

EME7939 – RESEARCH METHODS IN TECHNOLOGY-BASED EDUCATION

The Design, Development, and Evaluation of a WBT Unit: Teaching the English Present
Perfect through a Tense/Aspect Semantic Model to EFL Students.

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INTRODUCTION

Computer-Assisted Language Learning (CALL) is a relatively new and rapidly evolving academic field that explores the role of information and communication technologies in language learning and teaching. It provides fertile ground for leading edge, innovative, and highly creative thinking and scholarly work. The field of CALL is inherently multidisciplinary. It applies research from the fields of second language acquisition, sociology, linguistics, psychology, cognitive science, cultural studies, and natural language processing to second language pedagogy, and it melds these disciplines with technology-related fields such as computer science, artificial intelligence, and media/communication studies. When the field of CALL began, limitations of computer hardware narrowly restricted pedagogical options. Today, CALL activities exploit improved technology to produce highly interactive learning environments, providing effective support for the acquisition of listening, speaking, reading, and writing skills.

This study focuses on the design, development, and evaluation of a Web-Based Training (WBT) unit for English as Foreign Language Brazilian students incorporating the principles of a Tense/Aspect Semantic Model of the English Present Perfect and the Cognitive Load Theory. English as a Second Language (ESL) today is a social concern in the United States because of the significant amount of immigrants that are not proficient in English. Outside the United States, English as a Foreign Language (EFL) is

a well-established business. Millions of students worldwide go through English programs offered by the private sector as well as the public sector. In this context, the English Present Perfect (PP) and its contrast with other tenses, namely the Present Tense and Past Tense, are important issues because they are well-known troublemakers for those who attempt to teach them to an ESL or EFL clientele. This difficulty may lie in the fact that “the temporal meaning of the English Present Perfect differs from that of its counterpart even in cognate languages like Dutch and German” (Declerck 1986). Dowty (1979) observes that, “aside from the progressive, no English tense has received more attention from linguists and yet eluded a convincing analysis so completely as the present perfect.”

Among the persistent and prominent problems in the description of the present perfect has been that of: [1] characterizing the difference in meaning between sentences in the present perfect and in the simple past, [2] accurately classifying the present perfect as “tense” or “aspect”, [3] describing the ambiguity of the present perfect in sentences like: “*Harry has been in Bali for two days*, which is first interpreted, out of context, as implying that Harry’s presence in Bali obtains for all times within a present-inclusive time span whose lower bound is two days ago, but which could also be used to say that there were one or more visits to Bali by Harry within a present-inclusive time span; each of these visits lasted two days.” (Michaelis, 1998:238) and [4] characterizing McCawley’s (1971) primary readings of the present perfect:

- **Universal/Continuative**

All my adult life I have waited for the emergence of a strong center party.

- **Existential/Experiential**

He has written a poem today.

- **Resultative**

I've written six books and 80 journal articles.

He has had a haircut– (Result: His hair is shorter now)

Combining Declerck's Tense model (1986) and Godoy's Aspect model (1992) to the semantic analysis of the different meanings of the English Present Perfect (PP) it is possible to solve the problems stated above in a framework made of small logical chunks. When the small chunks (the elements of Tense and Aspect) are combined, the different meanings of the PP evolve. Semantically it means that the ambiguity of the PP and its different meanings (Universal/Continuative, Existential/Experiential, Resultative) are not a result of polysemy (Michaelis, 2000), but a result of an underlying semantic structure. This underlying semantic structure combined with the Cognitive Load Theory are the basis of the research questions of this study.

Cognitive Load Theory describes learning structures in terms of an information processing system involving long term memory, which effectively stores all of our knowledge and skills on a more-or-less permanent basis and working memory, which performs the intellectual tasks associated with consciousness. Information may only be stored in long-term memory after first being attended to, and processed by, working memory. Working memory, however, is extremely limited in both capacity and duration. These limitations will, under some conditions, impede learning. One of the tenets of Cognitive Load Theory is chunking. When presented a "large" set of elements to remember (such as the English Verb and Aspect systems), it is often helpful to combine

the elements to form a smaller number of groups. Each of the groups is referred to as a "chunk" of information. Chunking does not need to be based upon any underlying meaning or logic that can be identified within the elements of the to-be-learned information. However, if an underlying meaning or logic can be identified and is used to define the chunks, then understanding and remembering is said to be greatly enhanced.

LITERATURE REVIEW

The literature review of this study comprises two main areas: Computer Assisted Language Learning studies and theories that support the Semantic Model adopted in this study for the English Present Perfect.

Computer Assisted Language Learning (CALL) Studies

Abrioux (1996) claims that CALL has become "fully entrenched" in campus-based L2 programs, and that there is an apparent "paucity" of CALL use in distance programs; hence the current survey which Abrioux undertakes to "quantify the current and anticipated use of CALL in distance education settings". Initially 72 institutions were contacted in the U.S., Canada and other countries, to participate in the survey: as of the survey date, only 7 were using CALL in their distance L2 programs. Of those 7, there is only 1 (Waterloo University), which employs Computer Conferencing in its program, and while Abrioux indicates this fact in the table entitled "Use of CAI in Language Courses", there is no further mention of Waterloo's use of conferencing in its program. Only 9% of distance L2 programs use CALL at all (as opposed to 50% of on-campus programs). Abrioux gives the following explanations for lack of CALL in distance L2 programs: (1)

Cost; (2) Mindset (CALL viewed as "enhancement" rather than "key component" of program); (3) Pedagogical tradition of the discipline (vehicles for distance education for the past 20 years--print, TV radio, and audiocassettes) leave out the possibility for human interaction). Abrioux points out that some do not see teleconferencing, computer conferencing, e-mail etc. as true human interaction. Abrioux disagrees but states that even if we do disagree with this view: "one should not expect much more from computer applications in distance education than the provision, via electronic mail and computer conferencing, for non-contiguous, written interaction".

Adrianson and Hjelmquist (1996) look at CALL from a social and cognitive perspective. Their focus is on how much information is retained when transferred from person to person in a given medium. The fundamental question which they address is: "What, and how much of the information is left after it has been handled face-to-face and with computer-mediated systems, respectively?" They predict that the outcome to their study will be experience-dependent. In other words, their prediction is that "people who are 'laymen' in relation to computer-mediated systems will perform better face-to-face than in the computer-mediated system, whereas fewer differences are predicted for experienced users of computer-mediated communication. Their experiment involved the retelling and recalling of newspaper texts, with the retelling occurring both through face-to-face interaction and computer mediated communication. The results of their study confirm their predictions.

Barson, J., Frommer, J., & Schwartz, M. (1997) examine several interuniversity experiments involving collaborative projects between language classes. These projects

include the collaborative writing of a newspaper or video script. Such projects generally "unfold" in the following manner:

1. Introduction to computers and Networks
2. Organization of the collaborative project
3. Designing or writing the newspaper or video script
4. Revision of article or script
5. Final formatting
6. Recognition of effort

The collaborations studied by Barson, Frommer and Schwartz "afforded repeated opportunities to observe the classroom dynamics of students, using computers toward communicative ends". These dynamics are student-centered, with the involved students determining the course content. The central element of these collaborations is the negotiation of meaning. The students have "recourse to a wide range of discourse as they communicate with each other in varied contexts, discovering first-hand the many ways in which linguistic and sociolinguistic factors come into play in human communication". The focus is on developing in students crucial "linguistic and strategic competencies within some functional dynamic". The "principal aspects of the task-oriented approach" include the following: a "focus on authentic issues", a "student-shaped curriculum", the "redefinition of [the] teaching role"--in which the teacher becomes an "initiator" and facilitator, and the "realignment of grammar study"--shifting the focus from memorization and application of abstract grammar rules to the development of an "overall language competence through internalization of grammatical

concepts", which is achieved by "using language for a mutually selected, shared purpose" in "natural settings".

Batson, T. (1998) describes the Electronic Networks for Interaction (ENFI) project and its effects on classroom dynamics. For Batson "one of the most important [pedagogical dynamics] is the creation of a written social context, an online discourse community, which presents totally new opportunities for effective instruction in writing". This means, for Batson, changing the traditional roles of the student and, especially, the teacher. With computer Networks the teacher's role changes from that of the authority figure to one of "participant-leader". Batson lists the following reasons for which a computer is a necessary component in making this transformation:

1. "Because the teacher's contribution to classroom conversation is just a line on the screen like everyone else's, ENFI blurs social distinctions in the class...";
2. "ENFI allows for simultaneous responses to a question or comments on a topic because everyone can write at the same time". This results in increased participation;
3. "ENFI provides a verbatim printout of each classroom discussion, available for the class to work from immediately after the discussion ends";
4. "ENFI discussions are written rather than spoken, giving students a chance to work out ideas...";
5. "ENFI allows the class to become a discourse community in writing...they share special words, conventions, stylistic features, and a...purpose for writing";

In addition to describing these benefits of ENFI, Batson also explains technical requirements and gives advice on how to start an ENFI program.

Kroonenberg, N. (1997-1998) asserts that "electronic mail...encourages students to use computers in realistic situations so that they can develop communicative and thinking skills". She describes how to introduce e-mail technology into the L2 classroom, looking both at technical aspects and the logistics of giving e-mail assignments and of integrating those assignments with face-to-face classroom discussions. In addition, Kroonenberg briefly describes the assessment of student performance in e-mail assignments, along with the advantages of e-mail in terms of developing communicative and thinking skills.

Schwartz's article (1997) focuses on using the computer for purposes other than simple drill-and practice programs. He describes the use of word processing programs, CD-ROM technology for interfacing computers with video machines or to display video directly, as well as discussing the potential use of NetWorks for authentic communication. However, much of the article is a warning. CALL uses must coincide with evaluation methods and goals, lest computer technology go the way of the language laboratory. Language laboratories typically employed an audio-lingual method, while student progress was being evaluated on grammar-translation criteria. "Materials were developed, published, and distributed without research into how best to use the technology. The result was a loss of credibility for foreign language education and for the use of technology in language learning in general". Consequently, Schwartz insists that "it is not enough for teachers to purchase expensive equipment in the hope that students will use it and reach higher levels of proficiency. Teachers need to be trained in the appropriate use of the technology so they may better guide their students to achieve maximum results".

Boston, R. L. (1998) deals with the basics of modern technology and explains how to use a modem in distance education to send lectures to students at a rate that is faster than that of regular mail. Boston also mentions that e-mail discussions are richer than in a traditional classroom. In classrooms certain students have a tendency to hold back and not participate in the discussion. This hesitancy is especially apparent in students for whom English is their second language. Yet, shyness and timidity seem to be absent from working in print on a screen, and we have found that most students feel free to ask for clarification and to make their points known to the group. He also mentions that the students involved in an e-mail class develop a real sense of "group identity and community". Beyond this, Boston also describes "simulation" projects in which students participate on their computers (making decisions of state in a history simulation, or business decisions in an economics simulation) as well as pointing out that he can use the material from his e-mail lectures in his classroom lectures as well.

