What's going on in your mind?

Ron: Maybe they're eating dinner or something.

Int.: What makes you think that?

Ron: Just the way some of the words she said. Like they're ordering food or something. I don't know.

Int.: Which words make you think that?

Ron: Something I heard, "la vin" or something. Why or, I'm not sure.

Int.: O.k. Any ideas? Any more ideas?

Ron: Well, it seems like they're sitting down. They really can't be moving very active.

These first two excerpts indicate that Ron is not picking up on very much, even though this should not be a difficult text for a French 20S student. He appears to have an inadequate linguistic base for students at his level (he missed "banque") but he is sensitive to extralinguistic cues. On the basis of the latter, and the few words he has understood (argent, vin) he appears to be establishing a conceptual framework which can guide his interpretation. At this point, his protocols only indicate evidence of bottom-up processing. Having established only a very loose conceptual framework, Ron has no solid touchstone from which to predict and against which to monitor his comprehension.

Le monsieur a présenté une note à la caissière---elle était très surprise---elle a regardé le monsieur et, tout à coup, lui, il avait un revolver à la main!

Ron: Something about conduit, driving. Something that's green...driving too fast...green lights

Int.: Any other ideas?

Ron: No.

Ron continues to shift frameworks; his attempts at comprehension have shifted him from money to wine, and now to driving. With no solid framework from which to work and no metacognitive strategies to provide direction, Ron is "tossed about in a stream of sound" by the words he recognizes or thinks he recognizes. Furthermore, the cues that are salient to him are mostly interpreted incorrectly, due to problems in segmenting meaningful units from the stream of sound (e.g. il y avait=vin, tout à coup lui=conduit, revolver=vert). This evidence suggests that Ron's difficulties may be

exacerbated by problems in perception.

Et vous, qu'est-ce que vous avez fait, madame?
Mais moi, sans penser, je l'ai frappé avec mon parapluie!

Ron: Sounds like someone, someone else was inquiring. Not the man before. He said "qu'est-ce que vous avez fait mademoiselle". I think they got pulled over or something.

Int.: O.k. O.k.

Ron: I'm not sure.

Int.: Anything else that you picked up that is going on in the conversation? Words that are telling you anything. Ideas that are going through your mind? What's your mind struggling with right now?

Ron: The setting of where they are. If I know that, then I can pick up what, or usually what the, the whole thing is about.

Int.: Right. Any ideas what can give you, give you the idea of a setting?

Ron: No. Not really.

Ron seems to know what he needs to do in order to bring some meaning to this text, but somehow he is not capable of doing so. Perhaps his linguistic base is so deficient that he cannot create an adequate schema or, he is so sensitive to extralinguistic cues (as indicated by earlier protocols) that he is neglecting global linguistic cues that might help him create a stronger framework. Due to a myopic approach to the text, precipitated by an exclusively bottom-up processing of linguistic input, Ron is obliged to work with unconnected parts rather than an integrated whole.

Vous l'avez frappé avec votre parapluie?
Oui! Bam! Bien fort sur la tête!

Ron: "Sur la tête". "Hit your head". Hit his head so, "hit your head". Maybe it was an accident or something they got into or... "conduire" I heard. I know that. Something, that has something to do with driving. But maybe that other man who asked her was a police officer.

Ouf! Et qu'est-ce qui est arrivé?
Mais, j'ai cassé mon parapluie!
Vous avez cassé votre parapluie! Mais, qu'est-ce qui est arrivé au bandit?

Ron: "Casse"...Something is broken or something.

Int.: Anything else?

Ron: No.

Le bandit? Mais lui, il a perdu connaissance. Il est tombé par terre.
Et ensuite?
Alors, les policiers sont arrivés et le bandit s'est réveillé. Je vous le dis...il était très surpris de me voir avec mon parapluie!

Ron: She said something about "les policiers". O.k. So maybe these two got into an accident and the woman was (unintelligible). She sounds like she's really panicky. I can tell by her voice something happened that she's not too pleased about it.

Ron appears to be attempting to create a framework in the above excerpts but he rarely relates anything from one excerpt to another. According to Gernsbacher, *et al.*, (1990), "less skilled listeners" have a greater tendency to shift frameworks, resulting in more rapid fading of previously comprehended information and an inability to suppress irrelevant information in the new input. Ron's protocols appear to support this claim.

Je le crois bien, Madame!
Donc, on lui a mis des menottes et on l'a transporté au poste de police. Hier après-midi le chef de police est venu me féliciter, et hier soir on a mis ma photo à la première page du journal.

Ron: She said something about her photo, her photo being on a page of a journal. And he said "Madame", so that means they must be strangers. She said something about "police", "photo". So maybe these two are in conflict of some kind or she's in some sort of troubles. She said her face will be on the front page of a journal or something like that. Maybe she found something.

Int.: O.k. Anything else?

Ron: Not really.

Et moi, aussi, je vous félicite! Vous avez été très courageuse. Je vous remercie infiniment de votre interview si intéressante. Au revoir, madame.
Au revoir, monsieur...et merci.

Ron: Yeah, o.k. It was an interview.

Ron's thought processes as revealed in the above excerpts indicate that he is closer to an understanding of this text, but his thought processes continue to be isolated stabs at meaning. This same pattern continued during his second time through the text,

> O.K. She said something about an interview and the man praised her for being very courageous. Her, said she got her paper in the journal, her picture in the journal, so that means she must have done something really well, to be very courageous, which means being brave. She must have encountered something, since she's uh, helped to capture someone. She said something about police transporting someone. About, something about a lot of money.

The above protocol confirms that Ron has still not really integrated all the parts into one unified whole. Up to this point he has still not established a conceptual framework within which he could have organized what he had understood, and from which he could have elaborated to inference what he could not understand.

Because Ron seemed so close to a global understanding of this text, he was allowed a third try. This time, after the first excerpt, Ron responded that "there was a holdup at a bank." Once this was clearly established in his mind, he was able to correctly interpret the input for most of the remainder of the text. However, connecting linguistic input with the schema of a bank robbery continued to be a problem as evident in Ron's response to the excerpt where the lady broke her umbrella over the robber's head:

> Ron: The most I can think is if you break your hand or a finger "parapluie". I'm not sure what a parapluie is. She kept saying "parapluie."
> Int: Can you guess at it?
> Ron: Handball, maybe.

In making the above inference, Ron has done so out of the context of the framework that appeared to be working for him.

The above example illustrates once again how a qualitative analysis can provide insight into differences between listeners, not perceptible through a quantitative analysis. Throughout the protocols there was evidence of incorrect inferences, transfers, translation

and inappropriate elaboration. These strategies were coded similarly for all participants regardless of their accuracy. Therefore, when the use of these strategies is examined in context, differences in the quality of their use emerges. This difference can often be attributed to the appropriate deployment of metacognitive strategies informed by a solid conceptual framework. For example, Ron's incorrect inference above gives evidence of poor prediction skills and poor monitoring, largely because it was made within an isolated local level rather than at the broader level of the conceptual framework that incorporated an understanding of the whole text.

The protocols given by Ron and John demonstrate that an overreliance on either one of the two knowledge sources does not lead to successful comprehension of an oral text. In contrast, the protocols given by Evan demonstrate how successful listening comprehension is an interactive process of bottom-up and top-down processing between text-based and listener-based information. Even though his level of language proficiency compelled him to make more extensive use of world knowledge, Evan continued to parse the linguistic input for words he recognized and to monitor these linguistic cues for congruency with his established conceptual framework. The degree to which a listener relies more on one knowledge base than another appears to be influenced by level of language proficiency, as manifested in following protocols of an Intermediate listener.

5.3.3.3.3.4 Janet, a successful listener

Janet is an effective listener from a French 20N class, but is only in her fifth year of French, since she was put in advanced classes in junior high. Janet's protocols illustrate how an Intermediate level learner draws on linguistic and world knowledge

simultaneously in building meaning. This very difficult text (speed and accent) was handled with relative ease by Janet.

Bonjour Sylvain.
Salut Philippe! Salut Christine!
Ca va, toi?
Plus au moins.
Pourquoi? Tu n'as pas passé une bonne fin de semaine?
Oh oui! C'est ça le problème.

Janet: O.k. The girl's um, inquisitive. You can tell by the tone of her voice. She's like, "Oh, how's life?" and everything and the guy's really upset and he's like, "No, it's not good" and all this and she's like, "Why not? What's the problem?" You can just tell from the way, and they're probably just friends or whatever meeting somewhere.

Int.: How do you know that?

Janet: Um, just from the tone of, like, the way that they're talking with one another saying, "Oh, how's life?", bla, bla, bla. You wouldn't say that to a stranger that sort of a thing.

Int.: How do you know he's upset?

Janet: Um, his tone of voice. He's saying, "Oh, life's", and from the things he's saying, saying, "Oh, life's, oh, things aren't going that well", and she's like "Well, well, hasn't been a good week?", or she's asking about his life and everything so she must know him fairly well.

Janet uses both her linguistic knowledge and sensitivity to extralinguistic and voice cues to establish a preliminary conceptual framework. Although she does not deliberately say so, it appears that Janet also relates personally to the situation that is about to unfold. This use of personal elaboration will enhance the strength of Janet's predictions and monitoring.

Tu sais, mon frère Francis, le grand de vingt ans, il a loué un appartement avec sa blonde. Il est parti de chez nous en fin de semaine et je l'ai aidé à démenager.

Janet: Um, he's telling her how, what's happened and how his brother's gone off and got an apartment, I think--I'm not quite sure on that one. Uh, I didn't catch it--with, with this other person, and, and uh, I don't know. He's just telling her all his problems.

Int.: All right. You say, I think apartment. Uh, what makes you think that?

Janet: I thought, I, I thought I heard the word "appartement" in there, but I'm not quite sure if I caught it or not.

Int.: Anything else?

Janet: Uh, no, that's about it.

Although Janet is not absolutely certain about what she has just heard, she appears to be comfortable with her established framework and (using top-down processing) elaborates on it with a plausible "He's just telling her all his problems."

Puis après, on a commencé la peinture de son appartement.

Janet: O.k. It was an apartment. Um, he goes, "And then we started to paint his apartment", and everything and uh, so he's just relaying the story to her.

Int.: O.k. Anything else going on in your mind right now?

Janet: Uh, I'm trying to think about, like, he's sitting there telling her and I, I'm seeing what's happening, like. I see him going into this apartment now and going in getting ready to paint and all this other stuff.

Int.: O.k.

Ah! C'est le fun ça!
C'est amusant, mais avec tout ça, je n'ai pas fait mon travail de français et c'est aujourd'hui qu'il faut le remetrre. Comment est-ce que je vais expliquer ça à mon prof?

Janet: O.k. I see now. Uh, he uh, he missed out on, because he was, he was painting his brother's apartment, he was out having a good time and everything. He's gonna' pay for it now because he didn't do his French homework and he's worried about it um, because it's due today and he didn't get it finished.

Int.: O.k. How did you pick that up? Any particular...

Janet: Uh, he just, uh, I don't know. I just understood it. It's, basically I heard the words and they were all words I'd heard before like, "mc travail", (unintelligible).

The above protocols demonstrate how Janet cleverly uses both processing directions, illustrating the interactive nature of successful listening comprehension. Working from her conceptual framework, she parses the input for words that will confirm her conceptual framework (anticipation/selective attention) and/or new information which will help her make necessary adjustments (comprehension monitoring) and/or fill in missing details. Her final protocol bears this out, insofar as she

Dis-lui que tu ne peux pas lui remettre parce que tu as été malade, c'est tout. Ou tiens! Tu pourrais lui dire que tu n'as pas trouvé assez de références sur le sujet.

Janet: Oh, o.k. She's saying, "Well, you can, you can say that you were sick or um, you couldn't finish it", or whatever and uh, I don't know. She's, uh, that's about all I got.

Int.: O.k. What are you thinking?

Janet: She's um, she's trying to help him out, and, I don't know. In my mind I see her as being the type of student who's saying, well, you know, "You can fake your way through it. You can get out of it." Um, and I just, I'm recalling back to my friends who do that sort of thing.

Janet's use of world knowledge is made even more effective by her personal elaborations. Because she relates the information to personal experiences, she has a stronger conceptual framework from which to predict, and against which to check new linguistic input. Janet did this skilfully in all three texts.

Pas très fort, ton histoire.
Dis-lui...que tu es allé à la campagne avec tes parents et que tu as oublié ton travail à la maison.

Janet: O.k. um, she said, "Tell your teacher that this story that you went out to the country and you left your work at home", and uh...

Non et non. Je ne veux pas mentir. Je veux lui dire la vérité mais...m'arranger pour éviter les ennuis.

Janet: Uh, o.k. He's saying, "No, no. I'm not gonna' tell him that. I'm gonna' tell him the truth", and, I didn't quite catch the last bit.

Int.: O.k. Any other ideas going on in your mind right now other than what you said?

Janet: Uh, well, I'm thinking ahead and I'm thinking maybe his teacher will let him off because he told the truth or whatever, perhaps, I don't know.

Dis-lui que ton frère n'a pas beaucoup d'argent et qu'il comptait sur toi pour l'aider. C'est vrai, non! Puis, tous ces travaux ont pris plus de temps que tu l'imaginais.

Janet: O.k. He's saying something about his uh, telling his professor that his brother didn't have very much money or something. I don't know. I didn't quite catch that. Something...

Int.: O.k. What's going through your mind? What are you trying to deal with right now.

Janet: Well, I'm thinking, I'm thinking, money, what does money have to do with homework you know type of thing. Well, maybe he uh, he didn't have money to hire painters or something, so he needed his brother to help him or something like that.

These protocols illustrate how Janet, similar to other participants at this level, also

experiences some difficulty with the speed of the dialogue at this point. Nevertheless, she continues to parse the stream of sound for words she can recognize that can help her flesh out the unfolding story. Even though she does not recognize "mentir" (to lie), she picks up on "vérité" and slots the "lie or tell the truth" option into the story framework. However, on the next excerpt she picks up on money ("argent"), which she had not anticipated, subsequently monitoring it as incompatible her present framework. Regardless, she ventures a plausible interpretation that she may or may not have to revise as she monitors the upcoming input.

Ca, ça a plus de bon sens. Puis, pour compenser mon retard, je pourrais lui faire une page de plus. Il verrait ma bonne volonté. Pas vrai?

Janet: So, he's saying that he's going to tell the teacher that he volunteered, because I heard "volonte" in there so it sounds kind of like volunteer in English, so, I'm just assuming that's what the word is and um, and that's about it.

Bien sûr. De toute façon, c'est un professeur très compréhensif. Tu vas voir!

Janet: Uh, he's saying um, "Your teacher", comprehensif, "understand", "Your teacher will understand".

Int.: How do you know that?

Janet: Um, well, I, comprehensif sounds the same in English and uh, understand type of thing.

OK les amis. Merci de vos bons conseils. je me sens mieux.

Janet: He's saying, "Thank you so much. I owe you one", type of thing and he's gonna' go and tell his teacher.

Int.: O.k. Anything new?

Janet: I, uh, nope. That's about it. Just kind of working my way through it bit by bit.