Warschauer, M. (1996c) researched the effects on student motivation of using computers for writing and communication in the language classroom. A 30-question survey investigated the attitude toward using computers of 167 ESL and EFL students in 12 university academic writing courses in Hong Kong, Taiwan, and the U.S. It was found that the students overall had a positive attitude toward using computers and that this attitude was consistent across a number of variables, including gender, typing skill, and access to a computer at home. Further analysis showed that two variables in particular, self-reported knowledge of computers and amount of experience using electronic mail, correlated positively with student motivation. A factor analysis revealed that factors which influenced students' positive attitude toward computers included (1)

the perceived benefits of communicating via computer; (2) the feeling of personal empowerment which came from using computers; and (3) the perceived enhancement of learning opportunities which arose from using computers. Another possible factor was the sense of achievement which learning to use computers helped bring about.

Finally, differences were found in student motivation among the 12 courses, and these differences were seen to be due at least in part to the degree to which computer-based projects were integrated into the overall goals and structure of the course. The author concluded that teachers can enhance motivation by helping students gain knowledge and skill about using computers, giving them ample opportunity to communicate via computer, and carefully integrating computer activities into the regular structure and goals of the course.

Raschio (1996) "presents a review of concepts which form a basis for a communicative approach to foreign language software design". He criticizes mentoring CALL--programs which perform only drill-and-practice activities--because they do not aid in "the development or use of communicative skills by the learner". Raschio claims that: in order to effect a communicative use of the computer in foreign language learning, the computer's capabilities must be reassessed in light of the purposes to which it will be put in foreign language teaching and learning. CALL is an example of new thinking concerning the capabilities of the computer to foster and use communicative skills. In communicative CALL, "use" of language is more important than "usage". The purpose of communicative CALL is to "encourage the learner to generate original language in response to situations presented by the program". Raschio states that "the computer is not necessarily used for communication, but it does help provide

guided practice with original language that will aid the learner to communicate in real and varied communicative situations comprehensible input is provided in activities that are progressively more open-ended and personalized". Activities which are used in communicative CALL include "simulations and games", "text manipulation programs", "simulated conversation", word processing, local area network discussions, and electronic mail. In addition, Raschio points out six possible roles for the teacher in communicative CALL instruction: that of "facilitator", "evaluator", "diagnostician", motivator, "technician", and "program developer".

Brown and Jahn (1995) describe two Russian tutorial programs--one from IBM and one from Macintosh. Their description focuses on how these tutorial programs can be used in proficiency based Russian language (the two computer programs deal with problems unique to Russian) instruction. They focus on the advantage of the computer as a tutor, which allows each student a greater amount of individualized instruction, enabling students to receive tutoring and drills (along with error correction), primarily as a pre-class preparatory activity, preparing students (especially weaker students) for more advanced drilling in class by the teacher. The importance of this is that students have noun and verb forms engraved in their minds before they come to class. The bulk of the article lists and describes the specific features of each of the two computer programs.

Chun (1998) analyzes the discourse of her first-year German classes in an attempt to demonstrate "that conducting class discussions on a computer network is an effective method for increasing the interactive competence". She states that not only can networking help students' writing skills, but it increases their spoken proficiency as

well. One of her "a central hypothesis was that using CMC would provide students with the opportunity to generate and initiate different kinds of discourse structures or speech acts". As a basis for her study she uses both the *ACTFL Proficiency Guidelines* (for intermediate level 1/1+) and Kramersch's proposals for interactional competence (*Interactive Competence*, 1983). The bulk of the paper is devoted to summarizing the data of her study with respect to the "number and length of turns by each student and the syntactic complexity of each entry, i.e. number of simple and complex sentences, and types of syntactic forms which are used to express particular speech acts". The length of entries ranged from short, simple sentences to long, complex paragraphs. Students had "different 'styles' of discussing". Many of the students who were typically shy or timid in class were much more "prolific" on the computer. Three of the four most active participants were male. The "most sophisticated essay writer" in the class made a very small number of entries, and those were "not particularly long". Overall, males wrote more than females, but women wrote more compound or complex sentences. "These differences may be attributable to...writing style, possibly gender, language aptitude and ability to write cohesively and coherently in English". All of the students seemed to meet the *ACTFL Guidelines* and most of the abilities from Kramersch's list (with the exception of turn-taking, which seems to be irrelevant in CMC). Chun breaks down her students' discourse into the following categories: questions and answers, statements and imperatives, discourse management. The frequency of entry types ranked as follows, from highest to lowest frequency:

1. replies to question (both to teacher and to other students)

2. asking questions of other students (mostly to other students, then to the group as a whole, still fewer questions to the teacher)
3. statements addressed to other students
4. discourse management

The last category is perhaps the most interesting. Students do a particularly good job at expanding on a subject and introducing new subjects. Students request clarification when needed, employ tag-questions to state or solicit opinions, and give feedback. They also made appropriate greetings and farewells (the latter had greater frequency since lab sessions were held at the end of class). Chun hopes that "since these types of sentences strongly resemble what would be said in a spoken conversation, . . .the written competence gained from CMC can gradually be transferred to the students' speaking competence as well".

Murray, D. (1997) focuses on "the use of computers to facilitate communication in TESL programs". She points out that "computer-mediated communication is an especially flexible tool for providing learners with a variety of truly communicative . . . and collaborative language experiences". Murray describes four programs using e-mail for various purposes: writing and discussing papers and compositions, collaborative writing of a French Newspaper (all at the college level), and learning letter writing skills (at the elementary school level). She underlines ways in which CMC enhanced the students' learning experiences. Students were highly motivated by the medium. The medium also provides students with a real audience for their writing projects, teaches them computer skills, and facilitates learning across the curriculum. Murray also notes, with respect to the development of language skills, that all four projects described

"indicate that language learning is facilitated when language is the means rather than the object".

Cohen and Miyake (1996) discuss the use of a computer network called the Intercultural Learning Network. Among the questions which they address, the most important is "*Is it useful for instructional purposes*". The Intercultural Learning Network provides a "functional learning environment". The computer is used not to drill language but to communicate and accomplish specific tasks. The projects described involve interaction between students in the US, Israel and Japan. For all students involved, the principle goal was a better understanding of other cultures- going beyond classroom research and finding out from native speakers if textbook descriptions of the culture are accurate. For the students in Japan, another main goal of the project was to improve English communication skills. Various types of projects included the following:

1. "*Direct cultural exploration*": Students asked questions about the other classes' cultures. Cohen and Miyake found that specific (and well-informed) questions received better (and more motivated) responses than general questions.
2. "*Writing for an international students' news network*": Students write articles describing "aspects of their life, opinions" (on social issues for example), "reviews, etc."
3. "*Joint research projects in science and social science*", including comparisons of educational systems, of news (this was particularly interesting, since newspapers in different countries do not cover the same international news--a comparison of what is chosen/not chosen as news yields an interesting view of societal values

and concerns), of attitudes toward careers, and projects involving the natural sciences.

Cohen and Miyake point out the utility of the system as a "*functional learning environment for learning a second language*". One drawback seemed to be student complaints that they felt as if they were "trying to accomplish two goals at one time (research and language development)". However the Japanese students seemed to show improvement in their English skills--although we have to rely somewhat on the authors' word for this. Cohen and Miyake claim that on a translation pre-test the Japanese students scored an average of 64.1%, while on the post-test they averaged 74.6%. The question for someone reading the article is of course: does a translation test accurately measure communicative ability? Overall the greatest advantage of the use of the Intercultural Learning Network seems to be student motivation. The functional aspect of the project as well as the degree of student input appear to keep students interested.

Davis and Chang (1997-98) tell of their ESL on-line conferencing experiences in a program that linked students from the University of North Carolina at Charlotte with students at Taiwan's National Kaohsiung Normal University. They explain their program goals as follows: "...providing students a real context for improving their writing, helping them expand their ideas of content area reading and functional writing ...across cultural boundaries, making students familiar with international telecommunications, and investigating with students the potential effects of telecommunications on literacy acquisition." Projects and activities included the following:

1. Transmission of "reflections and questions about culture and language".

2. Writing what could be considered "dialog journals" to the students in the other university.
3. A history of the English language course which included collaboration and discussion, individual letters, a research-report forum, collection and creation of a 200-item thesaurus of English slang (from films or popular music).

Over the course of an 8-week session, improvements were made in grammatical areas such as self-reference (appropriate frequency in the use of 1st and 2nd person pronouns) and use of definite articles. Davis and Chang also note an enhanced cultural awareness in their students.

Kelm, O. R. (1996) deals with findings from personal experiences with a class of fifteen undergraduate students in a Portuguese class at the University of Texas at Austin. The class used a synchronous conferencing program called INTERCHANGE one day per week. According to Kelm, preliminary observations from this experience suggest that computer assisted class discussions may promote increased participation from all members of a work group, allow students to speak without interruption, reduce anxiety which is frequently present in oral conversations, render honest and candid expression of emotion, provide personalized identification of target language errors and create substantial interlanguage communication among L2 learners. An additional advantage, which Kelm does not mention explicitly but which seems evident in the text is that the teacher is much more "invisible" in the interactions. Students take the most turns, and are responsible for topic initiation (after the initial topic proposal by the teacher). The online conversation appears much more as a real conversation than does

a traditional L2 classroom's "conversation" activity involving nothing more than question, response, and feedback.

Egbert, Jessup and Valacich (1998) demonstrate the potential of the computer as an educational tool for English as a Second Language. They state that research already indicates that the computer can facilitate grammar and drill-based activities, and that the advantages of word-processing programs have also been well established. They present two more recent "explorations of computer technology for use in ESL classes [which] have moved beyond basic computer tools" of drilling and word processing. They cite Sayers, who presents the computer as a means of creating authentic contexts for writing, and Mackinson-Smyth who "indicates that negotiation strategies used in written interaction via networked computer systems improve both English language skills and students' attitude toward writing". The article demonstrates how an Electronic Meeting System (a network of personal computers) can be used in ESL instruction. Egbert, Jessup and Valacich describe how ESL students have used the EMS to write collaborative, creative compositions. The EMS enhanced students' ability to work together creatively and, by virtue of its efficiency, increased time on task.

Stoks (1999) claims in this article that the integration of new technology into the foreign language classroom has to date been unsuccessful, and that this is largely due to the "lack of sound curricular integration". In the article, Stoks traces the history of the development of computer technology in the foreign language curriculum of the Netherlands, and makes proposals for courseware development. Stoks believes that the role of computers in L2 instruction is still very limited, and that "certain methodological innovations, such as teaching functional grammar in communicative contexts is seldom

practised in the programs available". Stoks points out that in some cases computer programs are actually regressive when compared to advances in modern methodology. As a result, Stoks applies certain aspects of "a communicatively oriented approach to modern language learning" to the development of courseware, including "emphasis on real communication tasks", developing "reading and listening strategies" (rather than merely testing "comprehension"), and developing sociocultural competence. A brief section on e-mail is included, although Stoks seems to limit the role of e-mail to penpal letter exchanges.

Young (1998) examines CALL from the perspective of "second language acquisition based on conversational interaction, and...a characteristic of interaction which [he] call[s] the *negotiation of outcome*. By learning activities involving negotiation of outcome, Young means those types of learning activities in which the "final outcome of the activity is not determined ahead of time, but may be negotiated by the participants involved. Discussion, role-play, simulations, and games are kinds of activities which fall into this category. Young's research shows that there is a considerable difference between "the conversational discourse generated among learners by open ended programs that allow learners to negotiate an outcome, and the discourse generated by drill and-practice programs that allow no such negotiation of outcome". He contends that "computer programs which allow outcomes to be negotiated generate the kinds of conversational discourse which are most useful for successful language learning" and also suggests that the reason why "much CALL software is unsatisfactory is that it does not allow learners to negotiate the outcome of the activity".

A Semantic Model for the English Present Perfect

Let us begin by concentrating on the notion of “reference point” as interpreted by Declerck (1986). Declerck points out that what is striking in Reichenbach (1947), Comrie (1985), and many other treatments of tense (for example Dowty, 1979), is that this notion never receives an adequate technical definition. The idea is introduced in informal terms in the description of a particular tense (usually the past perfect) and it is apparently left to the reader to deduce a definition. From the examples and comments in Reichenbach (1947) and Comrie (1985), the reference point seems to be the time relative to which the situation (or the time of the situation) is located. In other words, a particular tense may locate the time of a situation as simultaneous with, prior to, or posterior to a particular time, which is the “time of reference” or “reference point”. This means that the “time of reference” is “the time pointed from” rather than “the time pointed to”. On the other hand, it is mostly pointed out that the time of reference can be established by a time adverbial and/or by a verb form in the context. In that sense the reference time is a “time pointed to”. Declerck concludes:

“So, the term ‘reference time’ will mean ‘time referred from’ in one context and ‘time referred to’ in another. In order to avoid confusion, the unambiguous labels ‘time referred to’ (henceforth: TR) and ‘time of orientation’ (henceforth: TO) will be adopted in this section. The latter term indicates the time to which a situation is related: whenever we use a tense to describe a situation, this situation is located relative to a TO. This clear distinction between the notions TR and TO does not mean that the two are mutually exclusive. In a sentence like *When we left at five John had already left* the time which serves as TO for the use of the past perfect is at the same time TR because it is referred to by the time adverbial at five.” (Declerck 1986: 320)

Apart from the notions **TR** and **TO**, Declerck (1986: 321) remarks that we also need **TS** and **TU**:

1. **TS** = “time of the situation”, i.e. for the time that the situation lasts (i.e. the portion of the time axis taken up by the situation).
2. **TU** = “time of utterance” (i.e. the time of speech).

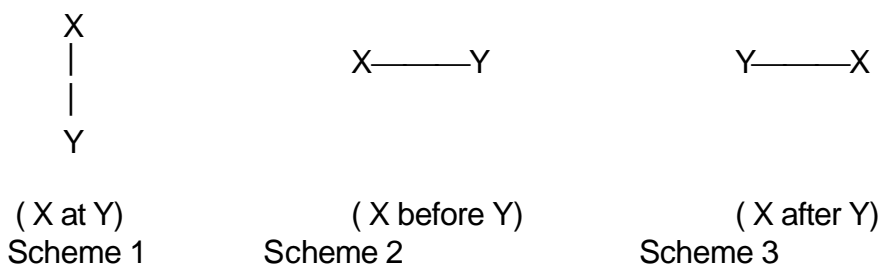
In Declerck’s analysis, whereas TU is punctual (and is thus represented by a point, not by a longer section of the time line), the other times (TR, TO and TS) can in principle be points or longer timespans. The “time of utterance”, in fact, takes some time on the time line, but this does not affect Declerck’s system, since it is seen as a unit.

The Past Perfect

Given the above notions, let us examine now the somewhat complicated example proposed by Declerck (1986: 321):

John left at five o’clock after the others had left at four.

In this sentence two situations are referred to, and both are located precisely in time: *the others left at four* and *John left at five*. This means that TS1 (the time taken up by the departure of the others) is located as simultaneous with TR1 (four o’clock), while TS2 (the time taken up by John’s departure) is located as simultaneous with TR2 (five o’clock). Declerck (1986) adopts the convention of representing simultaneity between two times (X and Y) as in scheme 1, while anteriority as in scheme 2 and posteriority as in scheme 3.

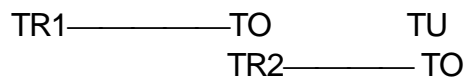


Using this convention, Declerck represents the temporal relation between TS1 and TR1 and that between TS2 and TR2 as in scheme 4:



Scheme 4

Now, whenever a speaker refers to a time, he does so from a particular temporal point of view. That is, any TR is related to a TO in terms of simultaneity, anteriority or posteriority. In the sentence under discussion, both TR1 and TR2 are thus related to a TO. The TO to which TR1 is related is TR2; the TO to which TR2 is related is TU. This can be schematically represented as in scheme 5:

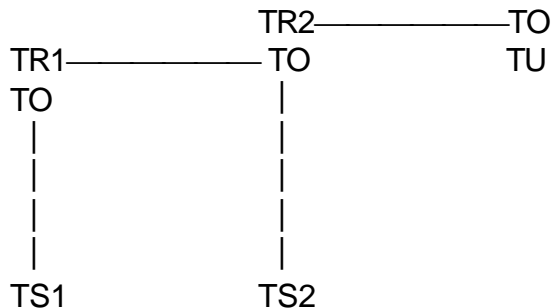


Scheme 5

Declerck (1986:322) points out that scheme 5 conveys the following information:

[a] that both TR1 and TR2 are located prior to a TO;

[b] that the TO to which TR1 is related is TR2;



Scheme 7

According to Declerck, scheme 7 is fully satisfactory, as it makes clear that:

[a] TU is the TO to which TR2 (*at five*) is related (i.e. *at five* denotes a time that lies in the past with respect to the moment of speech);

[b] TS2 (*John left*) is located as simultaneous with TR2 (i.e. the situation is represented as happening at five). TR2 is thus the TO to which TS2 is related;

[c] TR2 is also the TO to which TR1 (*at four*) is related: TR1 is represented as anterior to TR2;

[d] TR1 is the TO to which TS1 (*the others had left*) is related: TS1 is represented as simultaneous with (i.e. happening at) TR1.

It seems curious, however, that Declerck refers to the relationship between a TS and its TR in the same terms as the relationship between a TR and another TR, because as claimed by Prior (1967: 15) apud McCoard:

“...every event is simultaneous with some time; to happen means to become present at some time” (McCoard 1978: 92)

This means that unlike the relation between a TR and its TO, which can be of anteriority, simultaneity or posteriority, the relation between a TS and its TR (which Declerck (1986) also labels as “TO” of that TS) must be a relation of simultaneity. Otherwise, we would incur the same multiplicity of verb forms which Jespersen’s and Reichenbach’s systems are accused of. Moreover, it is our opinion that this distinction is fundamental to answer Michaelis’ (1994) criticism of the XN theory (mentioned at the end of last section). We will return to this issue in chapter four.

The relation “simultaneous with” which holds between a TS and its TO (TR), must not be assigned the strict definition according to which any point in TS must also be in TO and vice versa. Rather, “TS simul TO” means, according to Declerck (1986: 326), that the two times coincide in one of the following ways:

[a] both occupy the same point of the time line, as in: *At that moment a shot was fired;*

[b] both occupy (roughly) the same section of the time line as in: *I was in London yesterday;*

[c] the section occupied by TS is part of the section occupied by TO as in: *I left yesterday;*

[d] the section occupied by TO is part of the section occupied by TS as in: *I was at home at four o’clock.*

In [d] TS extends beyond TO and there is nothing to prevent it from extending even to the present or into the future. The problem noted in connection with Comrie’s system (viz. that it is not correct to state that the past tense represents TS as (wholly)

anterior to TU) is thus obviated here: what lies wholly in the past is not TS itself but the TO to which it is related. This relationship is of such a kind that TS may continue well beyond TO and even include the present and part of the future.

Let us continue the development of Declerck's (1986) tense model. In the sentence *John left at five o'clock after the others had left at four*, TR1 and TR2 are established by the time adverbials *at four* and *at five*. Declerck (1986: 323), however, notes that a past perfect or a past tense can also be used without an accompanying adverbial of time, as in: *The others had left before John left*.

In that case TR1 and TR2 are no longer established in the sentence itself. TR2 will then have to be established by the context (i.e. the sentence requires a context referring to the past). TR1 may then not be established at all, which means that there may be no "time referred to" in the strict sense of the term. However, even in that case the use of the past perfect implies that TS, (*the others had left*) is located at some (unidentified) TO and that this TO is itself located anterior to the TO that is formed by TR2. Declerck, therefore concludes:

"...if there is no adverbial establishing TR1 we might wish to replace the label 'time referred to' by some other symbol denoting a time that is not identified in the discourse, but the whole of the scheme remains unaffected. (For ease of reference the label 'TR' will be used even if the time is not 'referred to' in the sense of 'specified'.)" (Declerck 1986: 324)

This is in accordance with the view argued in Katz that:

“...a sentence does not temporally relate the things it is about to one another directly. Rather, it first relates them each to a fixed reference point and then relates them to one another indirectly by virtue of their relations to the reference point”. (Katz 1972: 34)

In fact, in Declerck’s schemes, there is no direct temporal relation between different TSs. Each TS is located relative to a TO, and these are related to each other.

Declerck claims that one of the major advantages of a scheme such as scheme 7 is that it makes clear the different roles played by tenses and time adverbials. The tenses are used in defining where the situations and their respective TOs are located in relation to another TO (cf. Godoi: 1992); the time adverbials do not specify the times of the situations but establish the TOs relative to which the TSs are located. Declerck thus concludes:

“...in *The boys were at home at five o'clock* the time adverbial *at five o'clock* specifies not the TS (i.e. the section of the time line occupied by the situation) but the TO relative to which the TS is located. (Note that in this case, TS may have a much longer duration than TO).” (Declerck 1986: 324)

This means that Declerck’s analysis concurs with Reichenbach’s claim that:

“...when a time determination is added, such as is given by words like *now* or *yesterday*, or by a nonreflexive symbol like *November 7, 1944*, it is referred, not to the event, but to the reference point of the sentence. We say *I met him yesterday*; that the word *yesterday* refers here to the event

obtains only because the points of reference and of event coincide”.