The above protocols reveal how Janet uses top-down processing to inference on seemingly salient items, using both her knowledge of English (volonté=volunteer) (incorrect but plausible transfer) and French (compréhensif=comprendre=understand) (deduction/induction) and then monitors these inferences through the filter of her

framework as plausible interpretations.

To conclude, Janet's final protocol "Just kind of working my way through it bit by bit," is a pertinent assessment, in simple terms, of her approach to listening comprehension. She establishes a conceptual framework at the opening of the dialogue, using all the cues available to her. She then listens for new cues (selective attention) slotting each one into her confirmed framework. And here is where lies the major difference between Novice and Intermediate listeners in their use of world and linguistic knowledge. Because Intermediate listeners have a broader linguistic base and more language experience, they are able to process larger chunks of meaningful information, organized as propositions (summarization). Therefore, they are able to "trigger" a reliable conceptual framework more quickly. Successful listening comprehension at this level involves an interactive rapid-fire matching of propositions with the established schema (simultaneous top-down and bottom-up processing), slotting new information (verification of predictions) into the framework and making any necessary adjustments (monitoring and revised predictions). These learners rarely work on an individual word basis, doing so only when they have difficulty, as evidenced in Janet's analysis of "compréhensif."

On the other hand, Novice listeners, due to limited linguistic knowledge and language experience, are less capable of automatically processing large chunks of discourse. To overcome processing limitations, these listeners draw largely on individual words, salient extralinguistic cues and other transparent linguistic cues such as cognates that access meaning directly in LTM. At this level, listeners depend on such cues for

the creation of a relevant conceptual framework on which they will need to rely more heavily than Intermediate level listeners to make predictions and to inference on what they have not understood. Novice listeners need to be sensitized to the kinds of the cues that can trigger a potentially reliable conceptual framework early in the text. This has important implications for the kind of listening texts that are used in Novice level classes to help learners become successful listeners.

To conclude, the analysis of the above protocols provides evidence for a model of listening comprehension as an active process of combining new text-based information with the listener's schematic knowledge and previous experience. It is an interactive process in which the listener draws simultaneously on different knowledge sources to interpret the meaning of a given message. At the Novice level, listeners rely more heavily on schematic knowledge in order to interpret large chunks of unfamiliar linguistic input. These listeners rely on very few cues to create a conceptual framework which will guide their interpretation of a text. Successful listening comprehension at this level requires a flexibility to continually weigh the validity of this framework in the light of new and possibly contradictory evidence. On the other hand, Intermediate listeners, because of their significantly larger linguistic base and broader language learning experience, are able to create a more solid conceptual framework earlier in the listening process. This framework can then be used to interpret unknown words and/or finer factual or sociocultural details that promote a deeper understanding of an utterance or text. Although Intermediate listeners do not rely on schematic knowledge to the same degree as Novice learners, this knowledge base continues to interact with new linguistic

information to generate a coherent interpretation of an oral text within the listener's mind.

5.4 Summary

This study used a retrospective interview, a stimulated recall and a think-aloud procedure in an attempt to collect convergent data on listening comprehension strategies. However, given that any one of the above research procedures may be more conducive than the other to the reporting of a particular strategy, each phase of this study also provided additional data crucial to a more complete understanding of listening comprehension strategies. These quantitative data, taken together with the findings of the qualitative analysis, reveal a clearer picture of the listening comprehension strategies used by high school Core French students.

5.4.1 Overall picture

Core French students used a wide variety of identifiable listening comprehension strategies that could be classified as either metacognitive, cognitive or socio-affective strategies. The use of these strategies appeared to vary by course/proficiency level and by listening ability.

The range of strategies and the frequency of their use appeared to increase by proficiency level. Although cognitive strategies were most used, the frequency of their use decreased by proficiency level while the range and frequency of metacognitive strategies used increased. More specifically, Novice level listeners tended to rely on inferencing, elaboration and summarization as well as strategies such as transfer, translation, repetition that promote surface decoding of spoken discourse. On the other

hand, while Intermediate level listeners also relied on inferencing, elaboration and summarization, they gave greater priority to the deeper metacognitive strategies such as comprehension monitoring and problem identification instead of the surface decoding strategies adopted by Novice level listeners. Furthermore, a qualitative analysis revealed that the latter group also relied more heavily on world knowledge and top-down processing to interpret the meaning of a message, whereas the Intermediate group relied more evenly and simultaneously on both world and linguistic knowledge to arrive at an interpretation. In interactional listening Novice listeners made greater use of kinesics, global reprises, hypothesis testing in English to clarify meaning or solicit further input from a native speaker. These same strategies were also used by Intermediate listeners, but less frequently and in qualitatively different ways. Global reprises and hypothesis testing were communicated in the target language and kinesics became less overt. The increased use of uptaking by Intermediate listeners reflected their increased linguistic knowledge and comfort in interacting in the target language.

Strategy use also varied by listening ability. The most significant difference distinguishing successful from less successful listeners was the use of metacognitive strategies. Successful listeners used comprehension monitoring and problem identification twice as much as their less successful peers. With regard to cognitive strategies, the latter group tended to use transfer significantly more often and to use elaboration and inferencing slightly more than the more successful listeners. The qualitative analysis also revealed differences in the use of prediction skills (selective attention), the quality of elaboration and inferencing, and the timing and depth of

comprehension monitoring.

Differences in strategy use by gender was not confirmed in this study. Whereas the retrospective interviews indicated that females reported the use of more metacognitive strategies as well more strategies in total than their male counterparts, the think-aloud sessions revealed that differences in actual strategy use is minimal.

Finally, any potential differences in strategy use by learning style could not be substantiated due to the extremely small sample in most of the groupings and the considerable variation within the same grouping.

5.4.2 Convergent data

The pattern of metacognitive strategy use was corroborated in all three research phases. Use of metacognitive strategies, in terms of total strategy use, appeared to increase by proficiency/course level with a converse drop in cognitive strategy use. While Novice listeners (French 10/20 students) appeared to be somewhat familiar with comprehension monitoring, this strategy emerged as the key metacognitive strategy at the Intermediate level. The powerful role of metacognitive strategies in providing direction to the listening comprehension process was further corroborated by the qualitative analysis. Clearly, the degree of success of other strategies used, even another metacognitive strategy such as selective attention, was determined by the strength of comprehension monitoring.

Results of all three phases indicated that students used more cognitive strategies than metacognitive or socio-affective strategies. Inferencing was the cognitive strategy that emerged from all three phases as important to listening comprehension at all

proficiency/course levels, whereas elaboration emerged only in Phases I and III. The failure of elaboration to emerge as an important cognitive strategy in Phase II can be attributed to the highly contextualized nature of the proficiency interview. Certain cognitive strategies also emerged at specific levels of language proficiency. The importance of transfer at the Novice I level and translation at the Novice II level was confirmed in both Phases II and III.

Only the Phase I interviews were successful in eliciting a range of socio-affective strategies. Although Phases II and III were not conducive to reporting the use of socio-affective strategies, evidence of self-encouragement in these phases confirmed the reported use of this strategy in Phase I.

Phase II revealed a different body of strategies used in interactional listening. Some of these repair strategies were also reported in the Phase I interviews by the few students who referred to interactions with a target language speaker.

Each research procedure examined the construct of listening comprehension from a slightly different angle, resulting in both convergent as well as additional complementary data. The convergent data presented above help to prov. .e a degree of internal reliability to this study.

5.5 Conclusion

This chapter has presented the results of the quantitative and qualitative analyses of the collected data. The results of all three research phases of this study have shown that Core French students use a variety of identifiable learning strategies when engaged in both transactional and interactional listening. Analysis of the protocols pointed to

quantitative differences in strategy use by level of language proficiency and listening ability. A further qualitative analysis by proficiency level and listening ability also pointed to differences between the use of world knowledge and linguistic knowledge in the comprehension process. The following chapter will discuss these results and their implications for theory and second language pedagogy.

Chapter VI

Discussion, Conclusions and Implications

6.0 Overview

This chapter will begin with a summary review of the study, the methodology and the results of each of three research phases. The results will be discussed and evaluated in comparison to the findings of related studies. The contributions of this study to a clearer understanding of comprehension processes will be discussed, along with an evaluation of the research procedures and the implications of the results for second language pedagogy and further research.

6.1 Interpretive summary

This study, consisting of three separate phases, investigated an important second language learning construct: listening comprehension strategies. The research questions focused on 1) the identification of learning strategies used by Core French high school students in transactional and interactional listening tasks, 2) the frequency of their use, and 3) the differences in strategy use, if any, by level of language proficiency, listening ability, gender and learning style.

In the first phase students reported retrospectively, by means of a structured interview, on the listening strategies they consciously used in different contexts. Students at all four course levels evidenced a familiarity with all three categories: metacognitive, cognitive and socio-affective strategies. The total number of strategies reported increased as the course level increased. Of the total number of strategies reported, each student

reported using a greater percentage of distinct cognitive strategies. Although students reported fewer distinct metacognitive strategies, the number of reported strategies in this category increased by course level; females tended to *report* a greater variety of metacognitive strategies than males. Reported numbers of distinct socio-affective strategies also increased by course level.

The second phase was designed to identify comprehension strategies used in interactional listening. Students participated in a proficiency interview which was videotaped and immediately followed by an audiorecorded stimulated recall session. Students viewed the videotape and attempted to recall their thought processes at points in the interview where they experienced comprehension difficulties.

The major strategies observed during the interview included kinesics, global reprise, hypothesis testing, uptakes and faking. Use of kinesics decreased and became less overt in direct relationship to proficiency level. Whereas global reprise and hypothesis testing in English decreased by rise in proficiency level, the deployment of these strategies in French increased. Uptaking increased significantly by proficiency level.

The stimulated recall session identified many of the same strategies reported in Phase I. Use of metacognitive strategies such as comprehension monitoring and problem identification increased significantly by proficiency level. Inferencing was the most popular cognitive strategy at all levels. Although translation was used frequently at all Novice sublevels, Novice I listeners relied most heavily on transfer. Self-encouragement, the only socio-affective strategy identified in this phase, was used almost exclusively at

the Novice I level.

In Phase III, the students, now placed into five different levels of language proficiency (Novice I to Intermediate III), participated in a think-aloud procedure, reporting their thought processes concurrently as they listened to authentic texts. Reporting sessions were audio-recorded, transcribed and coded according to an established taxonomy. Strategies were categorized and counted, and a listening comprehension strategy profile was prepared for each participant for subsequent grouping and analysis according to the variables investigated.

Results of this phase indicate clear differences in strategy use by listening ability and proficiency level. The use of the metacognitive strategies, monitoring, problem identification and selective attention appears to be a significant factor distinguishing the successful from the less successful listener. Although all students relied heavily on inferencing and elaboration, differences by proficiency level included greater use of transfer, translation and repetition at the Novice level. At the Intermediate level, the evidence shows increased summarization and metacognitive strategy use, primarily comprehension monitoring. Fewer differences were identified for learning style. In contrast to the results of Phase I, differences in strategy *use* by gender was minimal.

A qualitative analysis comparing representative protocols by proficiency level and listening ability provided further support for the quantitative results. This analysis provided additional insights into how and when a strategy was used, and revealed significant differences in the use of linguistic knowledge and world knowledge (schemata) by proficiency level in the comprehension process.

6.2 Discussion

The following analysis of the results presented in the previous chapter, will be organized by the research questions posited in Chapter I. Each question will be considered in the light of the results pertaining to it.

6.2.1 Strategies used in listening comprehension

The data presented in Chapter V demonstrate that high school Core French students recognize and use a wide variety of learning strategies in listening tasks. These results confirm the findings of other studies investigating listening strategy use with students of ESL (O'Malley, *et al.*, 1985a, 1989), and students of Spanish and Russian (Chamot & Küpper, 1989; Chamot *et al.*, 1987, 1988a, 1988b); both successful and less successful listeners use a wide variety of strategies.

The taxonomy developed and modified by O'Malley and colleagues (O'Malley & Chamot, 1990) was generally useful in classifying the covert cognitive processes which listeners used to build meaning from oral texts. The distinction between metacognitive and cognitive strategies was essential to categorizing differences between those strategies used in cognitively interacting with the language and those used in directing the comprehension processes. Building on the work of O'Malley and Chamot, this study was able to refine some of the existing categories and define a more comprehensive taxonomy of comprehension strategies that incorporates both interactional and transactional listening.

Interactional listening makes use of an entirely different set of listening strategies. These strategies are observable since they are used, consciously or unconsciously, to

convey to an interlocutor that communication is taking place or has broken down, most often the latter. In this regard, a typology of interactive listening strategies, grounded in interaction analysis and identified by Rost (1990), proved useful to classify the overt behaviours used by participants during the interview. Of the strategies identified by Rost (kinesics, global and specific reprises, hypothesis testing, forward inferencing and uptakes), all were identified in this study except forward inferencing. The latter is a more advanced strategy where the listener indicates to the speaker his/her current state of understanding by asking a question or openly stating what s/he thinks the speaker will say next. Presumably, the language proficiency of the students in this study was not sufficiently advanced, or the nature of the task did not require the use of this strategy. The observed use of obvious faking to avoid speaking, not identified by Rost, was added to this taxonomy. In consideration of their social mediation nature, interactive strategies were incorporated as types of repair strategies under the broader category of socio-affective strategies.

Additional refinements in classification were made to reflect more accurately the nature of the cognitive processes involved in comprehension. First of all, inferencing was broken down into different categories to better reveal the different sources of information students used to guide their guessing, in much the same way as had already been done for elaboration. These inferencing categories included: linguistic, extra-linguistic, voice/paralinguistic and kinesic. Furthermore, the category of "between parts elaboration" was changed to "between parts inferencing" in order to more accurately reflect the information source. Any use of world knowledge (outside of text information)

was considered elaboration, whereas use of information found within the text was considered inferencing. Second, the identification of more affective strategies has enriched the previously sparse category of socio-affective strategies. Reported use of affective strategies, such as lowering anxiety, self-encouragement and taking emotional temperature, adds to our understanding of how students handle anxiety in the face of listening in a second language, and verifies the work of Oxford (1990). Identification of these strategies, however, is only a beginning; how students deal with the often ignored, but crucial affective dimension of language learning needs to be explored more thoroughly.

This study was able to verify strategies identified in earlier studies. In the case of some strategies, refinements were made to reflect more accurately the processes in comprehension. Mostly importantly, the addition of an identified body of comprehension strategies used in interactional listening led to a more comprehensive taxonomy of strategies used in listening comprehension.

6.2.2 Language proficiency level

Question: Is there a difference in strategy use by level of language proficiency? If so, what are those differences?

This study verified that Core French students at all levels of language proficiency use predominantly cognitive strategies in listening comprehension. The effectiveness of these cognitive strategies is enhanced by the directing influence of metacognitive strategies and appropriate use of socio-affective strategies to reduce anxiety, increase motivation, cooperate with others and interact with target language speakers. The results

of this study indicate, however, that certain strategies appear to be used more frequently at a particular proficiency level while others appear to be used less.

6.2.2.1 Novice listeners

6.2.2.1.1 Discussion of findings

The Novice level appears to be a period of significant shifts in strategy use during listening tasks, after which a pattern of strategy use emerges and becomes relatively stable at the Intermediate level.

Novice I listeners rely heavily on elaboration, inferencing and transfer in order to build meaning. This was borne out in both Phases II and III. Because of their limited linguistic knowledge, Novice I listeners recognize very few words. They overcome this limitation by using what they know, using cognates from their first language (transfer). These French/English words have immediate meaning to Novice I listeners in English, and are therefore processed automatically, without analysis in STM. Listeners can then devote the limited processing capacity of STM to draw on their world knowledge and life experience (elaboration) and guess at what they do not understand (inferencing) in order to construct a meaningful interpretation of the text. Constraints on attentional resources do not allow Novice I listeners to do more. In fact, the qualitative analysis demonstrated that attempts by the more knowledgeable successful listener to translate interfered with the perception of additional semantic cues. The limited attentional resources may also explain the minimal evidence of comprehension monitoring at the Novice I/II levels, even for the more successful listeners.

Listeners at the Novice I level appear to be limited by cognitive constraints, such

that the cognitive strategies needed to deal with the language do not leave enough attentional energy for deeper processing strategies such as monitoring. In coping with the rapid sound stream of authentic documents, listeners at this level may not be capable of 1) holding in memory what they have already understood, 2) parsing new incoming input for more meaning, and 3) evaluating the congruency of the new information with the old, all at the same time. The pattern of strategy use manifested by Novice I listeners, has profound implications for pedagogy and the types of texts chosen.

At the Novice II level, as evidenced in both Phases II and III, the effects of trying to translate become apparent. Listeners at this level appear to use elaboration, translation and their larger linguistic base to interact with the text (summarization). Although they may be familiar with more words than Novice I listeners, the linguistic base of Novice II listeners is probably not sufficiently internalized for automatic access to meaning in LTM. Therefore, in order to comprehend the sound stream, students naturally feel compelled to translate.

This approach to listening can be explained by the way in which listening comprehension was practised in the classes from which the participants were selected. Observation by the investigator of these classes, using COLT (see Chapter IV), revealed that the type of listening exercises were discrete point, with little emphasis on meaning. Novice I/II participants came from French 10 and 20 classes where authentic documents were never used, and very little global listening practice was done. If any took place, it was presented by the teacher at a slow enough speed to encourage and reward translation. Furthermore, as pointed out by Eastman (1991), a compulsion to translate

may also be transferred from an inappropriate "word for word" reading strategy.

As proposed earlier, the results of Phase I and Phase II suggest that the Novice II level represents a period of instability, a finding also established by Prokop (1989). If this is a period of instability where listeners begin to rely on an inefficient strategy such as translation, it could represent a pivotal period for strategy instruction. It could be that if efficient listening strategies are not taught/learned before or at this stage, students will either continue to experience frustration in listening and second language learning, or give up. This may explain why the participants in this study who placed at the Intermediate level were almost all classified as successful listeners, while the one less successful listener was a compulsive translator.

At the Novice III level, listeners made heavy use of summarization, inferencing and elaboration. Comprehension monitoring was very low, however, ranking below less efficient strategies such as repetition and translation. A pattern of predominant use of summarization, elaboration and inferencing appears to be established at this level; the use of these strategies, however, is qualitatively different from the use of these strategies at the Intermediate level. Superficial and incomplete summarizations, inaccurate inferences and weak elaborations all indicate a more superficial interaction with the text. One quantitative indicator of this surface processing may be the low level of comprehension monitoring.

Although Novice III listeners are learning to chunk more information, substantial amounts of linguistic input are still not received as intake. Presumably, their increasing linguistic base is not sufficiently internalized for Novice III listeners to process detailed

chunks of information quickly, resulting in only main idea comprehension. Allocation of precious attentional resources to inefficient repetition and translation may also help to explain the inattention to detail and inadequate monitoring.

6.2.2.1.2 Comparison with other studies

Listening comprehension strategies of Russian and Spanish students were also investigated by Chamot, *et al.* (1988a), by "level of student instruction." The data for students at the Spanish 1 level, roughly equivalent to French 10, was not analyzed because "it seemed to consist largely of 'I didn't understand any of that.'" (p. II-13) The data for the Russian students was analyzed; however, the results do not agree very well with the results of this study. The Russian students monitored their comprehension more, and inferenced and transferred considerably less. This might suggest that the texts were quite easy for these students. There are a number of other reasons, however, that may explain the discrepancies in results. First of all, these students were first year (Spring) students in a regular or an intensive college Russian program, placing them at Novice II, at least. Invalid proficiency tests resulted in an inability to place students by sublevel. Russian students at this college have generally been sophisticated language learners; they performed at "above average" grades; Russian was their second or third foreign language; and, "ineffective learners were counselled out of the program." (p. III-2) These reasons, along with the fact that most pure French 10/20 students (Novice I/II students in this study) in an urban Alberta high school tend not to be academically inclined, are plausible explanations for the difference in findings.

The interactional strategies evidenced by Novice listeners during the Phase II

proficiency interview correspond closely to the results of a study conducted by Rost and Ross (1991). They concluded that

> ...persistent patterns of global queries...evidence that the listener is at a beginning level of proficiency, a level that is marked by frequent instances of "nonunderstanding" of the discourse and an inability to formulate propositions to represent what was heard. (p. 241)

Overt manifestations of "nonunderstanding" (kinesics) accompanied by frequent global reprises and hypothesis testing in English also characterize the pattern of interactional use evidenced by the Novice listeners in this present study. Use of these strategies gradually decreases with each rise in sublevel, culminating in a different pattern of strategy use for the next (Intermediate) level of proficiency.

In summary, the strategies used by Novice listeners in this study demonstrate that listening comprehension at this level is an interactive process in which listeners draw on both linguistic (bottom-up processing) and world (top-down processing) knowledge stores, but rely primarily on the latter to construct a meaningful interpretation of a text in memory. Novice listeners, because of their limited linguistic knowledge, rely heavily on cognates (transfer) and contextual, extra-linguistic cues such as type of text, background noise, tone of voice, kinesics, and relationships between speakers, from which they create a conceptual framework. Within this conceptual framework they use their world knowledge and life experience (elaboration) to guide their interpretation of the mostly incomprehensible linguistic input (inferencing). Limited linguistic knowledge forces Novice listeners to draw more heavily on their world knowledge (using top-down processes) as evidenced in both the quantitative and qualitative analyses of Novice I protocols in particular. This focus on primarily semantic cues allows listeners to allocate

precious attentional resources to processing larger units of meaning, and to process them more rapidly.

6.2.2.2 Intermediate listeners

6.2.2.2.1 Discussion of findings

The essential difference in strategy use between Novice and Intermediate listeners is the increased use of metacognitive strategies, primarily comprehension monitoring. This dramatic increase may be partially explained by the difference in listening ability of the participants in Novice III and Intermediate II as well as a discrepancy of two sublevels. Through time and necessity, Intermediate listeners have learned that success in listening and second language learning requires the directing control of metacognitive strategies. Those who have not learned this have probably withdrawn from language study, as manifested by the composition of this group, almost exclusively successful listeners.

In spite of the increased use of metacognitive strategies, Intermediate listeners still use predominantly cognitive strategies. They rely heavily on elaboration and inferencing to construct meaning; and, because of their increased linguistic and syntactic knowledge, they are able to process larger chunks of information (summarization). Prolonged language exposure has internalized many structures, routines and words, allowing Intermediate listeners to allocate more attentional resources to monitoring their comprehension. The fact that inefficient surface-level strategies such as repetition, transfer and translation (more popular with Novice listeners) have now been superseded in frequency of use by deeper processing strategies, lends further support to this claim.

In addition to greater use of comprehension monitoring, Intermediate listeners are also better able to identify areas of uncertainty that need further resolution for a more complete understanding of the text (problem identification). Because they understand more than Novice listeners, they are able to identify more precisely those areas where clarification is still needed.

The pattern of interactional strategy use exhibited by Intermediate listeners is also dramatically different from the pattern of Novice listeners. Global reprises and kinesics almost disappear, hypothesis testing is done in French, and uptakes increase four-fold. All this indicates that Intermediate listeners are more comfortable with the language; they have fewer comprehension problems in an interactional setting; they resolve any comprehension difficulties by using the target language; and they can hold their own as equal partners in a conversation.

At the Intermediate level, fewer differences in strategy use emerge between sublevels. Comprehension monitoring appears to remain at about the same level, but self-evaluation and planning strategies increase somewhat. The Intermediate III listeners in this study, all females, were sophisticated and articulate language learners. These factors could explain the increased use of self-evaluation and the virtual elimination of interactional strategies, save uptaking.

6.2.2.2.2 Comparison with other studies

A comparison between the strategy use of Intermediate listeners in this study and the Spanish 3 students in the Chamot *et al.* (1988a) study reveals many analogous results. The pattern of metacognitive strategy use compares favourably for both comprehension

monitoring and self-evaluation. Although there is a discrepancy in use of planning, the greater use of these strategies by the Spanish students can be explained by the advance organizers they were given. The use of cognitive strategies, except for summarization, also corresponds well. Use of elaboration, inferencing, translation, transfer and repetition appears to occur with approximately the same frequency by both French and Spanish students. Although notetaking was used more frequently by the Spanish students, that can be explained by the workbooks they were given. However, the minimal use of summarization by the Spanish students, compared to the extensive use of this strategy by the French students is puzzling. Since it is impossible to imagine that Spanish students at this level did not "dialogue with the text," it may be assumed that summarization was not coded in the same way as in this present study. Finally, it should be noted that the Spanish 3 students were given proficiency tests to establish differences between effective and less effective language learners, not to identify a level of proficiency for each student.

The Intermediate listeners in this study exhibited a pattern of interactional strategy use that superseded the pattern of "clarification requests at the local level" evidenced at the intermediate level in the Rost and Ross (1991) study. At the same time, use of forward inferencing, characteristic of listeners at a more advanced level in the above study, was not observed in the interviews of Intermediate listeners in this present study. However, given that the levels of proficiency referred to in the Rost and Ross study do not appear to be based on any standard measurement instrument, it is debatable whether the students in both studies were equally proficient.

In summary, Intermediate listeners appear to deploy a different pattern of listening strategies than their Novice counterparts, which may be explained by their increased linguistic knowledge. The ability of Intermediate listeners to process larger chunks of language as units of meaning allows them to devote more attentional energy to metacognitive activity such as comprehension monitoring and "on-line" prediction and selective attention. This greater facility with the language also allows them to become more involved partners in interactional listening, using only the target language for clarification when necessary. Although they still use their world and life knowledge (top-down processing) to instantiate a conceptual framework, they do not rely on it in the same way as Novice listeners. Intermediate listeners are able to activate a more solid conceptual framework much earlier in the listening process. The interaction between the two knowledge sources at this level appears to be a more dynamic and almost imperceptible process, until the listener confronts comprehension difficulties. Both quantitative and qualitative analyses demonstrate that Intermediate listeners do not totally eschew surface processing strategies such as translation, transfer and repetition, but resort to them (some listeners more than others) to tackle unknown words deemed to be relevant for comprehension purposes.

6.2.3 Listening ability

Question: Is there a difference in strategy use by successful and less successful listeners? If so, what are those differences?

Results of both the quantitative and qualitative data analyses demonstrated that successful and less successful listeners manifest different patterns of strategy use.

6.2.3.1 Discussion of findings

Metacognitive strategies enable students to think about their learning, and control the different cognitive processes involved in listening. This control, manifested in behaviours such as planning, monitoring and evaluating, appears to lead to greater success in listening comprehension as suggested by the results of this study. Although the pattern of cognitive strategy use indicates few differences, the use of metacognitive strategies such as comprehension monitoring and problem identification appears to characterize the listening behaviour of successful listeners. The crucial role of comprehension monitoring is further reinforced in the qualitative analysis, along with "on-line" selective attention, appropriate use of world knowledge and an active approach to the task.

At the Novice I level, fewer quantifiable differences appear to exist between successful and less successful listeners. As discussed above, attentional constraints and limited linguistic knowledge in the face of an overwhelmingly rapid sound stream precluded any possibilities of monitoring for both groups. What appears to distinguish successful listening at this point then is an active approach to the task which manifests itself in directing attention to all extra-linguistic semantic cues such as text structure, sounds, voice, etc., in addition to cognates. Any attempts at parsing for syntactic cues appear to interfere with perception of the more effective semantic cues. The implications of this for theory will be discussed below.

The strategies for successful listening comprehension from Novice II level and up appear to shift. Once students reach the Novice II level, a propensity for "word for

word" translation begins to appear. The ability to consciously impede the compulsion to do so becomes one factor characterizing highly effective listeners at this level (e.g. F202). Furthermore, successful listeners from the Novice II level and up are able to chunk more information into a unit of meaning for processing, presumably because they have internalized more target language vocabulary and structures; that is, association of sounds with meaning is more automatic, and expectation of syntactic patterns is more reliable (Conrad, 1985; Eastman, 1991).

In addition, successful listeners are able to use their world knowledge more productively, relating it to their own experience. This results in less shifting between potential frameworks and a greater ability to suppress information irrelevant to the appropriate framework. The ability to focus directly on salient cues that "trigger" immediate meaning and to suppress irrelevant information ensures that the listener does not lose access to previously comprehended information (Gernsbacher, *et al.*, 1990). Meaning is accumulated by successful listeners as new linguistic input interacts with previous knowledge sources and expectations generated by the conceptual framework. The greater use of double-check monitoring reveals one tool successful listeners use to check themselves during the listening process. Such concatenation of strategies fosters efficient cognitive processing that allows these listeners to devote attentional resources to a continuous cycle of metacognitive activity involving comprehension monitoring, further prediction of new information and monitoring again. This produces protocols which are characterized by rich, coherent and comprehensive summarization, in contrast to the superficial, disjointed and incomplete summarization of less successful listeners.

On the other hand, less successful listeners experience more problems because they squander precious time and attentional resources on inefficient surface processing strategies which take more time and build less meaning. This results in frequent shifting of conceptual framework, inadequate suppression of irrelevant information and rapid fading of recently comprehended information. Most importantly, they lack the regulating control of metacognitive strategies which give them an overview of the process and help them focus on meaning instead of decoding surface language. These listeners may not be conscious enough of their native language listening strategies (metacognitive awareness) to recognize that world knowledge and life experience can serve as a rich source of information for guiding their efforts in interpreting a text. Therefore, without a conceptual framework and a direction provided by anticipation, listening efforts become aimless, resulting in haphazard deployment of strategies that generate isolated parcels of meaning with inadequate relationships.

6.3.3.2 Comparison with other studies

The identified differences in strategy use between successful and less successful listeners in this study concur with the results of similar studies in identifying the crucial role of comprehension monitoring. In their investigation of listening comprehension strategies used in academic settings, O'Malley, *et al.* (1989) concluded that the deployment of self-monitoring, elaboration and inferencing differentiated between effective and ineffective ESL listeners "...classified by their school district at the intermediate level of English proficiency." From a purely quantitative perspective, the results of this present study indicated that less successful listeners inferenced and

elaborated slightly more than their more successful peers, possibly because they understood less and, of necessity, were obliged to guess at unfamiliar words/structures. On the other hand, the qualitative analyses did point to differences in the elaborations (*how* the successful listener used world knowledge) and the inferencing (the accuracy of the guesses).