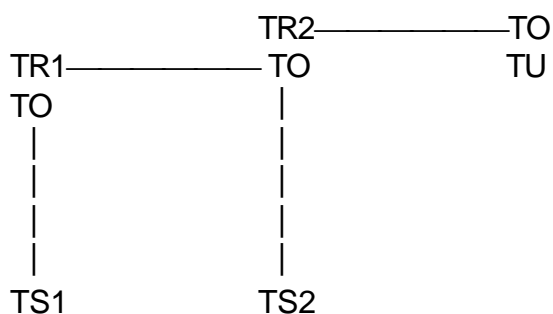
(Reichenbach 1947: 294)

Klein (1992), however, claims that past-perfect sentences like (a,b) below are ambiguous as to whether an adverbial expression modifies E or R. In (a), according to Klein, *at two* describes R. In (b), *at two* modifies E, while R is *three o'clock*:

(a) [*Yesterday, the mail arrived at two.*] *I had (already) left at two.*

(b) [*Yesterday, the mail arrived at three.*] *I had left at two.*

To offer an answer to Klein's objection, we may argue, following Declerck (1986: 324), that if a time adverbial is used in a clause where the tense presupposes more than one TR, as the past perfect does (cf. scheme 3.7 repeated below), we can expect that the time adverbial can be interpreted as establishing any one of these TRs. Therefore in “*I had left at two*” (Klein:1992), *at two* can establish either TR2 (a time before which I had already left) or TR1 (the time at which I had left). “Any time adverbial,” remarks Declerck (1986: 328), “can always be applied to every TR in the system”, except in one case, which will be discussed later.



Scheme 7

Declerck admits, however, that apart from the so-called “*time-when*” adverbials, i.e. adverbials denoting the time at which a situation is said to hold true (e.g. *yesterday*, *at 3 o'clock*, etc.):

“...there also are adverbials referring to the beginning or/and end of a period (e.g. *since 1970*, *from two o'clock until four*, *until now*) and adverbials that denote nothing but duration (e.g. *for two hours*, *all day long*). It is necessary to examine whether these two types also fit into the system.” (Declerck 1986: 357)

According to Declerck, the purely “*durational adverbs*” define the duration of **TS**, not of TR, which goes against Reichenbach’s (1947: 294) claim. In *I worked for two hours*:

“...the adverbial defines the duration of my working; the TR at which I worked is not identified, so its duration is not indicated either. The same is true in the perfect tenses, although there is often an implicature that the period indicated lasts up to the TO (so that the duration adverbial ultimately also indicates the time of the situation and the TR with which it is simultaneous).” (Declerck 1986: 357)

Thus, *I have lived in Paris for five years* can be interpreted in two ways. The first reading, on which *for five years* expresses no more than duration (and therefore tells us nothing about TR), is that somewhere in the course of my life there has been a period of five years during which I lived in Paris. This interpretation can be enforced by the

addition of a clause like *but now I am living in London*. The second reading is that *for five years* indicates a period that reaches up to now (cf. McCoard, 1978: 46; Dowty, 1979: 343). This interpretation is brought to the fore when we use a progressive form (*have been living*) because the progressive refers to the middle of a situation, i.e. represents the situation as not yet completed at TO. There appears to be an implicature that the second reading will be the more prominent of the two if it is allowed by the context.

When a durational adverbial is interpreted as indicating a period up to (and including) the TO, it serves the same function as adverbials of the type *since 1956, from 2 o'clock to 7, until World War II*. Adverbials like these refer to at least one of the two boundaries (beginning and end) of a period, and may therefore be called ‘*boundary adverbials*’. Although they would seem to indicate both time and duration, they are primarily time adverbials. Those that refer to both the beginning and ending-point of a period naturally also specify the duration of the timespan. Those that refer to the beginning only (e.g. *since 1950, from then onwards*) indirectly also do this, because they will normally be interpreted as indicating a TR that continues up to the TO. However, those that refer to the end only (e.g. *until 1950*) do not specify any duration (except if they collocate with a future tense, in which case TU is interpreted as indicating the beginning of the period). “Boundary adverbials” will therefore be taken to specify the TR at which the situation is located, not the time of the situation itself. This is in keeping with the fact that the TS need not be interpreted as covering exactly the same timespan as the period specified as TR. In *I have met him once since 1950* and *I had met him once between 1940 and 1950*, the duration of TS is much shorter than that of the period

(TR) relative to which it is located. In such examples, the boundary adverbial behaves exactly like a “time-when” adverbial such as *in 1950* or *the day before*. On the other hand, there does appear to be a conversational implicature seeing to it that, if the situation is a durative one, its duration will normally be interpreted as being the same as that indicated by the boundary adverbial. Thus, in *I have lived in London since 1950*, the normal interpretation is that the duration of the situation of my living in London is commensurate with the duration of the period denoted *by since 1950* (and up to now). However, this interpretation merely results from an implicature and can therefore be ruled out by the context, as in *I have lived in London since 1950, but only for a couple of years*. Declerck’s conclusion is that time adverbials of the *boundary type* serve the same function as *time-when* adverbials: they establish the TR relative to which TS is located as simultaneous. Remember that TR may be a point or a timespan and that “simultaneous with” allows for the possibility that TR and TS only partly overlap with each other. Purely *durational adverbials*, on the other hand, refer to TS, not to TR. For this reason they can easily cooccur with time adverbials, as in *I worked (for) fourteen hours yesterday*. It goes without saying that this is further evidence for the claim that, in the representations of the tenses, a distinction must be made between a TS and a TR relative to which the TS is located as simultaneous. A system like Comrie’s, in which this distinction is not made, is clearly unsatisfactory.

It is also important to note that Declerck (1986: 324) claims that the use of a tense relates to describing a situation and not to establishing a TR. Considering the example *John had already left when the others arrived*, Declerck points out that we do not know when John left (or, more correctly, what is the time -“TO”- to which the time of

the situation of John leaving is related). The past perfect of course implies that there is a TO, but it does not identify it. Time adverbials, on the other hand, do identify TOs.

Before going on, it is good to bear in mind that Declerck remarks that the temporal schemata that he proposes are meant to account for the “basic temporal” uses of the tenses only. According to Declerck, the past perfect has several “nontemporal” or “special” uses. Let us consider the following examples:

(a) *Bill had seen me before I saw him.*

(b) *Bill saw me before I saw him.*

(c) *Bill saw me before I had seen him.*

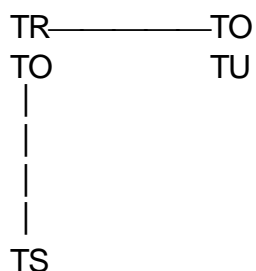
(In: Declerck 1986: 325)

Declerck explains sentence (a) as being an example of the “basic temporal” use of the past perfect: *had seen* refers to a situation that is represented as prior to the situation referred by *saw*. Sentence (b) illustrates the fact that, when there is a clause introduced by *before* or *after*, the past perfect is often replaced by a past tense because the anteriority relation is already signaled by the conjunction. That is, the past tense in the head clause results from tense simplification and therefore represents a “special” use of the past tense. In (c) it is the past perfect *had seen* that is not in keeping with the normal temporal meaning of the tense: here the past perfect refers to a situation that is not anterior to the one referred to by the past tense of the head clause. Sentences of this type have been examined in Declerck (1979a), where it is argued that the past perfect is used as a modal form expressing “irrealis”. The meaning of (c) is something like “Bill saw me at a time when I had not yet seen him”. The past perfect thus fails to represent the situation as factual, and we can easily find it in contexts that suggest that the

situation did not hold at all (e.g. *I concealed myself before Bill had seen me*). In sum, (b) and (c) are instances of a “special temporal” use and a modal use of a tense respectively, and are therefore not counterexamples to the temporal scheme that has been proposed for the basic temporal use of the past perfect.

The Simple Past

If scheme 7 represents the structure of the past perfect, the structure of the past tense can be shown to be a subpart of this, as in scheme 8:



Scheme 8

This representation of the past tense is in keeping with the view that the use of a past tense does not exclude the “situation referred to” from extending to the present or into the future (cf. McCoard, 1978: 45-51). Declerck thus concludes:

“John was in London yesterday says nothing about whether John still is in London today nor about where he will be tomorrow.” (Declerck 1986: 326)

temporal relation between them can establish only one TR. This principle has also been observed by Smith (1978: 48), who writes “complex time adverbials are single units in temporal interpretation”. So, an adverbial like *the day before yesterday* is felt to establish a single TR. If it is accompanied by a past tense, it establishes the one TR that is present in scheme 3.8 (i.e. the one which TS is simultaneous with). If it is accompanied by a past perfect, it can establish either of the TRs that occur in scheme 7. This accounts for the fact that *I had left the day before yesterday* can receive two interpretations: either the day before yesterday was the TO (= TR2) prior to which I had left, or it was the time at which I left (= TR1), as noted before in relation to Klein’s objection. As a conclusion, Declerck (1986: 328) observes that:

“...not all TRs and temporal relations expressed in a clause need be relevant to the selection of the tense of the clause. We can imagine complex adverbials like *the day after the last Sunday before Easter*. Even such an adverbial, which involves three TRs and two temporal relations, ultimately serves to specify a single TR. And this TR is the only one that is relevant to the selection of the tense of the accompanying verb.”

Declerck, however, points out one type of exception to this rule. It is possible, says Declerck (1986), that one of the TRs involved in the temporal relation expressed by the adverbial is not overtly indicated in the adverbial itself but must be identified from the context. Consider, for example, an adverbial like *the day before*. Whereas *the day before yesterday* ultimately does no more than establish a single TR, *the day before* establishes one TR and implies the existence of another. In the latter case the TR

established by the adverbial (i.e. the TR with which TS is simultaneous) is only one of the two TRs involved. And since the relation between them is one of anteriority, the temporal scheme that is realized is that of the past perfect, not of the past, and we should therefore expect *the day before* to collocate with the former tense. Needless to say, this expectation is borne out, for we say *I had done it the day before* rather than *I did it the day before*.

However, apart from the above kind of exception, it does appear to be the case that complex adverbials indicate only one TR relevant to the use of the tense. This is also clear from examples like *He was born at 7 o'clock on Christmas Day, 1977*, where we have a complex adverbial of a different type. In this case the complex adverbial consists of several indications of time, which identify the same time (viz. the TR relative to which TS is located as simultaneous) with different degrees of preciseness. As far as the temporal relations are concerned that are relevant to the use of the tenses, the different adverbials clearly establish a single TR (Smith (1978: 48) makes the same point).

According to Declerck (1986: 329), the above discussion of the past perfect and the past tense has revealed a number of basic principles:

[1] Irrespective of whether the tense is an “absolute” one (in Comrie’s sense) or a “relative” one, TS is never directly related to TU. Rather, it stands in a relationship of simultaneity with a TO which may be referred to by an adverbial and which is itself related to a TO. The latter TO may be TU or may be related to TU via one or more further TOs.