The "first year" Russian students in the Chamot, *et al.* (1988a) study, selected on the basis of their effectiveness as language learners, not listening ability, also manifested similar differences in strategy use. From both a quantitative and a qualitative perspective, effective Russian learners and successful French listeners appear to use monitoring and problem identification more, and inferencing equally to their less successful counterparts. However, effective Russian students appear to use elaboration more than the successful Core French listeners. An explanation for this difference is suggested in the discussion of the Spanish 3 study below. For the Russian students and the French students in this present study, elaboration and inferencing (outside of summarization which appears to have been coded differently in the O'Malley and Chamot studies) emerge as the most important cognitive strategies for both groups, and the qualitative analysis did point to the skilful use of world knowledge (elaboration) as germane to successful listening comprehension.

The strategy use of Spanish 3 students in the Chamot *et al.*, (1988a) study, also classified as either effective or ineffective language learners, evidenced similar differences for listening comprehension. From a quantitative point of view, differences between more and less successful listeners in the use of self-evaluation, inferencing,

transfer, repetition and translation are similar for both Spanish and French students. Although no quantitative differences in comprehension monitoring emerged between the two Spanish groups, the monitoring of the effective learners proved to be qualitatively different. Once again, significantly greater differences in elaboration by the two Spanish groups surfaced, similar to the findings in the other studies conducted by O'Malley, Chamot and colleagues. An examination of some of the coded protocols from the Spanish 3 study, made available to this investigator, suggests that the researcher in that study engaged the students actively in discussion. This resulted in more "editorializing" which involves elaboration; given that most effective learners are more verbal, they would have exhibited greater use of elaboration than their less effective peers in this context.

6.2.4 Gender

Question: Is there a difference in strategy use by gender? If so, what are those differences?

Although the findings of Phase I suggest that for listening tasks females use more metacognitive strategies as well as a greater number and variety of strategies than their male counterparts, the findings of Phase III suggest that these differences are minimal.

6.3.4.1 Discussion of findings

Many second language teachers believe that, overall, females are better language learners than males. They support their claim by pointing to the greater number of females in their classes and the greater interest and progress manifested by these females compared to their male classmates. The Phase I results of this study indicated that

females do indeed report a wider variety and more frequent use of strategies. However, when actual use of learning strategies during a listening task was assessed in Phase III, the differences between males and females appeared to be minimal. While females did use slightly more metacognitive strategies, this difference can be attributed to the almost exclusive use of self-evaluation strategies. The greater use of self-evaluation strategies as well as greater use of voice/paralinguistic inferencing can be attributed to female sensitivity and attention to "metamessages" (Tannen, 1986). On the other hand, the greater use of between parts inferencing by males is not as easy to explain. It is possible that their overall greater propensity for logical, rational thinking (Otten, 1985) compels them to utilize a more deductive approach to link together the major ideas of a text.

6.2.4.2 Comparison with other studies

The results of Phase I corroborate the results of other studies which have examined the role of gender in general language learning strategy choice. Politzer (1983) pointed to the factor of social interaction by females as a statistically significant variable in choice of language learning behaviours (strategies). Similarly, Oxford and Nyikos (1989) discovered that females reported greater use of "conversational/input elicitation strategies" than males, as well as two other factors. On the other hand, in his study of language laboratory strategies, Prokop (1989) found evidence that males preferred risk-taking, reporting strategies more creative in nature, and females reporting more cautious strategies leading to accuracy. Findings by Ehrman and Oxford (1989) corroborate all of the above studies, revealing that females reported significantly greater use of strategies in four categories: searching and communicating for meaning, functional practice

(equivalent to the social behaviours in the studies cited above), general learning strategies (closely related to the preoccupation with accuracy in the Politzer study) and self-management strategies. Greater reported use by females of self-management strategies, equivalent to metacognitive strategies, was also corroborated by Phase I of this present study.

The above studies, along with Phase I of this study, have one thing in common, they all used retrospective self-report as a methodology. Actual evidence of "on-line" strategy use by gender has still not been investigated. However, the results of Phase III of this study would indicate that there is a difference between *reported* strategy use and *actual* strategy use. How can this difference be explained?

A number of possibilities can be considered in interpreting this apparent discrepancy between use and report. Females typically excel at verbal fluency; "...at about age eleven females begin to outscore males at a wide variety of verbal skills..." (Maccoby and Jacklin, 1974, p. 84). They rely heavily on verbal problem-solving strategies (Otten, 1985) and have a stronger social orientation than males (Maccoby and Jacklin, 1974). This, in addition to the inexpressiveness of males and the tendency of men to be less self-disclosing than women (Kramarae, 1985) could help to explain greater reported use of strategies by females. Females tend to be "conversation smoothers," (Kramarae, 1985) and, given that the investigator was male, they may have wanted to appear more polite and cooperative in providing data. Strategy *use* by gender merits further study to verify the possible differences between reported use and actual use of learning strategies on a wide variety of language tasks.

The above reasons might also be cited to explain the gender differences in listening comprehension strategies by college students reported by Bacon (1992). She presented evidence that females "...reported using a significantly higher proportion of metacognitive strategies than did men." (p. 171) What is not clear, however, is whether this refers to actual strategy use during the listening phase, or strategies reported during a "post-listening test." Since the participants in this study were not expected to think-aloud at specific points in the text, but only think-aloud at their discretion, the reasons for differences in reporting style between males and females would also hold here. The Bacon study, while closer to the listening act than an interview, was indeed only immediate retrospection. It can be argued that the think-aloud procedure used in this present study came closer to tapping actual "on-line" strategy use.

6.2.5 Learning style

Question: Is there a difference in strategy use by personal learning style? If so, what are those differences?

Although some differences in strategy use by learning style do emerge, any conclusions regarding this variable do not appear to be warranted.

6.2.5.1 Discussion of findings

Galloway and Labarca (1990) describe learning style as

> ...a composite of environmental and perceptual preferences, which influence our physical and sensing needs; cognitive variables, which determine how we approach, conceptualize, and structure our world; and social preferences, which arise from cognitive, personality, and affective factors and which shape our behavioral tendencies in learning situations." (p. 113)

Dimensions of learning style have been labelled differently in the literature. However,

the bipolar continuum of analytic vs. global processing appears to be an appropriate superordinate category which encompasses other related dimensions such as field-independence/dependence, left/right-brain hemisphericity, thinking/feeling (Oxford, 1990; Schmeck, 1988). The analytic vs. global dimension is conceptualized in the Learning-Style Inventory (LSI) as a thinking vs. feeling/sensing dimension.

It is reasonable to hypothesize an intimate relationship between learning style and learning strategy choice. The results of this study revealed that the differences between feeling/sensing type students and thinking type students were similar to those characterizing the differences between successful and less successful listeners. This is not surprising since three of the four students classified at the feeling/sensing end of the continuum were also classified as successful listeners. At the same time, only five out of the eleven students who placed at the thinking end of the continuum were classified as successful listeners. Although the numbers are too small to make any definitive claims, these results might suggest that students who perceive their language learning experiences by sensing/feeling them in more concrete rather than abstract ways tend to monitor more, elaborate in more personal ways and inference more. Since sensing/feeling learners tend to be more global in their approach to learning they are able to concentrate on the main ideas of an oral text. Analytical learners, on the other hand, tend to focus on detail and, because of the ephemeral nature of an oral text, would lose many of the details as well as the broader picture. This penchant for detail would not result in successful listening experiences, providing further support for the claim that listeners approach a comprehension task differently, recalling more main ideas in contrast

to readers who recall more detail (Lund, 1991).

The strategies used by sensing/feeling listeners identified in this study can be classified as "deep" strategies (Biggs, 1988). This would suggest that these listeners approach the text by focusing more on the overall meaning of the text rather than the obvious meaning of each individual part (Marton, 1988). The former approach is characterized by the use of such strategies as comprehension monitoring, inferencing and personal elaboration. The latter approach, more prevalent in the pattern of strategy use by learners who tend to think through their language learning experiences, appears to be characterized by the use of more surface strategies such as transfer and repetition. Students with a global learning style, exemplified in this study in a sensing/feeling approach to learning, appear to use a pattern of listening comprehension strategies similar to that of successful listeners. However, because so many successful listeners also placed at the thinking end of the continuum it would be unjustified to conclude that a particular learning style might lead to greater success in listening comprehension.

6.2.5.2. Comparison with other studies

Although a relationship between learning style and second language learning strategy choice is presumed to be significant, few studies have actually investigated the strength and nature of such a relationship. Ehrman and Oxford (1989, 1990) used the MBTI as a measurement instrument, which, like the LSI, is rooted in the theories of Jung. The bipolar thinking/feeling scale of the MBTI roughly approximates the thinking vs. sensing/feeling dimension of the LSI. Approximately the same percentage (70-75%) of learners from this study and the Oxford and Ehrman studies fell towards the thinking

end of the continuum. In the quantitative study (Ehrman and Oxford, 1989), learners at the feeling end of the continuum reported more social strategies which were not tapped in this study. However, in the qualitative study (Ehrman and Oxford, 1990), thinkers, who enjoy analysis, reported an affinity for cognitive strategies, in contrast to feelers who "reject most cognitive strategies," and for whom metacognitive strategy use is "totally unreported." (p. 320) This present study finds no support for such claims, and would go so far as to question the validity of such reports. Although they may not be conscious of it, the "sophisticated, successful language learners" interviewed in the study would, of necessity, have to use both cognitive and metacognitive strategies in order to carry out language tasks.

The comparisons that have been made regarding learning styles should be approached with a great deal of caution, however. The Ehrman and Oxford studies dealt with the report of general language learning strategies used by highly sophisticated adult language learners, whereas this study dealt with the use of listening strategies by high school language learners representing a wide range of academic abilities. The relationship between learning style and choice of learning strategies needs more research with careful attention to instrumentation and sample.

6.3 Conclusions

This study investigated the types of listening comprehension strategies used by high school Core French students and examined whether any differences in strategy use by language proficiency, listening ability, gender and learning style would be found. Results of the findings suggest that Core French students of differing listening ability,

at all levels of language proficiency are familiar with a wide variety of listening comprehension strategies for transactional and interactional listening. These strategies can be subsumed under the categories of metacognitive, cognitive and socio-affective strategies. However, because of the small sample size, the following conclusions should be taken as suggestive rather than definitive.

Novice I listeners are capable of building meaning from authentic oral texts. In spite of their limited linguistic knowledge, and without the benefit of advance organizers, these listeners used cognates, sound effects and the inherent redundancy of authentic texts to create and support a conceptual framework (using primarily top-down processing) for constructing a meaningful interpretation of the text. Although this interpretation was not detailed, appropriate pre-listening activities, coupled with a specified task would likely help these listeners to direct attention (through bottom-up processing) to the details defined by the task. The efficient use of semantic cues which access meaning quickly and directly, evidenced by these listeners, needs to be fostered in order to impede the compulsion to translate at the Novice II level, when linguistic knowledge increases.

The most important cognitive strategies for all levels of language proficiency appear to be inferencing and elaboration. Summarization becomes important at more advanced levels where students "dialogue" with the text (using top-down and bottom-up process simultaneously) and use of comprehension monitoring increases significantly at the Intermediate level.

A quantitative picture of strategy use offers only a vague representation of differences in listening comprehension. When illumined by a qualitative perspective, the

emerging picture of strategy use transcends numerical differences. Interpreting *how and when* strategies are used is probably more important, something that cannot be captured in a quantitative picture. Qualitative differences are manifest in the strength of elaborations, the accuracy of transfers and inferencing and the completeness of summarizations. In particular, qualitative differences emerge in the combination of cognitive with metacognitive strategies.

Pertinent use of metacognitive strategies appears to be crucial to successful listening comprehension. The ability to monitor comprehension is vital. Use of this strategy is particularly effective when carried out at the deeper schema level, with attention to all sources of information: conceptual framework, new linguistic input, text structure, information comprehended so far, and purpose for listening. Effectiveness of monitoring is further enhanced by deploying other metacognitive strategies such as anticipation, problem identification, self-evaluation. Deployment of metacognitive strategies is facilitated when the listener eschews inefficient strategies such as translation and repetition, thereby allotting more attentional resources to strategies which expedite synthesis of meaning.

Differences in strategy use by gender appears to be minimal. Whereas females may report more strategy use than males, the difference in actual use seems to be inconsequential. It would be unjustified to draw any conclusions regarding differences in strategy use by learning style.

6.4 Implications

6.4.1 Implications for theory

The following discussion will attempt to highlight aspects of the process in listening comprehension posited in the models discussed earlier (Nagle & Sanders, 1986; O'Malley & Chamot, 1990), which appear to be validated by this study. This discussion will consider four aspects: the interactive nature of listening, the impact of memory capacity, the directing potential of metacognitive strategies and the integral role of comprehension monitoring.

This study confirms that listening is an active process of constructing meaning. It is not variably a top-down or bottom-up process, but an interactive process (Byrnes, 1984; Rost, 1990; Anderson & Lynch, 1988) by which a listener draws on a number of sources simultaneously, the results of each interaction informing the other, to prompt a mental interpretation of a text or utterance in memory. These sources include the listener's life experience comprising of world and cultural knowledge, the topic of the text/conversation, the listener's knowledge of text structure and how information is organized within it, the listener's knowledge of surface features of L2, linguistic transfer from L1, extralinguistic and/or paralinguistic particulars, the listener's language proficiency and comprehension strategies (Richards, 1983; Faerch & Kasper, 1986; James, 1984; Dunkel, 1986; O'Malley, *et al.*, 1989; Long, 1989). The latter will govern how effectively and efficiently the above elements interact to build meaning. Furthermore, all of the above elements, residing within the listener and/or t text, also continue to interact with the developing interpretation of the ongoing text or the

interaction between speakers. While some of these elements are accounted for in the Nagle and Sanders (1986) model, and other elements such as strategies and language proficiency can be accounted for in the LTM, many of the contextual elements and other external factors as discussed below are not considered.

In addition to drawing on these various sources of information, listening comprehension is influenced by other external factors. The purpose for listening and the difficulty of the text or task will determine the goal which, in turn, will dictate what becomes salient in the text or interaction and which strategies the listener will deploy (Lund, 1990; Richards, 1990). Closely related to purpose is the context of the listening act. The context of the interaction has significant implications for listener inferencing of gaps in understanding and speaker intentions (Richards, 1983). Both the purpose for and context of a listening activity can raise the level of anxiety within the listener so that less linguistic input becomes available as intake. All of these, in addition to numerous individual listener factors, result in significant variability in listener performance and strategy use, as evidenced in this study. For this reason, none of the models posited in the literature presently account for the apparently different paths listeners take in arriving at synthesis of meaning. For that reason, the *one* retrieval/inference line leading to synthesis of meaning (see Figure 3.1, p. 55) should probably be many lines of different lengths and contours to illustrate the multidimensional ways listeners build a meaningful interpretation.