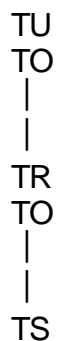
[2] Time adverbials of the *boundary type* serve the same function as *time-when* adverbials: they establish the TR relative to which TS is located as simultaneous. *Durational adverbials*, on the other hand, refer to TS, not to TR.

[3] If the tense is such that several TRs are involved, the time adverbial can be interpreted as referring to any one of them. However, Declerck (1986: 356) notes an exception to this rule, which will be discussed in section 3.6.7.1.

[4] As far as the use of the tenses is concerned, only one TR is established by two or more time adverbials in the same clause.

The Simple Present

On the basis of these principles Declerck represents the other tenses. In this dissertation we will follow Declerck's analysis of just one more tense, apart from the present perfect itself: the present tense, since the perfect is identified by Jespersen (1931: 47) as a "kind of present tense." The present tense, according to Declerck (1986: 329), offers the simplest scheme:



Scheme 10

The present tense, in scheme 10, represents a situation as simultaneous with a TR which is itself simultaneous with TU. This is the case of the example offered by Declerck (1986: 330): *John is here today*. The TR is indicated by *today*. As noted by Comrie (1985: 2, 36, 37), TU is by definition punctual (nondurative). TR, on the other hand, may be a longer timespan (e.g. *today*). This is in keeping with Declerck's definition of "simul": when we say that TR is simultaneous with TU, this does not mean that TR has to be punctual too. Similarly, the statement that TS is located as simultaneous with TR does not mean that the two must take up exactly the same portion of the time axis. The present tense in the example *John is here today* does not exclude the possibility that John was here yesterday too, nor that he may remain here for some time in the future. That is, for the simultaneity relation to hold it is sufficient that one time partially overlaps the other.

The above remarks, according to Declerck, make it clear that we need all three times (TU, TR and TS) in the description of the present tense. TR is necessary as an intermediary between TU and TS because it is the time indicated by *today*. Like other time adverbials that are "shifters" (Jakobson: 1957), such as *yesterday and tomorrow*, *today* locates a timespan relative to TU. And, as is the case in sentences with *yesterday and tomorrow*, TS is located relative to this timespan. Declerck's analysis of the present tense is, therefore, in keeping with the general principles that have been pointed out above. Moreover, it explains why the three times in question (TU, TR and TS) may be different times in the sense that they may take up three different portions of the time axis. In the example (3.26) *John is here today*, TS (the time of John's being here) may be longer than TR (*today*), and this in its turn is longer than TU.

The Present Perfect

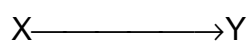
In the opinion of Comrie (1981, 1985), the present perfect does not differ from the past tense in terms of time location: both tenses locate a situation as prior to the present moment. The difference between the two is rather one of aspect: the present perfect implies “current relevance”, the past tense does not. This means that Comrie’s analysis of the perfect runs counter to Reichenbach’s. The latter holds that the perfect involves the present moment as reference point, whereas the reference point involved in the use of the past tense coincides with the time of the past situation.

Declerck’s theory (1986) will differ from Comrie’s (1985) in that it does not consider the two tenses as locating situations in time in exactly the same way. As noted by Comrie himself (1985: 78-79), “adverbial indications of definite past time require the past tense”. The present perfect, remarks Declerck:

“...can cooccur with time adverbials only if the time of the situation is located relative to a time that extends from the past to the present. Thus, the present perfect can be used with such adverbials as *lately*, *this afternoon*, *since 1960*, etc. Adverbials like *in the past*, *for some time*, etc. are interpreted as denoting a period up to now when accompanied by a present perfect. An adverbial such as *at some time* can collocate with the perfect in the sense of ‘at some time in a period up to now’. Even adverbials like *at 2 o’clock* are possible, but in that case too there is reference to a period extending to TU.” (Declerck 1986: 346)

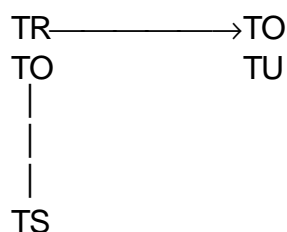
As noted by Comrie (1985: 79), *I have arrived at two o'clock* means “there has been at least one instance in my life when I arrived at two o'clock”. All this suggests, according to Declerck, that the present perfect does not locate a situation in time in the same way as the past tense does. Whereas the past locates TS at a TR that lies wholly before TU, the present perfect locates TS at a TR that reaches from the past up to TU. The relation between TR and TU is thus no longer of the type “X (wholly) before Y”, but rather of the type “X before-and-up to Y”. The latter relation can be represented as shown in scheme 11:

11:



Scheme 11

The scheme of the present perfect then looks as is shown in scheme 12:



Scheme 12

It should be noted that this is different from what Declerck has observed in connection with the past tense, which leaves open the possibility that TS extends beyond TR and up to TU, but does express that TR is completely before TU. In scheme 12 it is TR itself which extends up to TU. As for the TS that is located relative to it, it may also extend to the present (as in *I have lived here since 1950* or it may not do so as in *I have seen him lately* or *I have been there twice*). It is this difference between the present perfect and the past tense that accounts for the fact that, in the theory that

holds that the only relevant distinction in tense is that between past and present, the present perfect counts as a present tense whereas the past tense self-evidently does not. Thus, Banfield (1982: 265) notes that “in the case of the present perfect, despite the reference to a past time, the tense is present and retains a reference to the speaker and the moment of the utterance”.

This representation of the perfect seems to fit in nicely with the “extended now” analysis of the perfect advocated by McCoard (1978). It also concurs with an “indefinite past” analysis to the extent that it explains why the present perfect cannot be accompanied by adverbials referring to some “definite time” in the past: if the TR at which TS is located is identified as being such that TU is not part of it, then the conditions for using the present perfect are not satisfied, since the present perfect requires that TR should include TU. On the other hand, the analysis seems to be able to account for the use of the perfect with adverbial indications of recent past such as *just* or *this minute*, since we can assume that the (very) recent past can be considered as part of the present in the extended sense (cf. Poutsma 1926: 263). Of course, the use of the perfect in such cases is highly conventionalized: British English uses the perfect with *just* and the past with the synonymous *just now*; American English uses the past tense in both cases (cf. McCoard 1978: 45).

Declerck’s analysis of the present perfect also accounts for the distribution of time adverbials over the past tense and the present perfect. Adverbials that establish a TR not including TU require the use of the past tense. Adverbials establishing a TR reaching up to (and including) TU trigger the use of the present perfect. According to

Declerck (1986: 348), however, there are a couple of adverbials that deserve some special comment:

[1] A question beginning with *when* must normally be in the past tense rather than in the present perfect. We say *When did it happen?* and not (3.30) **When has it happened?* (except on a habitual interpretation). This is in keeping with Declerck's analysis. Nonhabitual *when* is always interpreted as referring to an interval of time that does not include TU. Otherwise we use *since when* (or *for how long?*). The use of the past tense with *when* and of the perfect with *since when* is thus predictable.

[2] Comrie (1979: 30) notes that the use of *long since* (as in *I have long since given up smoking*) as a "potential counterexample" to the rule that time adverbials accompanying a present perfect cannot exclude TU from their reference. However, it does not seem that *long since* is an exception. *Since* refers to a period starting at a certain time in the past (contextually identified) and reaching up to some TO. This TO may be TU, in which case all conditions for using the present perfect are satisfied. The interpretation is that the time of my giving up smoking is located as simultaneous with this period. "Simultaneous with" will here receive the interpretation "at some time in the course of", which is one of its usual interpretations. The addition of *long* just means that this unidentified time in the period indicated does not lie close to TU. This does not in any way interfere with the conditions for using the present perfect.

[3] An adverbial like *until now* can be used both with the past tense - (3.31) *I lived in the country until now* - and with the present perfect - (3.32) *I have lived in the country until now*. This follows simply from the fact that *until now* can mean both "up to, but not including, TU" and "up to and including TU". As predicted by the theory, the past tense

suggests that I have now stopped living in the country whereas the present perfect implies that I still do.

In sum, the analysis advocated here claims that the difference between past and perfect lies basically in the different meanings of the “before” relation between TR and TU, and therefore in how they locate a situation in time. This runs counter to the view that the basic difference between the two tenses is one of aspect (viz. the absence or presence of an implication of current relevance). This is confirmed by the fact that current relevance can also be implied in sentences that make use of the past tense (cf. McCoard 1978: 56-60). Therefore, contrary to what is claimed by Comrie, the present perfect does differ from the past tense in the way it locates a situation in time. The past tense locates a situation relative to a TR, which lies entirely in the past while the present perfect locates a situation relative to a TR, which starts in the past and reaches up to TU.

Aspect

As opposed to Comrie who sees aspect as “not concerned with relating the time of the situation to any other time-point, but rather with the internal temporal constituency of the one situation” (Comrie; 1976: 5), Godoi (1992) defines it as **“the relation between the time of reference (understood as a period) and the time of the situation (i.e. the time that the event takes up on the time axis)”**. This relation presents two possibilities:

“[a] the time of reference includes the time of the event and the situation has “endpoints”, i.e., it is bounded;

[b] the time of the event includes the time of reference and the situation does not have “endpoints”, it is unbounded (Godoi 1992: 208)

Based on this definition of aspect, which uses the EP property as defined by Hatav (1989), Godoi (1992: 209) distinguishes two types of aspect:

[1] Perfective aspect:

[1.1] $TS \subset TR$

[1.2] $TS \subsetneq TR$ (proper inclusion)

[2] Imperfective aspect:

[2.1] $TR \subset TS$

[2.2] $TR \subsetneq TS$ (improper inclusion)

According to Godoi, cases [1.1], [1.2] and [2.2] will have end points. In case [2.1] the situation will lack the end points, characterizing an open situation.

Aspectual Classes of Verbs

Godoi points out that Guenther, Hoepelman & Rohrer (1978) propose the new parameter of “gradual becoming” instead of Dowty’s “change of state” (1979) in order to capture the differences among the aspectual classes of verbs and avoid the problems, discussed earlier in this chapter, with Vendler’s classification. In this way, Accomplishment would be represented as: $\Delta f \rightarrow f$, i.e., the gradual development (indicated by Δf , in which Δ is the operator of changing) results in a State (f). The State would be represented as: $f \rightarrow f$ in which f remains constant in a given period of time.

The Activity would be: $\Delta f \rightarrow \Delta f$, i.e. an on-going change remains as an on-going change through the period of time considered and the Achievement would be represented as: $\neg f \rightarrow f$, meaning an instant change.