Listening comprehension for second language learners is delimited by cognitive constraints, and successful listening comprehension necessitates overcoming these

constraints. This interpretation of the process appears to agree with the models posited earlier (Nagle & Sanders, 1986). In order to avoid overloading STM, listeners need to 1) focus on semantic cues that can be encoded in memory quickly and efficiently, 2) resist the compulsion to translate, and, 3) chunk larger units of meaning into propositions. The less attention the listener gives to decoding individual words, the more attentional resources are available for storage of partial meaning and attention to crucial processes such as monitoring, inferencing, elaborating and predicting that function at deeper levels of meaning. This means that beginning listeners can use extra-linguistic contextual clues, the transparency of L1 cognates and other salient items to encode meaning and conceptualize a framework from which they predict and inference a meaningful interpretation. Although more advanced listeners continue to use these cues, increased linguistic knowledge provides them with greater detail and less ambiguity. With prolonged language exposure, these listeners have internalized more language, allowing them to process propositions instead of individual words. Because it is done in real time, listening is perforce a selective process; therefore, *what* is selected for processing becomes crucial in successful comprehension. Once again, even though all listeners must learn to cope with the same limited processing capacity of STM, the way in which individual listeners cope will, in effect, also determine the path to synthesis of meaning (or lack of it).

The strategies deployed by the second language listener will determine what is selected for processing. Elaboration and inferencing are crucial cognitive strategies integral to the process of listening comprehension, as evidenced in their extensive use by

all listeners. In fact, these strategies appear to be qualitatively different from other cognitive strategies in degree of interaction with the text. However, their potential is curtailed without the directing influence and control provided by metacognitive strategies, particularly comprehension monitoring.

This study confirms what L1 studies (Samuels, 1987; Danks & End, 1987) have shown about the crucial role of metacognitive strategies in listening comprehension. The directing character of these strategies, acknowledged in the executive decision maker of the Nagle and Sanders model, gives listeners an overview of the other processes and uses data from these processes to look ahead (predict), to monitor the developing interpretation for errors or breakdowns, and to look back, evaluating the process (Henner Stanchina, 1987). Comprehension monitoring appears to be a superordinate strategy. By keeping in mind the purpose of the listening task, the established conceptual framework and the ongoing interpretation of the text/interaction, comprehension monitoring determines what is salient and what is redundant. Accordingly, by deploying prediction strategies such as selective attention, it directs further linguistic analysis in searching out new information congruent with the developing interpretation. Appropriate revisions are then made when predictions are not verified.

Comprehension monitoring appears to be a vital support to selective attention, elaboration and inferencing in building mental structures for retaining the developing interpretation and for mapping new coherent information into it (see Gernsbacher, *et al.*, 1990). When predictions are consistently verified, the same or connected nodes in memory are activated, continually strengthening the conceptual framework and the

cohesiveness of the developing interpretation. This continuous reinforcement of the same or connected nodes results in more detailed predictions and more accurate inferencing. When predictions and inferences are verified, the framework is even further strengthened, enabling the listener to suppress what is redundant or irrelevant. However, when information not congruent with the previous framework is received, new nodes are activated in memory, constructing another network to serve as a new conceptual framework. Unless the connected nodes of the earlier framework are reactivated by further congruent information, they will begin to fade so that what was comprehended earlier is forgotten. This helps to explain why comprehension monitoring appears to be used more often by successful listeners, interacting with anticipation, elaboration and inferencing, regulating the more efficient operation of these strategies.

Models, such as the one posited by Nagle and Sanders, tend to be simple, parsimonious tools for explaining a process. While such a model can be helpful for understanding what appear to be elements common to the process, it cannot be understood as one line (albeit recursive) to a common end. A theory of listening comprehension, including the role of different strategies within it, needs to make room for various ways in which listeners deploy these different strategies.

6.4.2 Implications for pedagogy

Given that the use of metacognitive strategies, particulary comprehension monitoring, appears to be used more by successful listeners, teaching strategies that foster the growth of these learning strategies need to be promoted. Furthermore, given that Novice I listeners can arrive at gist comprehension of authentic texts without any

advance preparation, this type of listening practice at early stages of language learning is warranted, providing that the texts used have the appropriate characteristics to facilitate comprehension at this level.[1] In fact, the listening strategy profiles of Novice I/II listeners would suggest that the beginning two years of language instruction are pivotal in developing appropriate listening strategies and stimulating subsequent language learning success. The fact that Novice I listeners could not translate phrases and were obliged to focus on every semantic cue available to them indicates that a top-down, meaning-based approach can be used at this level. This approach needs to be nurtured through a subsequent critical period when listeners feel compelled to decode surface language in a bottom-up fashion and calls for ample opportunities for guided practice in listening so that deployment of appropriate metacognitive strategies becomes automatic, before, during and after the listening activity. Drawing on the present research, a process approach utilizing a framework of activities that develop planning, monitoring and evaluation strategies would appear warranted.

Pre-listening activities encourage listeners to plan, to organize their prior knowledge and to anticipate. During this critical phase, teachers need to prepare students for what they will hear and what they are expected to do. First of all, relevant schemata need to be instantiated so that an appropriate conceptual framework is constructed in which students can organize prior knowledge. This will include any one or more of the

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[1]This is not to suggest that listening practice at this level would involve exclusive use of authentic texts. In order to develop confidence and to provide students with input that contains structures slightly beyond their level of competence, listening comprehension instruction at this level should also involve lots of teacher talk supported by concrete referents and actions/gestures to facilitate comprehension.

following: knowledge of the topic (content schemata), logical organization of the information (textual schemata) and any relevant cultural schemata. Second, a purpose for listening needs to be established so that students know the specific information they need to listen for and/or the degree of detail required. This will determine how much bottom-up processing needs to be done. Third, on the basis of the above, students need to make predictions, elaborating from their conceptual framework to anticipate what they might hear. This will provide a focus for their listening (selective attention).

Comprehension monitoring and inferencing skills are developed during the listening phase. Students use their predictions, conceptual framework and extra-linguistic cues to interpret the linguistic input, revising predictions as necessary. The success of this phase is enhanced if the conceptual framework is strong enough to suppress irrelevant information. However, because of the ephemeral nature of listening, teacher intervention during this phase is virtually impossible. Therefore, periodic practice in logical inferencing, cognate awareness and word derivation skills (see Cashman, 1990) will facilitate the interpretation process and help students learn how to monitor at a local level.

During the post-listening phase, evaluation skills are nurtured. Teachers can help students evaluate either the results of their predictions in the light of their conceptual framework or the effectiveness of their strategies. Replaying the text once or twice, selectively attending to unresolved problems or verification of specifics, may be warranted, and will provide a clear goal for the repeat.

This three-phase framework, adapted from Massey and Duplantie (1983), is

substantiated by the results of this study. In order that students develop good listening strategies, it is essential that the teacher work within this framework during the first two years of language learning, at least. At Novice levels the teacher needs to act in a metacognitive role for the students, discouraging a reliance on language decoding in favour of cues that encourage top-down processing strategies. This is possible only when the accompanying task does not demand detailed comprehension, such as the orientation and main idea comprehension functions identified by Lund (1990). This does not mean that listening for detail should never be done at the Novice level. Listening for detail, requiring bottom-up processing, should be limited to texts related to a project or theme where students can be expected to comprehend the detail.

As students move beyond the Novice level, teachers gradually transfer to the student their metacognitive role. However, they should continue to serve in a facilitating rather than a monitoring role, calling students' attention to appropriate strategies, particularly when students are faced with a difficult text, a different accent, interfering noises or a complex task. Helping students to organize prior knowledge by instantiating appropriate schemata is one way in which the teacher will continue to facilitate listening comprehension.

The pedagogical implications of this study presuppose the use of authentic texts (see Rogers & Medley, 1988). The natural redundancy inherent in this type of discourse provides students with reinforcing cues embedded throughout the text. However, not all authentic texts may be appropriate. Texts must first of all relate to the life experience of the student. If students are to learn that their world knowledge and life experience

play a vital role in the comprehension process, they must be exposed to texts where they can capitalize on that knowledge base. Second, these texts must incorporate sound effects that are natural to the situation but important in creating a conceptual framework, particularly at the Novice level. Third, texts that contain many cognates are especially helpful to Novice listeners since these words are automatic and do not require processing to generate meaning. A necessary corollary to an appropriate text is a task that is appropriate to the level of the students (see Lund, 1991).

Finally, students need to relax; listening is a stressful activity as acknowledged by the participants in this study. Teachers need to do more than just tell students that they do not have to understand every word and that they must relax. Most importantly, teachers can help students direct attention to what is important. As mentioned earlier, because of its ephemeral nature, listening comprehension is, perforce, selective. Therefore, teaching students *what* to attend to is critical in easing the process and in giving students confidence. When they are guided to acquire pedagogically sound tools (strategies) as delineated above, and given opportunities for practice, students can experience success like the student cited by Rubin (1988) who now "felt smart." Only then can teachers rightfully talk about the power of affective strategies such as self-encouragement, taking emotional temperature, and lowering anxiety, to maximize the power of solid research-based strategies. When separated from student evaluation, lots of listening practice can enhance motivation and strategy acquisition.

While extensive practice in listening is desirable, teachers will need to develop a variety of ways to conduct pre-listening activities and to verify comprehension.

Students can be encouraged to learn from each other. Group work (primarily dyads) can effectively involve *all* students in pre-listening prediction and post-listening evaluation activities. Inferencing skills can be strengthened through group discussions, alerting students to different logical possibilities and weighing the merits of each. Finally, using different response formats for verifying successful comprehension (as determined by the purpose for listening) adds variety and interest to a process that takes time (for example, see Lund, 1991; Oxford, 1990; Richards, 1990; Ur, 1984).

6.5 Recommendations for further research

This study was exploratory in both scope and methodology. As such, the results need to be validated with a larger sample at each level. The following discussion will propose recommendations for methodology and future research.

Based on the experience of this study, the following suggestions should strengthen future research design in this area. First of all, in order to more clearly differentiate between successful and less successful listeners, a listening comprehension test should be administered to all participants. The resulting scores can serve as a baseline for identifying the participants whose profiles will be compared for differences in strategy use by listening ability. Second, future research should separate a study of the use of world and linguistic knowledge from a study of strategies so that planning strategies can also be assessed. Third, during the structured interview, as conducted in Phase I, the interviewer should be especially alert to self-management strategies, asking participants ***how*** they arranged conditions for successful accomplishment of listening tasks. Their answers would elicit more evidence of affective strategy use. Finally, the proficiency

interview should not be used to study strategy use in interactive listening. Instead, both participants should be equal partners in a communication task (e.g. information gap) where the student is not just questioned, but is required to understand his/her interlocutor in order to complete the task.

In addition to the recommended improvements in methodology, the following areas for further research are suggested.

The apparent patterns and frequency of strategy use at each level of proficiency need to be verified with a larger sample, particularly at the French 10 and 20 levels. It is important to know whether the Novice II level (French 20 students who have already had approximately 100-150 hours of instruction) does indeed represent a period of instability in strategy use. If future research provides further support for this finding, the implications for instruction in listening comprehension and learning strategies would be significant. Similar research with students at different ages should also be conducted, particularly with students in elementary and junior high schools where most Alberta children begin FSL instruction.

The effects of text difficulty on strategy use at different levels of language proficiency also merits further study in order to determine whether advanced learners resort to similar patterns of strategy use as beginning learners or whether they tackle the text differently.

The present theoretical framework in which most listening comprehension and learning strategy research takes place needs to be reviewed. The information processing framework, while helpful in developing an understanding of purely cognitive processes,

is inadequate for explaining the mitigating effects of crucial human variables in language learning such as motivation, self-concept and anxiety, to name only a few (Skehan, 1991). Integrated models, such as the one proposed by Titone (1988), and work done by Rost (1990) hold promise for a fruitful framework in which to account for the role of the person and the environment in language learning and listening comprehension.

Validation of the General Comprehension Skill for language learning, replicating in second language contexts the four experiments conducted by Gernsbacher, *et al.* (1990), would enhance our understanding of the cognitive processes involved in second language comprehension.

Finally, strategy training studies need to be conducted. Further research on the effects of pre-listening activities on student performance in listening tasks, for example, would be a logical first step, and a natural extension of this study.

6.6 Concluding comments

Listening comprehension strategies as a field of research opens up new vistas into how second languages are learned. Its potential to unravel complex mental processes that were previously unexplained is complemented by its disclosure of the powerful influence of personality and situational variables on these dynamic processes. The important role of metacognitive strategies, as established in this study, and the potential impact of the still largely unexplored socio-affective strategies draw attention to the benefits of further exploration of mental processes and learning environment for success in L2 listening comprehension and subsequent learning.

The application of listening comprehension strategy research in the classroom

offers a whole new set of tools for use by teachers and students to assist in learning second languages. While much exploration and experimentation remains to be done, the outcome will likely be major advances in both the theory and practice of language teaching/learning.

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APPENDIX A

Information/permission letter for parents/guardians

Structured listening interview guide

Instructions to Phase I participants for validating transcripts

Sample Phase I transcript (coded and validated)

Guidelines for thinking aloud

Sample page of coded protocols from a Phase III think-aloud session

Strategy checklist for Phase II interviews

January 14, 1991

Dear Parent/Guardian:

Your son/daughter has been invited to participate in a special study on language learning. The study, under the supervision of my advisor Dr. D. V. Parker, will focus on how students learn to listen to and understand a second language. No special knowledge or skills are required for students to participate. Participation is voluntary and students may withdraw at any time.

About forty students will be involved in individualized interview sessions in which they will be encouraged to share what they do when they listen in a second language and what they are thinking when they are attempting to understand oral texts. There are no correct answers; students only need to answer honestly and completely. Normal class instruction will be disrupted as little as possible.

Results of this research will provide valuable information for curriculum development and classroom teaching practices in the teaching of second languages. Your school system has approved the study and has available a copy of all related research materials should you wish to see them. At the completion of this study, a written report will be sent to the school. Participants will remain anonymous in the written report of this study.

If you have any questions, you are encouraged to call me at 492-5723 (university) or 454-2691 (home). Dr. Parker can be reached at the University at 492-5101.

Thank you.

Yours sincerely,

Larry Vandergrift
PhD Candidate

Structured Listening Interview Guide

1. Your teacher speaks to you in French, making conversation, giving explanations, directions and/or assignments.

   a. Do you ever have difficulties understanding your teacher? Can you describe the difficulties?
   b. What particular methods or techniques do you use to understand him/her?
   c. How do you deal with unfamiliar words?
   d. What do you do if you don't understand the French you hear?

2. Your teacher expects you to complete a listening activity (exercise) in class, listening to a conversation or another kind of oral text recorded on a tape. Think of the last listening activity you did in class.

   a. What is the first thing that you do when you begin such an activity?
   b. Can you recreate the sequence of steps you take?
   c. How do you deal with unfamiliar words? What do you do?
   d. What do you do when you have difficulty?
   e. For a variety of reasons, many language learners become anxious when faced with a listening task.
      Does this happen to you? How do you deal with this?

3. You have an opportunity to listen to French outside of class, listening to radio or television, or interacting with a native speakers. Have you ever taken advantage of such opportunities? If so...

   a. Can you tell me about any methods or tricks you used to understand?
   b. How did you deal with unfamiliar words?
   c. What did you when you did not understand?
   d. Did you become nervous or anxious? How did you deal with this?

Scale for frequency of use: rarely
sometimes
often
almost always

(Adapted from Chamot and Küpper, 1989)

February 1, 1991

Dear participant:

Please read over the attached transcript of your recent interview with me about listening in French class. Read through it carefully to verify that this indeed represents how you listen in class. I have left a blank in front of each strategy that you mentioned. First of all, would you please indicate how often you use this strategy according to the following grid:

almost always = 1
often = 2
sometimes = 3
rarely = 4

Second, feel free to add other ways in which you discover meaning. Just write them in and indicate how often you do this. Finally, some of you have questions on your transcript because I had a hard time understanding what you told me. This is not your fault; it was my lousy tape recorder (which I have since returned to the store)! If you can remember what you said, please add it.

Thanks to all of you for your input. I will be contacting about half of you to participate in the more intensive phases of this study. I've enjoyed working with you and I hope I can count on your continued support.

Sincerely,
Liz

PLEASE RETURN THE TRANSCRIPT TO YOUR TEACHER!

F202

Name: E B Class: French 20

Structured Interview Guide for Listening Comprenension

1. Your teacher speaks to you in French, making conversation, giving explanations, directions and/or assignments.

a. What particular methods or techniques do you use to understand her?
..2..I take notes about what she says NOTE TAKING
..3..I review PLANNING
..1..I pay a lot of attention DIR ATTN. & SELF-MNGMT.

b. How do you deal with unfamiliar words?
..1..I look in the back of the book RES
..2..I look in the dictionary RES
..4..when I write it down it sort comes to my mind what it means (I recognize the word) NOTE TAK
..3..I relate the word to a topic we've studied ACAD. ELAB.

c. What do you do if you don't understand the French you hear?
..1..I'll talk to the teacher & CLAR.

2. Your teacher expects you to complete a listening activity (exercise) in class, listening to a conversation or another kind of oral text recorded on a tape. Think of the last listening activity you did in class.

a. What is the first thing that you do when you begin such an activity?
..1..I clear my mind SELF MNGEMENT
..1..I listen really hard DIR ATTN
..1..I pick out key words in the instructions PLANNIN SEL ATTN.

b. Can you recreate the sequence of steps you take?
..1..I pick out key words and put it all together to figure out what we have to do SEL ATTN BP INF

c. How do you deal with unfamiliar words?
..3..I ask the teacher & CLAR
..2..I ask the person in front of me COOP
..1..I look in the book RES

d. What do you do when you have difficulty?

e. For a variety of reasons, many language learners become anxious when faced with a listening task. How do you deal with this?
..1..I listen more carefully to the instructions SELF MNGEMENT

THINK ALOUD

SAY EVERYTHING THAT COMES TO YOUR MIND

ACT LIKE YOU'RE IN A ROOM TALKING TO YOURSELF

HOW ARE YOU MAKING SENSE OF WHAT YOU ARE HEARING?

HOW ARE YOU DEALING WITH UNFAMILIAR WORDS

WHAT ARE YOU NOT UNDERSTANDING

HOW DO YOU FIGURE IT OUT WHEN YOU DO UNDERSTAND

WHAT PICTURES OR MEMORIES COME TO MIND

WHAT ARE YOU THINKING

A la météo, ce soir, il y a risque d'orages violents.

Priscilla: Ah, the weather. She's giving the weather report and she said there's some kind of risk, something, some type of violent weather probably. SUM Q ELAB

Int.: O.k. How do you know that?

Priscilla: Because she says, there's, she said you know "risque", uh something "violents". So it must be the weather because that's what she's reporting. So probably a wind or rain or something.

Présentement, le mercure indique 34°C.

Priscilla: She said "Presently the thermometer indicates" that um, I missed the number degrees. Some certain, certain degrees. PROB ID SUM

Int.: O.k. Anything, how did you arrive at that?

Priscilla: Um, I didn't understand the word "thermometer" but she said "indicates that it's presently at certain degrees" so I assumed the, the thermometer or whatever that they use. WLD ELAB

L'humidité relative est de 47%.

Priscilla: The humidity is at uh, 47% I think she said. SUM

Int.: How did you know?

Priscilla: Oh, how did I know that. She, "humidité. It sounded very much like English. I got that. She said something about the "percent" so... TRNSFER WLD ELAB

Les vents du sud-ouest sont de 25 km à l'heure.

Priscilla: The winds from the southwest are 25 km an hour. SUMM

Int.: Can you give me the reasons for that?

Priscilla: I understood the vocabulary.

Sur la carte satellite de l'est du Canada, on peut voir, sur le centre de la province, un front froid qui descend lentement.

Priscilla: There's some, some type of weather coming in from the west, I think it is. And it's in the center of the province. It's coming down, it's moving down. It's probably some type of low or high moving down. SUMM WLD ELAB

Int.: How do you know that?

Priscilla: She said "It's descending and", uh, "coming from the west" so it must be some type of, front, cold front or warm front whatever.

Int.: How do you know that?
Priscilla: I'm thinking of weather. I learned weather in grade 8. ACAD. ELAB.

Phase II Strategy Checklist Name and Code: 244

Strategy					
Global reprise	asks for repeat in Fr. asks for repeat in Eng.				
Specific reprise	word fragment				
other requests	slow down				
Hypothesis testing	in English in French				
Forward inference	in English in French				
Kinesics	lean forward cocked head glazed eyes hands eyebrows furrowed confused look				
uptake, continuation signals	nods verbal (oui) paraling. (mmm)				
Faking	a particular expression used?				

Repeats to self (question or words):

Any affective strategies:
self-encouragement?
emotional temperature?
lower anxiety?
other?

APPENDIX B

Texts of the listening passages

Sources of the listening passages

Appendix B

Texts of the Listening Passages

1.0 Level I texts

1.1 Le restaurant Santa Lucia

Vous aimez les mets italiens? (*Italian music*) Eh bien, venez au restaurant Santa Lucia au 3261, boulevard St-Denis.

Là vous allez trouver votre repas préféré....spaghetti, lasagne, ravioli et, bien sûr, la meilleure pizza en ville!

Chaque semaine au restaurant Santa Lucia il y a un bon spécial.

Cette semaine on offre une lasagne au gratin avec salade pour 3,50$ seulement.

En plus, tous les lundis entre 17h et 20h on dîne au spaghetti pour seulement 2$ - à volonté!

Vous ne voulez pas sortir? Alors, pour une délicieuse pizza chaude, téléphonez au restaurant Santa Lucia au numéro 385-9318.... livraison rapide et gratuite!

Source: A la radio!, tape 2B, p. 38.

1.2 Pique-nique musicale

Voici un événement pour toute la famille, organisé par le centre communautaire.

(*guitar music*) Dimanche après-midi, le 13 juillet, il y a un pique-nique musical au parc Lafontaine à l'angle des rues Papineau et St-Jean.

Il y a des jeux, des clowns et de la musique.

En plus, les hamburgers et les hot-dogs sont en vente à 50c.

N'oubliez pas! Il ne faut pas le manquer.

Pique-nique musical, dimanche le 13 juillet, de 13h30 à 17h au parc Lafontaine.

Source: A la radio! tape 2B, p. 39

1.3 La ligne musicale

Alors, mes amis, si vous voulez dédier une chanson à quelqu'un, donnez-moi un coup de téléphone.

Allô! Qui est à l'appareil?
Lucie Laberge.

Lucie, tu veux entendre une chanson. Laquelle?
C'est "Viens chez moi".

C'est pour qui?
Je veux la dédier à mon ami, Claude.
Oui, d'accord.

Mais, tu sais, Lucie, il y a une petite condition! Quelle est ta station de radio préférée? Dis-le bien fort!
CKML, bien sûr.

Parfait! Bravo! Alors, voici "Viens chez moi" pour Claude, de la part de Lucie.

C'est très facile, mes amis, si vous voulez dédier une chanson à quelqu'un, composez le numéro 792-0281---"La ligne musicale".

Source: A la radio!, tape 3A, p. 42.

1.4 Canada---URSS

Ecoutez bien, tous les amateurs de hockey.

(*Russian national anthem*) Au Forum, c'est un match de hockey extraordinaire entre les Etoiles soviétiques et les Canadiens! Retenez la date! C'est vendredi, le 31 décembre, à 19h au Forum de Montréal!

La vente des billets commence lundi à 9h du matin. Voici les prix des billets:

Blancs---13,50$;
Bleus---8$;
Bleus du centre---11,50$
Places debout---8$

On peut les acheter aux guichets du Forum et à tous les comptoirs Ticketron.

A ne pas oublier---il y a une limite de six billets par personne.

Source: A la radio!, tape 1B, p. 22.

2.0 Level II texts

2.1 Le baseball à moitié prix

Voici une annonce du marché Canaprix!

(*upbeat music*) He, tous les amateurs de baseball!

Cette semaine au marché Canaprix on vous offre des billets de baseball à moitié prix. C'est ça, mes amis---à moitié prix!

D'habitude on paie 7$ le billet, mais cette semaine au marché Canaprix les billets ne coûtent que 3,50$ chacun.

Un super-spécial à ne pas manquer! Ces billets sont valables pour les matches des Expos contre Philadelphie le 29 juin, le 30 juin, et le 1er juillet.

Donc, on vous attend. Venez nous voir pour vos billets de baseball!

Source: A la radio!, tape 1B, p. 24.

2.2 L'heureuse gagnante

Allô, est-ce que je peux parler à mademoiselle Hélène Petit, s'il vous plaît.
C'est moi-même, monsieur.

Ah, bonjour et Joyeuse Saint-Valentin, Hélène. Ici Robert Belair de CKAC. J'ai une très bonne nouvelle à vous annoncer aujourd'hui.
Oui.

Mais oui, Hélène. La bonne nouvelle est que vous êtes la gagnante du premier prix de notre tirage "Le coeur en fête."

C'est vrai? Mais, c'est formidable! Quelle belle surprise!

C'est bien vrai! Félicitations de nous tous à CKAC! Vous gagnez un weekend de ski pour deux personnes à L'auberge nordique dans les Laurentides.

Bien sûr! Je peux y aller avec ma soeur Emilie? Elle aussi, elle aime skier.
Bonne idée!

Donc, encore une fois, félicitations et au revoir.
Au revoir, Robert, et merci, merci beaucoup.

Source: A la radio!, tape 2A, p. 30.

2.3 Un nouveau magazine pour les jeunes

Vous voulez être au courant? C'est une annonce spéciale.

(*upbeat music*) Attention les jeunes! Formidable! fait ses débuts! Vous attendez ce magazine depuis longtemps, et le voilà enfin!

Aujourd'hui, chez votre marchand de journaux, vous trouvez Formidable! le magazine fait spécialement pour vous, les jeunes.

Dans Formidable! on vous parle de vos personnalités préférées---chanteurs, groupes, vedettes de cinéma et de la télé, athlètes, etc.

Beaucoup de bons articles, de belles photos et de bandes illustrées.
Il y a des coupons pour des offres spéciales et un concours à tous les mois. Ce mois-ci vous pouvez gagner un voyage au Carnaval de Québec!

Et Formidable! n'est pas cher! Seulement 1,50$ par mois. Oui, c'est vrai, mes amis! Vous ne payez que 1,50$ par mois. Formidable? Oui, c'est Formidable!

Source: A la radio!, tape 2B, p. 35.

2.4 Vente pour la rentrée

Et voici un message d'un de nos commanditaires!

(*upbeat music*) C'est parti! C'est la super-vente chez Jo-Jo Jeans, spécialiste de la mode! Des prix INCROYABLES!

Des spéciaux à vous faire tomber sur le dos---et juste à temps pour le retour à l'école. Nos cinq boutiques sont remplies de spéciaux sensationnels!

Tous nos jeans sont réduits à 18,95$.

Des pullovers de couleurs variées sont à 7,95$, et

pour compléter votre ensemble, il y a de beaux sacs en denim à 4,95$ seulement. Oui, vous avez bien entendu! Nous avons dit vrai! Des prix INCROYABLES!

Mais---faites vite! La vente se termine le 3 septembre!

Rendez-vous à l'une de nos cinq boutiques Jo-Jo Jeans de la région métropolitaine!

Source: A la radio!, tape 2B, p. 35.

2.5 Gardienne recherchée

Gardienne [illegible].

Madame [illegible] est à la recherche d'une gardienne pour son garçon de deux ans et demi.

C'est pour le mois de juillet.

Les heures de travail seront de 8h à 16h du lundi au vendredi.

On choisira de préférence quelqu'un qui parle français et qui a de l'expérience avec un enfant de cet âge.

Le salaire est à discuter.

Pour de plus amples renseignements, veuillez téléphoner à madame Malprise au numéro 484-0280.

Source: A la radio!, tape 3A, p. 44.

3.0 Level III texts

3.1 Madame Frappefort

Bon, madame Frappefort...voulez-vous nous raconter ce qui est arrivé à la banque hier matin?
Eh bien! Je suis allée à la banque hier vers 10h30. J'avais besoin d'argent.

Vous avez dû attendre longtemps?
Pas trop longtemps, non. Environ 10 minutes, peut-être. Là, j'étais en ligne, j'attendais devant le guichet et il y avait un homme devant moi.
Oui.

le monsieur et, tout à coup, lui, il avait un revolver à la main!

Et vous, qu'est-ce que vous avez fait, madame?
Mais moi, sans penser, je l'ai frappé avec mon parapluie!

Vous l'avez frappé avec votre parapluie?
Oui! Bam! Bien fort sur la tête!

Ouf! Et qu'est-ce qui est arrivé?
Mais, j'ai cassé mon parapluie!
Vous avez cassé votre parapluie! Mais, qu'est-ce qui est arrivé au bandit?

Le bandit? Mais lui, il a perdu connaissance. Il est tombé par terre.
Et ensuite?
Alors, les policiers sont arrivés et le bandit s'est réveillé. Je vous le dis...il était très surpris de me voir avec mon parapluie!

Je le crois bien, Madame!
Donc, on lui a mis des menottes et on l'a transporté au poste de police. Hier après-midi le chef de police est venu me féliciter, et hier soir on a mis ma photo à la première page du journal.

Et moi, aussi, je vous félicite! Vous avez été très courageuse. Je vous remercie infiniment de votre interview si intéressante. Au revoir, madame.
Au revoir, monsieur...et merci.

Source: A la radio!, tape 3B, pp. 52-3.

3.2 La course Terry Fox

Mesdames et messieurs---j'ai le grand plaisir d'être à la ligne d'arrivée de la course Terry Fox. La course vient de se terminer et je suis ici pour interviewer quelques-uns des participants. Et justement, voici un des coureurs maintenant.

(*crowd noises*) Bonjour, monsieur. Puis-je vous demander votre nom?
Louis Pelletier.
Eh bien, monsieur Pelletier. Vous n'êtes pas trop essoufflé pour répondre à quelques questions?
Mais, pas du tout! Je suis en pleine forme!

C'est très bien, ça. Est-ce que je peux vous demander votre âge?
J'ai soixante-douze ans.
Un bel âge! C'est la première fois que vous participez à la course Terry Fox?
Non, C'est la quatrième fois.