Godoi (1992: 164) remarks, however, that even with the inclusion of the concept of “gradual change” many problems remain unsolved, especially the “imperfective paradox”, which involve “Accomplishments” and “Achievements” according to Dowty (1977). As noted before, Dowty remarks that the analysis of Accomplishments in terms of “become-sentences” was motivated (on the semantic side) by the need to capture the meaning of an Accomplishment verb phrase, which invariably involves the coming about of a particular state of affairs:

“Yet it is just this entailment that such a result-state comes about that fails when the Accomplishment verb phrase appears in a progressive tense. In other words, the problem is to give an account of how ‘John was drawing a circle’ entails that John was engaged in a bringing-a-circle-into-existence Activity but does not entail that he brought a circle into existence. This is the ‘imperfective paradox’.” (Dowty 1977: 133)

According to Dowty (1977), the “imperfective paradox” also holds for “Achievement terms”, since VPs like *fall off a table* are “Achievement terms” Vendler’s sense, and when in the progressive form do not entail the final state of being *fallen off the table*.

Declerck (1979), discussing the “imperfective paradox”, remarks that Vendler’s distinction between “Accomplishment terms” and “Activity terms” (or between “bounded”

and “unbounded” expressions, applies primarily to situations rather than to linguistic expressions. It follows that the only kind of linguistic expressions to which the bounded/unbounded distinction is applicable are linguistic propositions: propositions are, indeed, the logico-linguistic correlates of situations (cf. Zydatiss 1976: 42). This is in keeping with the findings of Verkuyl (1972), who has shown that the (un)bounded nature of a sentence may depend not only on the verb, but also on most of the nominal constituents (Subject NP, Indirect Object NP, etc.). Shi (1989) also comes to the same conclusion. The following sentences, taken from Declerck (1979: 268), illustrate this point:

(1.a) *John ate an ounce of cheese (in an hour). (bounded)*

(1.b) *John ate cheese (for hours). (unbounded)*

(2.a) *(For hours) water ran out of the tap. (unbounded)*

(2.b) *A liter of water ran out of the tap (in an hour). (bounded)*

(3.a) *John drew a circle on the floor (in an hour). (bounded)*

(3.b) *(For hours) little girls (came and) drew a circle on the floor. (unbounded)*

These observations and examples led Declerck to conclude that Dowty’s initial assumption that VPs like *draw a circle* are “Accomplishment” VPs is false (the same can be said of the VPs like *fall off the table* classified by Dowty as “Achievement” VP): the “Accomplishment/Activity” distinction applies not to VPs but to situations, and VPs like

draw a circle can occur in unbounded as well as bounded propositions. In this way, says Declerck:

“...the ‘imperfective paradox’, as formulated by Dowty, is the problem of how it is possible that we can use an ‘Accomplishment VP’ like *draw a circle* in a sentence in the progressive, which implies that the result-state did not necessarily come about.” (Declerck 1979: 271)

And he offers the following answer:

“...a sentence like *John was drawing a circle* does not involve a bounded VP: as we have observed, the bounded/unbounded distinction applies not to VPs but rather to linguistic propositions and the sentence above is an unbounded proposition. This means that, from a linguistic point of view, the problem of the ‘imperfective paradox’ simply does not arise...” (Declerck 1979: 271)

Godoi (1992), in accordance with Declerck’s conclusion (1979), proposes that the aspectual classes refer only to **situations** (cf. Shi 1990:62) and a situation is **necessarily** located in time (cf. McCoard 1978: 92) and that therefore:

“...dealing with isolated Aspectual classes, listing them in the infinitive form (cf. Vendler, Dowty, Dahl, among others) or presenting them in only one tense becomes a vicious circle ...Thus, an Aspectual Class can be determined only when it refers to a situation with its TU, TS and TR, and it is not possible to assign Aspectual Classes to isolated verbs, VPs or non-

temporal sentences.” (Godoi 1992: 164-169).

According to Godoi, to affirm that an Accomplishment represents a gradual development that results in a state is possible only when a situation located in the past has “end points”, i.e. is a concluded situation. Achievements, also involving the notion of change, although an instantive change, are, in the same way, possible only when the situation is completed in the past. Otherwise there is no way to deduce any completion entailed in these two categories.

Based on the above discussion, Godoi (1992: 166,167) proposes new definitions for Accomplishments and Achievements:

[1] Accomplishment:

$$\boxed{\mathbf{P}} (\mathbf{H}' \mathbf{D} \mathbf{f} \textcircled{\mathbf{R}} \mathbf{f})$$

$\boxed{\mathbf{P}}$ Past Operator (= necessarily in the past)

H'- An Operator for an interval up to now, but not including TU

[2] Achievement:

$$\boxed{\mathbf{P}} (\mathbf{H}' \mathbf{\emptyset} \mathbf{f} \textcircled{\mathbf{R}} \mathbf{f})$$

Summarizing the representations of the aspectual classes according to Godoi, we have:

Aspectual Class	Representation
States	$f \textcircled{R} f$
Activities	$Df \textcircled{R} Df$
Accomplishments	$P (H' Df \textcircled{R} f)$
Achievements	$P (H' \emptyset f \textcircled{R} f)$

According to Godoi (1992: 209), all aspectual classes (i.e. States, Activities, Achievements and Accomplishments) may have the perfective aspect ($TS \subset TR$ & $TS \subseteq TR$):

- (a) *Rita lived with her Grandmother in 1985.* - State
- (b) *Peter swam with his friends on Saturday.* - Activity
- (c) *Marc won the science contest.* - Achievement
- (d) *Ann decorated a Christmas tree with origami.* - Accomplishment

The imperfective aspect ($TR \subset TS$ & $TR \subseteq TS$), is possible only for **States** and **Activities** because of the **distributive property**, i.e. the property which states that if a situation is interrupted at any moment “t” in which the situation was happening, it can be said that the situation happened (cf. Vendler 1967: 100).

The Ambiguity of the Present Perfect with Durational Adverbs

Let us return now to the problem posed by Heny (1982) and Richards (1982) concerning the ambiguity of the present perfect with durational phrases. When analyzing the sentence *Sam has been in Boston for 20 minutes*, one of the solutions

proposed was Declerck's (1986), in which the durational adverb *for 20 minutes* refers to the time of the situation and not to the time of reference, which for the present perfect extends up to the moment of speech and includes it. In this way, there is, according to Declerck, the possibility of two readings: [1] TS included in a longer TR or [2] TR understood (by contextual matters¹) as coinciding with TS, generating the continuative reading (McCawley:1971). We also said that this interpretation seemed to be incomplete, since it could not account for the fact that in the sentence (4.6) *Sam has been fired* the continuative reading is not possible.

Based on the concepts of aspect and aspectual classes developed above and on the XN theory for the present perfect as discussed in chapter 3, we propose the following analysis:

Sam has been in Boston for 20 minutes.

1. The TR of the present perfect extends up to and includes TU (cf. Declerck: 1986).
2. The durational adverb *for 20 minutes* refers to TS, and thus does not say anything about TR (cf. Declerck: 1986).
3. The situation is Stative, and thus allows for a perfective reading in which $TS \subset (XN)TR^2$ (since $TS \subseteq (XN)TR$ cannot happen in the English present perfect, as discussed before), and an imperfective reading in which $(XN)TR \subseteq TS$ (since the situation up to **now** has EPs, as discussed in section 4.3.5.1). In the perfective reading, therefore, $20\ minutes \subset (XN)TR$ and in the imperfective reading $(XN)TR \subseteq 20\ minutes$. *20 minutes* in a continuative reading, in our analysis, is thus

¹ Cf. Declerck 1986: 357.

² The (XN) in front of the TR indicates that the TR reaches up to the TU and involves it (cf. Declerck: 1986)

understood to coincide with TR not because of “implicature” as claimed by Declerck (1986:357), but because of its semantic frame.

4. Therefore, the two possible readings are **perfective aspect** (somewhere in the course of Sam’s life there has been a period of 20 minutes during which he was in Boston) and **imperfective aspect**, in which *for 20 minutes* indicates not only that the event lasted *20 minutes*, but also that these *20 minutes* reach up to now.

In this way we argue that there are two distinct semantic frames for the two readings of the present perfect with durational phrases, one being distinct from the other in aspect. Before returning to the solutions proposed by Declerck (1986) and Mittwoch (1988) for the present perfect with durational adverbs let us recall that McCoard, when discussing the same subject, calls attention to the following point:

“It is somewhat curious to realize that the most likely, ‘neutral’ interpretation of *I’ve lived here*, without adverbial supplements, involves the inference that the speaker is *not* presently living here.” (McCoard 1978: 46)

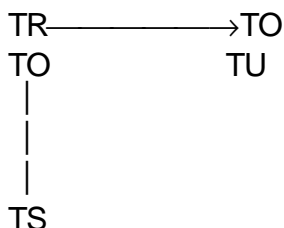
However, we may add to that comment that *I’ve broken my nose*, even with adverbial supplements, cannot involve any other inference, except that somewhere in the past it happened. The question is: what is in *I’ve lived here* that, with adverbial supplements, allows an ambiguous reading? It cannot be the adverbial supplements themselves, because they are not present. Or the other way round: Why cannot sentences like *I’ve broken my nose* or *Sam has been fired* have a continuative reading? This is the reason why we said that both Mittwoch’s and Declerck’s analyses were somewhat incomplete: focusing on the durational adverbs, neither explanations can account for the “potential”

of some sentences in the present perfect, without durational adverbs, of becoming ambiguous. According to the analysis proposed above, we claim that the possibility of the ambiguity with a sentence in the present perfect lies on three factors:

1. The XN time of reference of the present perfect;
2. The aspectual class to which the situation involved in the present perfect belongs;
3. The aspect(s), compatible with the aspectual class of the situation.

Sentences *Sam has been fired* and *I've broken my nose*, thus, are different from *I've lived here* in that they are Achievements, which must be in the perfective aspect (cf. Godoi: 1992), while *I've lived here* is a State, which may occur in both perfective and imperfective aspects, generating an ambiguous reading.

The following scheme and comments illustrate and summarize the different elements discussed so far:



Temporal relationship:

TR \longrightarrow TU : Extended-Now

Aspectual relationship:

TR x TS

(a) Perfective: TS Ì (XN)TR

May occur with all aspectual classes:

- (a) *Linda has lived in London* (but now she is living in New York) - Stative
- (b) *Peter has solved a Math test* - Accomplishment
- (c) *Robert has won the race* - Achievement
- (d) *Ann has run* - Activity

(b) Imperfective: (XN)TR Í TS

May occur only with Statives and Activities:

- (a) *Rusty has lived in London for 3 years (now)* - Stative
- (b) *Sarah has worked a lot (lately)* - Activity

When States and Activities appear with the present perfect, therefore, we have the possibility of an ambiguous reading of the sentence, since their perfective and imperfective aspects occur in only one form: *have + past participle*.