Formidable! Est-ce que vous courez beaucoup?
Oui, Je fais du jogging à tous les jours.
C'est très bien ça, monsieur, surtout à votre âge.

Merci, mais ce n'est pas tout. Je fais de la gymnastique deux fois par semaine...
Ah, bon!
Oui, et je nage un peu à tous les jours, puis en été je joue au golf avec des amis.

Bravo! C'est vraiment bien! Est-ce qu'il y a une madame Pelletier?
Oui, je suis marié, mais ma femme n'est pas ici aujourd'hui.

Comment ça, monsieur?
Mais, ma femme, elle a ses propres activités. Elle travaille beaucoup dans son jardin---elle cultive de très belles roses---et elle joue au bridge avec ses amies.

C'est une famille très occupée. Alors, je vous remercie, monsieur Pelletier, et je vous félicite. Bonne chance et---à l'année prochaine, peut-être.
A l'année prochaine! Au revoir.

Alors, chers auditeurs, voilà peut-être le secret. Pour rester jeune et en bonne santé on doit être actif...Physiquement et mentalement. Et maintenant, voici un autre participant...

Source: A la radio!, tape 3B, pp. 50-1.

3.3 L'argent, fait-il le bonheur?

Bonjour, tout le monde. Ici Irène Jeannot. Dans le studio aujourd'hui nous avons monsieur Georges Patry et sa femme Monique, qui sont les heureux gagnants d'un million de dollars à la loterie de la semaine dernière. Ils vont nous parler de leur bonne fortune!

Alors, monsieur, vous avez gagné un million de dollars à la loterie la semaine dernière, n'est-ce pas?

Oui, mademoiselle, c'est vrai!
Est-ce que cet argent va beaucoup changer votre vie, pensez-vous?
Non, pas beaucoup. Nous allons continuer à mener notre petite vie simple et tranquille.

Comment, vous n'allez pas changer de maison, acheter une belle voiture peut-être?

Non. Nous allons continuer à habiter la même maison. Nous y sommes assez confortables, vous savez. Pourtant, j'ai l'intention de m'acheter une petite voiture très ordinaire. C'est tout! Nous allons mettre l'argent à la banque.

C'est tout? Vous m'étonnez, monsieur.
Oui, et il m'étonne aussi!
Quoi, madame, vous n'êtes pas d'accord avec votre mari?

Pas du tout!
Alors, vous, vous pensez que cet argent va peut-être changer votre vie?
Bien sûr qu'il va changer notre vie!

Comment ça, madame?
Premièrement, je veux acheter une belle et grande maison et une belle voiture---une décapotable!

Et vous allez voyager, madame?
C'est mon rêve depuis longtemps. Je vais aller en Europe, au Japon...partout!

Et vous, monsieur, vous allez voyager avec madame?
Moi, je déteste les voyages. Je déteste les décapotables. Je ne veux pas de grande maison. Je veux une vie très tranquille.

Lui, il peut avoir sa petite vie tranquille! Moi, je vais m'acheter de beaux bijoux et un beau manteau de fourrure, et je vais partir pour l'Europe la semaine prochaine.

Bon voyage, madame! Et bonne chance, monsieur! Eh bien, chers auditeurs! Je ne sais pas si vous pensez comme moi, mais moi, je crois que cet argent va beaucoup changer la vie de ces deux gagnants, n'est-ce pas?

Source: A la radio!, tape 3B, p. 52.

3.4 **Message téléphonique** (*québécois accent*)

(*phone rings*) Oui, allô!
Est-ce que je peux parler à madame Lavallée?
Oh! Ma mère est absente pour la soirée. Elle est partie au cinéma avec mon père.

Est-ce que tu peux lui faire un message?
Un instant, je vais aller chercher un crayon puis du papier.

Oui, Monsieur, je suis prêt.

Dis-lui que monsieur Perreault de Québec, un de ses clients, va arriver demain.

Comment épelez-vous son nom?
PERREAULT. Il sera à Dorval à 10h30 par le vol 137 de Québecair. Dis à ta mère d'aller le chercher à Dorval.

Bon, ça va.

Veux-tu me répéter le message?
Monsieur Perreault arrive à Dorval demain à 10h30 par le vol 137 de Québecair. Maman doit aller le chercher.

C'est ça. Merci beacucoup. Je compte sur toi pour lui transmettre le message. Bonsoir!
Bonsoir, Monsieur.

Source: Communication plus 1 (Guide d'accompagnement), p. 107.

4.0 Level IV texts

4.1 Trouver une excuse (*québécois accent*)

(*school hallway noises*) Bonjour Sylvain.
Salut Philippe! Salut Christine!
Ca va, toi?
Plus au moins.
Pourquoi? Tu n'as pas passé une bonne fin de semaine?
Oh oui! C'est ça le problème.

Tu sais, mon frère Francis, le grand de vingt ans, il a loué un appartement avec sa blonde. Il est parti de chez nous en fin de semaine et je l'ai aidé à demenager.

Puis après, on a commencé la peinture de son appartement.

Ah! C'est le fun ça!
C'est amusant, mais avec tout ça, je n'ai pas fait mon travail de français et c'est aujourd'hui qu'il faut le remetrre. Comment est-ce que je vais expliquer ça à mon prof?

Dis-lui que tu ne peux pas lui remettre parce que tu as été malade, c'est tout. Ou tiens! Tu pourrais lui dire que tu n'as pas trouvé assez de références sur le sujet.

Pas très fort, ton histoire.
Dis-lui...que tu es allé à la campagne avec tes parents et que tu as oublié ton travail à la maison.

Non et non. Je ne veux pas mentir. Je veux lui dire la vérité mais...m'arranger pour éviter les ennuis.

Dis-lui que ton frère n'a pas beaucoup d'argent et qu'il comptait sur toi pour l'aider.
C'est vrai, non! Puis, tous ces travaux ont pris plus de temps que tu l'imaginais.

Ca, ça a plus de bon sens. Puis, pour compenser mon retard, je pourrais lui faire une page de plus. Il verrait ma bonne volonté. Pas vrai?

Bien sûr. De toute façon, c'est un professeur très compréhensif. Tu vas voir!

OK les amis. Merci de vos bons conseils. je me sens mieux. (*school bell rings*)

Source: Communication + 3 (Guide d'accompagnement), p. 68.

4.2 La couleur du temps

(*electrifying music*) A la météo, ce soir, il y a risque d'orages violents.

Présentement, le mercure indique 34*C.

L'humidité relative est de 47%.

Les vents du sud-ouest sont de 25 km à l'heure.

Sur la carte satellite de l'est du Canada, on peut voir, sur le centre de la province, un front froid qui descend lentement.

Les prévisions pour ce soir et la nuit prochaine: nuageux, risque de quelques averses.

Minimum pour la nuit prochaine, entre 16 et 18 degrés. Le maximum demain, entre 22 et 24 degrés.

Au pays, les températures sont dans les moyennes saisonnières.

Aperçu pour demain: du soleil en matinée: en après-midi, le ciel se couvre à nouveau.

Faibles probabilités de précipitations, environ 30%.

C'est tout pour la météo. Bonne soirée, Mesdames, Messieurs.

Source: Communication + 3 (Guide d'accompagnement), p. 69.

4.3 Rendez-vous manqué (*québécois accent*)

(*phone rings, footsteps*) Allô! Est-ce que je peux parler à Véronique?
Oui, un instant. C'est Sergio?
Oui, c'est moi.
Oh! Ca va toi?

Véronique était bien inquiète hier soir. Qu'est-ce qui est arrivé? Bien, moi aussi. Je l'ai attendue une demi-heure.
Attends! Elle est ici.

Allô toi. Qu'est-ce qui t'est arrivé hier?
Comme je t'avais dit en classe, je t'ai attendue au café Picasso.

J'étais inquiet, tu sais! J'étais là à 18h30. J'ai attendu une demi-heure.

Bien voyons, je t'ai attendu à l'Expresso.
T'es pas sérieuse!

C'est ce que j'avais compris: l'Expresso, 18h30. C'est ce qui arrive quand on chuchote en classe.

La prochaine fois, tu me l'écriras au lieu de me déranger pendant le cours.

J'ai pas trouvé ça drôle, tu sais. J'ai attendu jusqu'à 19h15.

Je suis rentrée et j'ai téléphoné chez vous. Il n'y avait pas de réponse.

Alors j'ai téléphoné à Lucie et, pour m'enlever ma mauvaise humeur, je suis allée chez elle. On a parlé et écouté des cassettes.

Bien, je regrette vraiment tu sais! Excuse-moi. Moi aussi, j'étais déçu.

J'ai pris un expresso au Picasso, puis Mireille et Julien sont arrivés. On a décidé d'aller voir un film à l'Outremont à 21h30. Moi aussi j'ai essayé de te téléphoner, mais tu devais être partie chez Lucie.

Oui, puis maman étant sortie...
Je suis rentré après le film. Il était tard et je n'ai pas osé t'appeler. Je m'excuse encore. La prochaine fois, je serai plus clair.

J'espère! Je ne l'ai pas trouvée drôle. Tu pourrais te reprendre ce soir. Où tu m'invites pour te faire pardonner?

Bien, c'est que...bon, bien...

Source: Communication + 3 (Guide d'accompagnement), p. 70.

Sources of the listening passages

Boucher, Anne-Marie and Michel Ladouceur. (1984). Communication plus 1 (Edition révisée). Montréal: Centre Educatif et Culturel.

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APPENDIX C

Listening comprehension strategies and their definitions with representative examples

Listening Comprehension Strategies and their Definitions
with Representative Examples

Metacognitive strategies

1. **Planning:** Developing an awareness of what needs to be done to accomplish a listening task, developing an appropriate action plan and/or appropriate contingency plans to overcome difficulties that may interfere with successful completion of the task.

1a. **Advance organization:**	Clarifying the objectives of an anticipated listening task and/or proposing strategies for handling it.	I read over what we have to do. (Fr.10) I try to think of questions the teacher is going to ask. (Fr.20S)
1b. **Directed attention:**	Deciding in advance to attend in general to the listening task and to ignore irrelevant distractors; maintaining attention while listening.	I listen really hard. (Fr.20) I pick out the words that are familiar so that... (Fr.10, in combination with **inferencing**)
1c. **Selective attention:**	Deciding to attend to specific aspects of language input or situational details that assist in understanding and/or task completion.	I listen for the key words. (Fr.20) I establish the speakers in the conversation, their relationship by tone of voice, how they will address each other. This will limit the topics of discussion. (Fr.20N, in combination with **planning**, voice **inferencing** and **elaboration**.)
1d. **Self-management:**	Understanding the conditions that help one successfully accomplish listening tasks and arranging for the presence of those conditions.	I try to get in the frame of mind to understand French. (Fr.20) I put everything aside and concentrate on what she is saying. (Fr.20S)

2. **Self-monitoring:** Checking, verifying, or correcting one's comprehension or performance in the course of a listening task.

2a. **Comprehension monitoring:**	Checking, verifying, or correcting one's understanding at the local level.	I translate and see if it sounds right. (Fr.10, in combination with **translation**) I just try to put everything together, understanding one thing leads to understanding another. (Fr.20S)
2b. **Auditory monitoring:**	Using one's "ear" for the language (how something sounds) to make decisions.	I use my knowledge of Portuguese, primarily sound. (Fr.20S, in combination with **transfer**.) I use the sound of words to relate to other words I know. (Fr. 20)

2c. **Double-check monitoring:**	Checking, verifying or correcting one's understanding across the task or during the second time through the oral text.	I might catch it at the end and then I'd go back. (Fr.20) Sunny in the morning, that's not making sense...(earlier) it sounded like a cold front, something doesn't make sense to me any more. (Int. II, from think-alouds)

3. **Self-evaluation:** Checking the outcomes of one's listening comprehension against an internal measure of completeness and accuracy.

3a. **Performance evaluation:**	Judging one's overall execution of the task.	How close was I? (Int.III, at end of a think-aloud report)
3b. **Strategy evaluation:**	Judging one's strategy use.	I don't concentrate too much to the point of translation of individual words because then you just have a whole lot of words and not how they're strung together into some kind of meaning. (Fr.20N)
4. **Problem identification:**	Explicitly identifying the central point needing resolution in a task or identifying an aspect of the task that hinders its successful completion.	I'm not sure but "partager" and I'm not really sure what that means. I think that kind of has something to do with that. (Int. II, from think-alouds) Music, there is something, ..."des jeux", I don't know what that is. (Nov.II, from think-alouds)

Cognitive strategies

1. **Inferencing:** Using information within the text or conversational context to guess the meanings of unfamiliar language items associated with a listening task, to predict outcomes, or to fill in missing information.

1a. **Linguistic inferencing:**	Using known words in an utterance to guess the meaning of unknown words.	I use other words in the sentence. (Fr.10) I try to think of it in context and guess. (Fr.20S)
1b. **Voice and paralinguistic inferencing:**	Using tone of voice and/or paralinguistics to guess the meaning of unknown words in an utterance.	I listen to the way the words are said. (Fr.20) I guess, using tone of voice as a clue. (Fr.20S)
1c. **Kinesic inferencing:**	Using facial expressions, body language and hand movements to guess the meaning of unknown words used by a speaker.	I try to read her body language. (Fr.10) I read her face. (Fr.20) I use the teacher's hand gestures. (Fr.20S)

1d. **Extralinguistic inferencing:**	Using background sounds and relationships between speakers in an oral text, material in the response sheet or concrete situational referents to guess the meaning of unknown words.	I guess on the basis of the kind of information the question asks for. (Fr.10) I comprehend what the teacher chooses to write on the board to clarify what she is saying. (Fr.20N)
1e. **Between parts inferencing:**	Using information beyond the local sentential level to guess at meaning.	Because in the beginning she said course, so maybe it was, maybe it was a race...may be a horse race... (Nov. III, from think-alouds)
2. **Elaboration:** Using prior knowledge from outside the text or conversational context and relating it to knowledge gained from the text or conversation in order to predict outcomes or fill in missing information.		
2a. **Personal elaboration:**	Referring to prior experience personally.	I think there is some big picnic or a family gathering, sounds like fun, I don't know... (Nov.I, from think-alouds) You know...maybe they missed, because that happens to me lots just miss accidentally and then you call up and say, "Well, what happened?" (Int.III, from think-alouds)
2b. **World elaboration:**	Using knowledge gained from experience in the world.	Recognizing the names in sports helps you to know what sport they are talking about. (Fr.20S) I use the topic to determine the words that I will listen for. (Fr. 20S, in combination with **selective attention**)
2c. **Academic elaboration:**	Using knowledge gained in academic situations.	[I know that]from doing telephone conversations in class. (Nov.III, from think-alouds) I relate the word to a topic we've studied. (Fr.20) I try to think of all my background in French. (Fr.20S)
2d. **Questioning elaboration:**	Using a combination of questions and world knowledge to brainstorm logical possibilities.	Something about sixty-one, restaurant, sixty-one. Maybe it's the address. (Nov.I, from think-alouds) Um, he said he started, probably fixing up his apartment, something about his apartment. Probably just moved in, um, because they're fixing it up. (Int.III, from think-alouds)