METHOD

The combination of the semantic model for the English Present Perfect described in the Literature Review with the Cognitive Load theory allows me to generate the following research questions for this study:

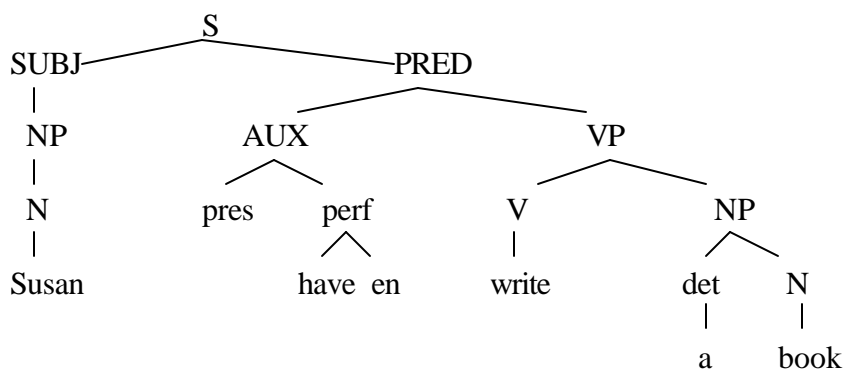
1. **Developmental Question:** How can I incorporate the logic “chunks” of the Present Perfect into a program to be used via Internet to help EFL students grasp the underlying semantic structure of the Present Perfect? (The results will be reported as lessons learned during the development of the program)
2. **Developmental Question:** What elements should be considered in the Design phase to allow a smooth Developing phase in the building of the program to be

utilized in this study? (To be reported as lessons learned during the development of the program)

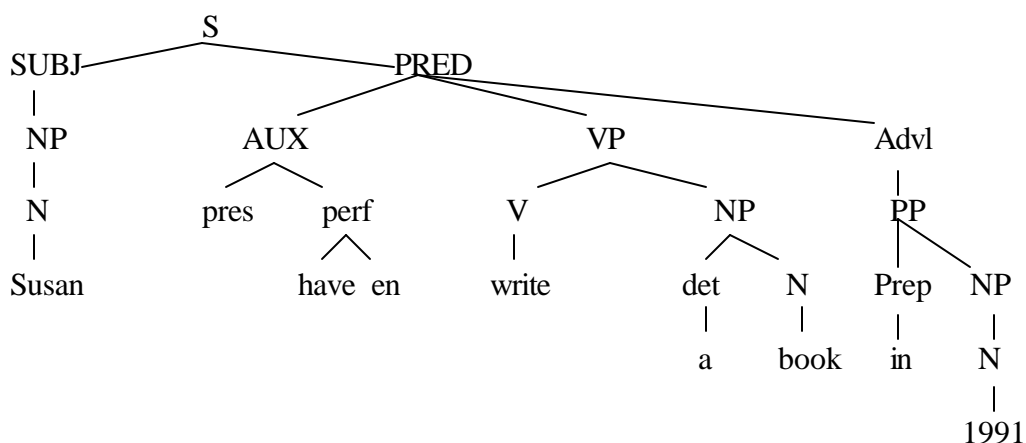
3. **Learning Question:** Will a program when incorporating the logic underlying the meanings of the Present Perfect enhance its understanding and remembering as postulated by Cognitive Load Theory? ($H_0: \mu_1 = \mu_2$ - To be tested in a True-Experimental research design)
4. **Transfer Question:** Will a program that stresses the semantic structure underlying the Present Perfect help in the understanding of other tenses (specifically the Present, Past, and Past Perfect) and their contrast with the Present Perfect? (To be assessed through online interviews during and at the end of the course, utilizing Blackboard's chat capabilities)
5. **Evaluation Question:** How will the students react to this online course? (To be assessed through an Exit Survey)

To answer Question #1 we will utilize a systematic structural analysis of sentences in the Present Perfect and consider the technical possibilities of incorporating the elements involved into a program. Let us analyze, for example, the deep structures of the following sentences:

1. *Susan has written a book.*

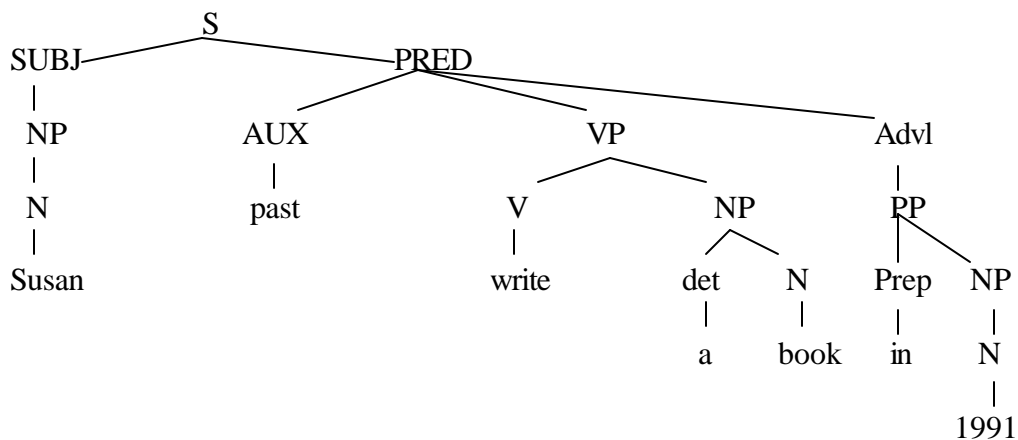


2. *Susan has written a book in 1991.

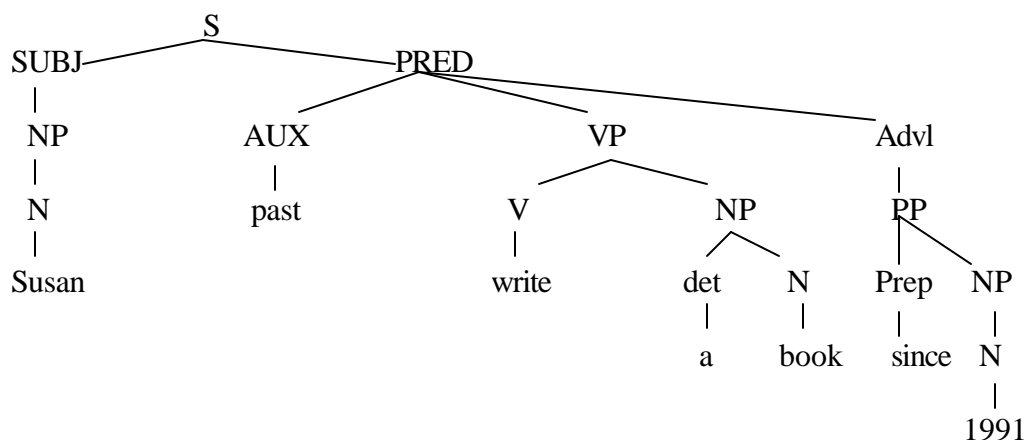


What is making sentence (2) ungrammatical is obviously the adverbial node, which is the only addition to the perfectly grammatical sentence (1). The difference between these two sentences is that in sentence (2) the adverbial is determining **TR** < **TU**. Since, according to Declerck (1986:352), the **TR** cannot be "wholly before" in the present perfect structure, the sentence is ungrammatical.

3. Susan wrote a book in 1991.

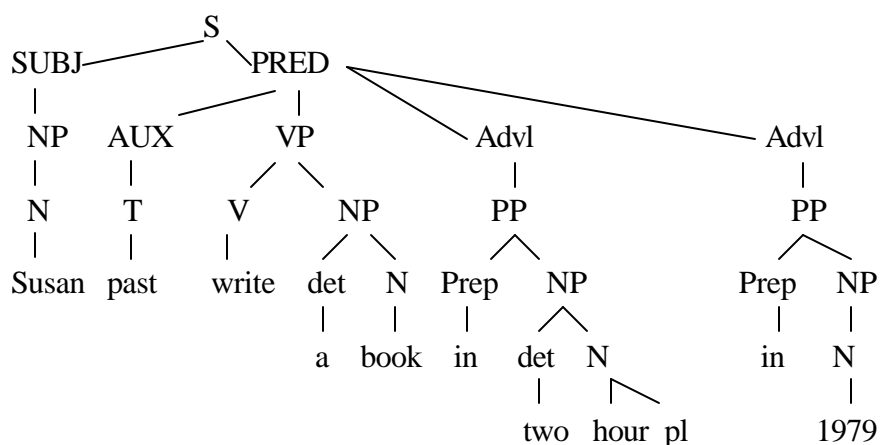


4. *Susan wrote a book since 1991.

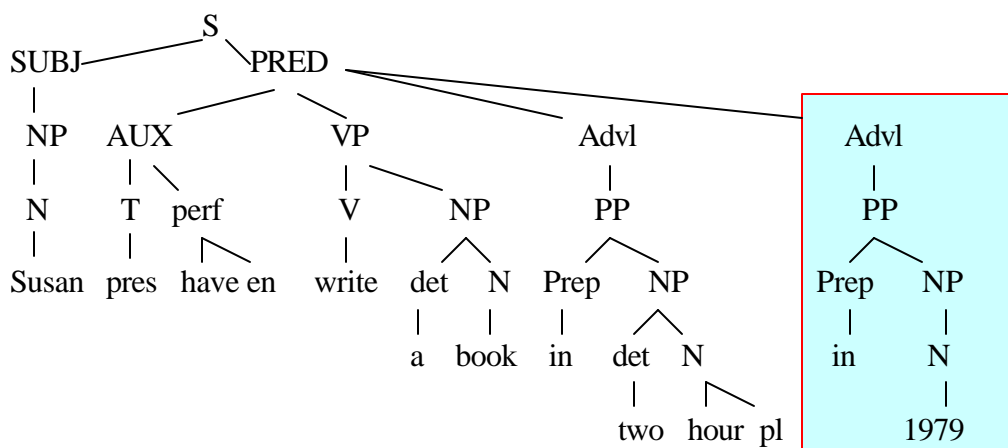


Likewise, whatever is making sentence (4) ungrammatical is contained by the adverbial node, which is the only element that changes from acceptable sentence (3) to unacceptable sentence (4). The reason is that in sentence (3) the adverbial node determines $\text{TR} < \text{TU}$, which is compatible with the simple past structure, while in sentence (4) it determines $\text{TR} \leq \text{TU}$, which requires the present perfect structure.