2e. **Creative elaboration:**	Making up a story line, or adopting a clever perspective.	Sounded like introducing something, like it says here is something but I can't figure out what it is, it could be like ...one of the athletes, like introducing some person or something. (Nov.I, from think-alouds) I guess there is a trip to the Carnival in Quebec so maybe it is like something for them to enter a date, to write, or draw... (Nov.II, from think-alouds)
2f. **Imagery:**	Using mental or actual pictures or visuals to represent information; coded as a separate category but viewed as a form of elaboration.	I can picture the words in my mind. (Fr.10) I make pictures in my mind for words I know, then I fill in the picture that's missing in the sequence of pictures in my mind. (Fr.20N)
3. **Summarization:**	Making a mental or written summary of language and information presented in a listening task.	I remember the key points and run them through my head, "what happened here and what happened here" and get everything organized in order to answer the questions. (Fr.20N)
4. **Translation:**	Rendering ideas from one language to another in a relatively verbatim manner.	I translate. (Fr.10) I'll say what she says in my head, but in English. (Fr.20S) A little voice inside me is translating. (Fr.20N)
5. **Transfer:**	Using knowledge of one language to facilitate listening in another.	I try to relate the words to English. (Fr.10) I use my knowledge of other languages: English to understand German and Portuguese (primarily sound) to understand French. (Fr.20S)
6. **Repetition:**	Repeating a chunk of language (a word or phrase) in the course of performing a listening task.	I sound out the words. (Fr.10) I say the word to myself. (Fr.20N)
7. **Resourcing:**	Using available reference sources of information about the target language, including dictionaries, textbooks, and prior work.	I look it up in a dictionary. (Fr.20S) I look in the back of the book. (Fr.20)

8. **Grouping:**	Recalling information based on grouping according to common attributes.	I try to relate the words that sound the same. (Fr.10, in combination with **auditory monitoring**) I break up words for parts I might recognize. (Fr.20N)
9. **Note taking:**	Writing down key words and concepts in abbreviated verbal, graphic, or numerical form to assist performance of a listening task.	I write down the word. (Fr.10) When I write it down, it comes to my mind what it means. (Fr.20)
10. **Deduction/ induction:**	Consciously applying learned or self-developed rules to understand the target language.	I use knowledge of the kinds of words such as parts of speech. (Fr.20S)
11. **Substitution:**	Selecting alternative approaches, revised plans, or different words or phrases to accomplish a listening task.	I substitute words, translate and see if it sounds right. (Fr.10, in combination with **translation** and **comprehension monitoring**)

Socio-affective strategies

1. **Questioning for clarification:**	Asking for explanation, verification, rephrasing, or examples about the language and/or task; posing questions to the self.	I'll ask the teacher. (Fr.10) I'll ask for a repeat. (Fr.20S)
2. **Cooperation:**	Working together with someone other than an interlocutor to solve a problem, pool information, check a learning task, model a language activity, or get feedback on oral or written performance.	I ask someone who knows the word. (Fr.20N) I ask a friend. (Fr.10) I ask the person next to me. (Fr.20)
3. **Lowering anxiety:**	Reducing anxiety through the use of mental techniques that make one feel more competent to perform a listening task.	I think of something funny to calm me down. (Fr.10) I take deep breaths. (Fr.20S)
4. **Self-encouragement:**	Providing personal motivation through positive self-talk and/or arranging rewards for oneself during a listening activity or upon its completion.	I try to get what I can. (Fr.20S) O.K...my hunch was right. (Nov.II, from think-alouds) I tell myself that everyone else is probably having some kind of problem as well. (Fr.20N)
5. **Taking emotional temperature:**	Becoming aware of, and getting in touch with one's emotions while listening, in order to avert negative ones and make the most of positive ones.	I take it home and take it out on my family. (Fr.10) O.K. I'm getting mad 'cause I don't understand. (Int.III, taken from think-alouds)

6. Repairs: Soliciting further input or clarification when comprehension has broken down in interaction with an interlocutor.

Direct appeals: Overt requests for clarification through the use of native or target language.		
6a. Global reprise:	Listener asks for outright repetition, rephrasing or simplification of preceding utterance. This may be a statement that nothing was understood.	I ask for help, to go one word at a time. (Fr.20S) What was the question? (Novice II) I'm not sure what you mean. (Novice III) Répetez. Parlez de? (Novice III) Pardon? (Int. II)
6b. Specific reprise:	Listener asks a question referring to a specific word, term or fragment in that was not understood in the previous utterance.	Where? (Novice II) le souper? is that dinner? (Novice III) va...? (Novice II)
6c. Hypothesis testing:	Listener asks specific questions about facts in the preceding utterance to verify that s/he has understood and/or what s/he is expected to do.	Suggest an example, based on what I thought the teacher said to see if the teacher agrees or clarifies. (Fr.20N) ...after les devoirs? (Novice II) ...the last book? (Novice III) ...l'été passé? ...depuis l'école? (Int. II)
Indirect appeals: Non-verbal requests for clarification or signals for continued narration.		
6d. Kinesics:	Indicating a need for clarification by means of kinesics and/or paralinguistics.	Throw arms in the air, look up, chuckle, shake head, confused looks, blank looks, squint eyes, etc. (Novice I-III) Furrowed eyebrows, intense looks, shake head, etc. (Int. II-III) I give hints that I don't understand, such as raised eyebrows and "Hmm?" (Fr.20N)
6e. Uptaking:	Listener uses kinesics and paralinguistics to indicate to the interlocutor to go on, that s/he understands.	Nods, "mmmmmm," "oui," "ah," "oh," (at all proficiency levels) Laughing at the appropriate time (Int. III)
6f. Faking:	Listener sends uptaking signals or non-commital reponses in order to avoid seeking clarification, and acknowledging to the interlocutor that s/he has not understood.	Agreeing to a "what" question (Nov. I) Comme ci, comme ça. (Nov. II) Oui (smile). (Nov. II) Je pense. (Int. II)

Source: Adapted from O'Malley and Chamot (1990, pp. 137-139); Oxford (1990, p. 21); Ellis (1986, p. 185); and, Rost and Ross (1991, p. 250)

APPENDIX D

Table 8.1 *Metacognitive strategies used (percentage of total strategy use) by each Novice level listener during the Phase I"I think-aloud sessions*

Metacognitive Strategies	Novice I				Novice II						Novice III			
	101	102	103	105	104	201	202	203	204	205	20S2	20S4	20S5	20S7
Planning	**2.94**	**3.16**	**0.00**	**1.15**	**1.32**	**1.28**	**0.88**	**2.86**	**1.47**	**1.04**	**3.03**	**2.68**	**0.00**	**0.84**
---Advance organ.														
---Directed attention	1.47	1.05												
---Selective attention		2.11		1.15	1.32	1.28	0.88	2.86	1.47	1.04	3.03	2.68		0.84
---Self-management	1.47													
Self-monitoring	**2.94**	**0.00**	**6.39**	**2.30**	**2.64**	**5.13**	**4.42**	**10.00**	**4.41**	**9.39**	**4.56**	**8.03**	**2.30**	**0.84**
---Comprehension.	1.47				1.32	1.28	0.88	1.43	1.47	3.13	2.28	3.57	2.30	
---word					1.32		0.88		1.47	3.13	1.52	0.89		
---sentence											0.76			
---schema	1.47					1.28		1.43				2.68	2.30	
---Auditory mon.			2.13									0.89		
---Double-check mon.	1.47		4.26	2.30	1.32	3.85	3.54	8.57	2.94	6.26	2.28	3.57		0.84
---word			2.13		1.32	3.85	1.77	1.43	1.47	3.13		0.89		
---sentence								1.43	1.47		0.76			
---schema	1.47		2.13	2.30			1.77	5.71		3.13	1.52	2.68		0.84
Problem identificat'n		3.16		2.30	1.32		7.08			3.13	5.30	5.36	1.15	3.36
Self-evaluation	**1.47**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.04**	**0.00**	**0.00**	**0.00**	**0.00**
---Performance eval.														
---Strategy eval.	1.47									1.04				
Totals	**7.35**	**6.32**	**6.39**	**5.75**	**5.28**	**6.41**	**12.38**	**12.86**	**5.88**	**14.60**	**12.89**	**16.07**	**3.45**	**5.04**

Table 8.2 *Metacognitive strategies used (percentage of total strategy use) by each Intermediate level listener during Phase III think-aloud sessions*

Metacognitive Strategies	Intermediate II				Intermediate III		
	20S1	20S3	20S6	20N2	20N1	20N3	20N4
Planning	**1.74**	**1.30**	**1.52**	**2.78**	**2.61**	**2.73**	**4.48**
---Advance organization					0.65		
---Directed attention	0.58		0.76	1.85			
---Selective attention	1.16	0.65	0.76	0.93	1.96	1.82	4.48
---Self-management		0.65				0.91	
Self-monitoring	**13.30**	**11.70**	**8.34**	**10.18**	**9.80**	**9.10**	**10.46**
---Comprehension mon.	2.31	2.60	3.03	8.33	5.88	3.64	5.97
---word	0.58		0.76	0.93	0.65	0.91	1.49
---sentence		0.65					0.75
---schema	1.73	1.95	2.27	7.40	5.23	1.82	3.73
---Auditory monitoring	1.16	1.95	1.52			0.91	0.75
---Double-check monitoring	9.83	7.15	3.79	1.85	3.92	4.55	3.74
---word	4.05	3.90	0.76		1.31	0.91	0.75
---sentence	0.58	0.65					
---schema	5.20	2.60	3.03	1.85	2.61	3.64	2.99
Problem identification	**4.05**	**5.19**	**9.09**	**2.78**	**2.61**	**4.55**	**5.22**
Self-evaluation	**0.00**	**0.00**	**0.00**	**0.93**	**1.96**	**5.46**	**1.49**
---Performance evaluation					1.31	1.82	1.49
---Strategy evaluation				0.93	0.65	3.64	
Totals	**19.09**	**18.19**	**18.95**	**16.67**	**16.98**	**20.93**	**21.65**

Table 8.3 *Cognitive strategies used (percentage of total strategy use) by each Novice level listener during the Phase III think-aloud sessions*

Cognitive Strategies	Novice I				Novice II						Novice III			
	101	102	103	105	104	201	202	203	204	205	20S2	20S4	20S5	20S7
Repetition	8.82	2.11	2.13	5.75	14.47	11.54	13.27	1.43	8.82	21.88	6.06	9.82	4.60	22.69
Grouping	1.47	1.05	2.13	2.30	1.32									
Deduction/ind.	1.47	3.16				3.85			1.47		0.76	0.89		2.52
Elaboration	23.52	29.47	25.53	22.98	25.01	25.63	15.04	22.86	13.23	10.41	25.01	16.07	18.39	13.44
---personal		1.05	2.13		1.32		0.88	4.29		1.04	0.76			
---world	11.76	12.63	8.51	11.49	10.53	7.69	10.62	7.14	5.88	1.04	9.85	4.46	5.75	5.04
---academic						2.56					0.76			
---questioning	8.82	8.42	14.89	10.34	11.84	12.82	3.54	11.43	5.88	8.33	13.64	11.61	12.64	8.40
---creative	2.94	4.21		1.15	1.32	2.56			1.47					
---imagery		3.16												
Summarization	10.29	8.42	19.15	13.79	5.26	11.54	28.32	18.57	23.53	13.54	36.36	34.82	35.63	26.05
Translation	11.76	7.37	10.64	9.20	15.79	11.54	9.73	17.14	23.53	27.08	3.79	10.71	3.45	9.24
Transfer	20.59	13.68	21.28	10.34	21.05	17.95	12.39	8.57	10.29	6.25	6.06	2.68	5.75	2.52
Inferencing	14.70	26.32	10.64	29.89	11.85	11.54	8.85	18.57	13.23	6.24	9.10	8.93	28.73	18.48
---linguistic	10.29	20.00	8.51	20.69	5.26	1.28		7.14	2.94	1.04	3.03	2.68	11.49	5.88
---voice/para.	1.47	3.16	2.13	3.45	1.32	1.28	1.77	2.86	5.88	2.08	3.79	2.68	1.15	5.88
---extralinguistic	2.94	3.16		3.45	1.32	3.85	1.77	2.86	2.94	1.04	0.76	0.89	5.75	1.68
---between parts				2.30	3.95	5.13	5.31	5.71	1.47	2.08	1.52	2.68	10.34	5.04
Totals	92.62	91.58	91.50	94.25	94.75	93.59	87.60	87.14	94.10	85.40	87.14	83.92	96.55	94.94

Table 8.4 *Cognitive strategies used (percentage of total strategy use) by each Intermediate listener during the Phase III think-aloud sessions*

Cognitive Strategies	Intermediate II				Intermediate III		
	20S1	20S3	20S6	20N2	20N1	20N3	20N4
Repetition	6.94	8.44	3.79	3.70	1.96	8.18	2.24
Grouping							
Deduction/induction	1.73					0.91	
Elaboration	22.54	20.78	17.43	27.98	30.05	14.55	18.65
---personal	0.58				2.61	0.91	
---world	5.20	5.84	9.09	15.74	13.07	4.55	7.46
---academic			0.76		0.65		
---questioning	16.76	14.94	7.58	11.11	11.11	7.27	11.19
---creative				0.93			
---imagery					2.61	1.82	
Summarization	28.32	22.92	38.64	25.93	31.37	29.09	32.84
Translation	2.89	4.55	5.30	2.78	3.92	5.45	3.73
Transfer	2.89	2.60	4.55	3.70	3.27	1.82	1.49
Inferencing	15.61	16.24	11.37	19.44	12.42	16.36	18.66
---linguistic	1.16	3.90	1.52	6.48	4.58	5.45	4.48
---voice/paraling.	8.67	2.60	6.82	1.85	2.61	6.36	6.72
---extralinguistic	2.31	0.65	3.03	2.78	3.92	1.82	2.24
---between parts	3.47	9.09		8.33	1.31	2.73	5.22
Totals	80.92	81.83	81.08	83.33	82.99	76.36	77.61

Table 8.5 *Summary of Strategy Use by Category for Each Participant (in per cent) during Phase III Think-Aloud Sessions*

Strategy category	Novice I				Novice II						Novice III			
	101	102	103	105	104	201	202	203	204	205	20S2	20S4	20S5	20S7
Metacognitive	7.38	6.32	6.39	5.75	5.28	6.41	12.38	12.86	5.88	14.60	12.89	16.07	3.45	5.04
Cognitive	92.62	91.58	91.50	94.25	94.75	93.59	87.60	87.14	94.10	85.40	87.14	83.92	96.55	94.94
Socio-affective	0.00	2.10	2.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Strategy category	Intermediate II				Intermediate III		
	20S1	20S3	20S6	20N2	20N1	20N3	20N4
Metacognitive	19.09	18.19	18.95	16.67	16.98	20.93	21.65
Cognitive	80.92	81.81	81.08	83.33	82.99	76.36	77.61
Socio-affective	0.00	0.00	0.00	0.00	0.00	2.73	0.75

For a breakdown of each category see Tables 8.1; 8.2; 8.3; and, 8.4.