5. Susan wrote a book in two hours (in 1979).



6. *Susan has written a book in two hours *(in 1979).*



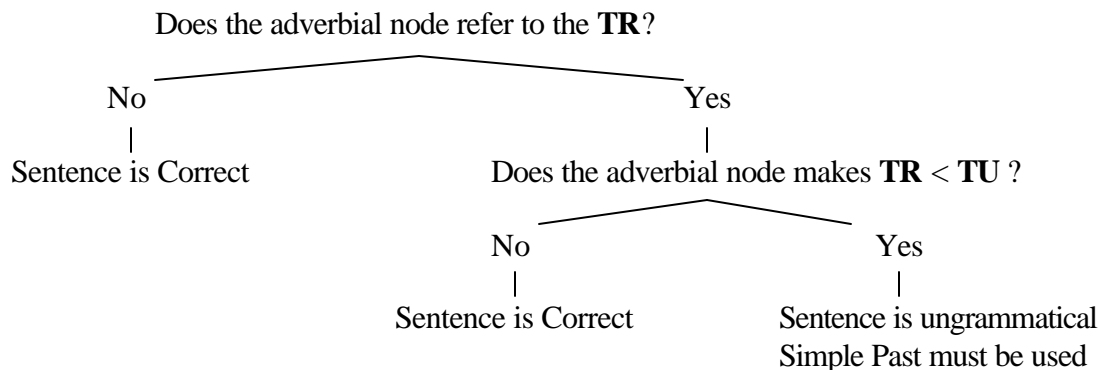
In sentences (5) and (6) the first adverbial node refers to **TS** (time spent writing the book) while the second adverbial node refers to **TR** (when the event occurred). As predicted by Declerck's tense theory, the second adverbial node makes sentence (6) ungrammatical because it causes **TR** to be "wholly before" **TU** ($TR < TU$), which is incompatible with the present perfect structure.

Evidently a pure database approach is not enough to incorporate this information into software because it would not be feasible to classify all possible English adverbials into the categories of $TR < TU$ or $TR \leq TU$. A decision-tree approach supported by an ample database, however, seems to be adequate to deal with the complexities of the present perfect structure and its distinction from the simple past. There are two central questions to be answered:

1. Does the adverbial node refer to **TR** or **TS**?
2. If the adverbial node refers to **TR**, does it cause the **TR** to be separated from the **TU**?

The database will enable the software to recognize adverbials and classify the most common ones. If the components of the present perfect are detected and there is the

presence of an adverbial node, a decision tree is activated, asking the user the two central questions:



The general research design selected for the study is Developmental. This design was selected for three reasons: (1) the combination of Declerck and Godoy's models to build a semantic structure to the English Present Perfect is original. Therefore, a product incorporating this notion will have to be built to accomplish the purpose of the study, (2) the cycle of development of this product, specifically the Design and Development phases, is part of my research interest, and (3) the Developmental research design is flexible, allowing me to use qualitative and quantitative techniques to the benefit of the whole study.

According to each one of the research questions stated above, the important variables potentially affecting the phenomena I am proposing to investigate can be summarized as follows:

Research Question #1 – The aspect I am proposing to investigate and report in the form of lessons learned during the development of the program is how the notions involved in the semantic model for the English Present Perfect that I

adopted can be incorporated into a program to be used via Internet. This “how” type of question is typical of Developmental studies (Richey & Neslon, 1996).

Research Question #2 – The aspect that I am proposing to investigate and report in the form of lessons learned during the development of the program are the elements that should be considered in the Design phase to make the development of the software easier.

Research Question #3 – This part of the study will involve a true experiment.

The variables involved are:

1. Independent Variable – Treatment utilizing the semantic model adopted in this study for the English Present Perfect OR treatment utilizing Elbaun’s procedures (Elbaum, S. N. 2001. Grammar in Context. Boston, MA: Heinle & Heinle)
2. Dependent Variables – (2.1) Scores of immediate post-test, (2.2) Scores of late post-test.

Research Question #4 – This question will be studied qualitatively through recorded written interviews on the web utilizing Blackboard’s chat capabilities. I am interested to know if the students will be able to transfer the notions associated with the English Present Perfect to other English tenses. The purpose of this part of the study is not to establish an experimental Cause-Effect relationship, but to shed some light in the process of knowledge transfer. The aspects involved are: (3.1) the semantic model developed in this study for the English Present Perfect, (3.2) the transfer of this semantic model to other English tenses. In terms of IV and DV, the Independent Variable would be “the semantic

model developed in this study for the English Present Perfect” and the Dependent Variable would be “the transfer of this semantic model to other English tenses”.

Research Question #5 – The Exit Survey will be a database oriented electronic form dealing primarily with satisfaction variables. The results will be reported utilizing descriptive statistics, as part of the evaluation of the unit developed.

The sample for the whole study will be a consequence of the sampling procedures used for the experimental portion of the research. The experiment that will be conducted to answer research question #3 will follow a True-Experiment research design type: the independent variable will be manipulated, and the unit of analysis will be randomly assigned to participants. The participants will be undergraduate students from a Brazilian University enrolled for a distance course in Beginning Intermediate English Writing Skills who do not master the use of the English Present Perfect and its contrast with other English tenses. A screening test will be applied to select only those students who do not master the use of the English Present Perfect.

To arrive at the sample size, a Power table of F Test ($\alpha = .05$, $u = 1$) was consulted. A realistic medium effect size of .50 and Power of 88% will be utilized. With these parameters the Power table of F test indicated that the required sample size is $n=20$ for each group. Considering that dropout rates may be high, as it is known to happen with WBT courses (Horton, 2000), I increased the total sample size to $n = 100$, i.e., $n = 50$ for each group.

The instruments that will be used for data collection are: (1) Oxford Practice Grammar Test, (2) Cambridge Grammar Test, and (3) Blackboard chat device. Both,

the Oxford Practice Grammar Test and Cambridge Grammar Test will be acquired. The portions of the Oxford Practice Grammar Test and Cambridge Grammar Test to be used in this study refer to the use of verb tenses and will be validated for this study by experts in the area. The reliability for both tests will be assessed by Cronbach's alpha, which is a widely used index of a measure's reliability that is equivalent to the average of the split-half correlations from all possible splits into halves of the items on the test. The third instrument, Blackboard, is a well-known shell utilized for distance learning courses. The university in which I am conducting the experiment has this software, and I will seek authorization to utilize it in this study. I will seek the opinion of experts in order to validate Blackboard for this specific study.

The Oxford Practice Grammar Test will be utilized in the screening test for the selection of the sample and in the immediate post-test. The Cambridge Grammar Test will be utilized in the late post-test. Both instruments, Oxford Practice Grammar Test and Cambridge Grammar Test, are equivalent pencil and paper type of tests, and, therefore, require the real presence of the students involved in the study. A proctor will be available to administer the tests in Brazil. To collect data for research question #4, the Blackboard chat device will be used. This technique requires the virtual presence of the participants, in real time. The interviews will be created by the author (see Appendix 2), conducted synchronously online, and recorded for analysis. I will seek the opinion of experts to validate this interview. In both cases, pencil and paper tests and recorded interviews, the integrity of the data that will be collected is pretty much assured.

To collect data for research questions #1 and #2, detailed logs will be kept about the elements felt as necessary by the researcher in the Design and Development

phases. To analyze data collected for research questions #1 and #2, an interpretive approach will be used. The only assumption is that the researcher was diligent enough to keep accurate and detailed observations about the Design and Development phases of the instruction system design model utilized, which is the generic model.

To address question research #4, an interpretive approach in search evidence of transfer will be used to analyze the recorded interviews. My interest, as stated before, is to find clues of transfer of the semantic model incorporated into the program used to teach the English Present Perfect to other English tenses. The assumption in the use of this technique is that the virtual student being interviewed corresponds to the real student participating in the study and that the virtual conversations are recorded reliably by Blackboard chat device.

To analyze the data collected for research question #3, the t-test for independent means will be used to test the difference of means between group1 and group2 in the immediate post-test and late post-test ($H_0: \mu_1 = \mu_2$). The assumptions for the t-test are: (1) independence of observations, (2) normal distribution of observations. The ttest is relatively robust to violations of this second assumption especially if the sample sizes are 20 or more, and (3) equal variances. The t-test is relatively robust to violations of the assumption of homogeneity of variances when the sample sizes are equal. The data collected in Question#5 will be presented utilizing descriptive statistics.

The interpretation of the data will be based on the following elements from the data analysis:

Question #1 – elements that were felt necessary by the author to incorporate the logic “chunks” of the English Present Perfect into a program.

Question #2 – elements that were felt necessary by the author to include in the Design phase in order to promote a smooth Development phase.

Question #3 – the significance of the differences found between the means of group1 (program utilizing Elbaum's procedures: Elbaum, S. N. 2001. Grammar in Context. Boston, MA: Heinle & Heinle) and group2 (program incorporating the semantic model for the English Present Perfect adopted in this study). $H_0: \mu_1 = \mu_2$ will be accepted if $t_{calc} < t_{crit}$ or rejected if $t_{calc} > t_{crit}$.

Question #4 – the clues of transfer that will possibly evolve from the interviews.

Question #5 – data gathered through the Exit Survey.

Because developmental and qualitative research is often context specific, like research questions #1, #2 and #4 in this study, one must be particularly concerned with the limitations or unique conditions that may be operating in this particular study. Such limitations will affect the extent to which one may generalize the conclusions of the study. The results may be applicable only in the situation studied, or to others with similar characteristics, rather than being generalizable to a wider range of instructional environments. The study proposed here uses mixed qualitative and quantitative techniques, and, therefore there will be differences in the external validity of the study in relation to the different research questions not only in relation to the whole study. Research questions #1 and #2 are situation specific and will have little external validity. The value of these questions lies in the fact that they will provide insights for the Design and Development phases of a product incorporating a semantic framework of linguistic nature. Research question #4 is also case specific and will contribute to the understanding of some transfer mechanisms related to language learning. Research

question #3 is, in principle, the most generalizable one since a true experiment will be utilized to collect information. It is always good to keep in mind that in this proposal we are considering quasi-ideal situations. If severe adversities occur, for example a catastrophic attrition, adaptations will have to be made and the external validity of the experimental part of this study may suffer. In addition, it is always good to keep in mind that some factors may affect the internal validity of this study:

1. History – Other events that may occur besides the experimental treatment.
2. Maturation – While the experimental treatment is in progress, physical or psychological changes in the research participants may occur.
3. Testing – Both the screening test and the immediate post-test will utilize the Oxford Practice Grammar Test. Students might show an improvement simply as an effect of their experience with the screening test. However, it is unlikely to occur due to the amount of time between the two tests.
4. Differential selection – In experimental designs in which a control group is used, the effect of the treatment sometimes is confounded with other factors because of differential selection of research participants for the experimental and control groups. A screening test will be used to minimize this problem.
5. Experimental mortality – Some research participants might be lost from the experimental or control group because they drop out of the study, miss posttesting, or are absent during some sessions. The sample size was increased in more than 50% of the required size to minimize this problem.

6. Experimental treatment diffusion – If the treatment condition is perceived as highly desirable relative to the control condition, members of the control group may seek access to the treatment condition.
7. Compensatory rivalry by the control group – This extraneous variable is sometimes called the John Henry effect. It involves a situation in which control group participants perform beyond their usual level because they perceive that they are in competition with the experimental group.
8. Resentful demoralization of the control group – A control group can become discouraged if it perceives that the experimental group is receiving a desirable treatment that is being withheld from it.

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Appendix 1: Exit Survey

Exit Survey Distance Learning/Online Courses

**Thank you for completing this exit survey.
We are very interested in your comments and are constantly trying to improve our courses.**

Name (optional): <input type="text" value="Anonymous"/>	
Course: <input type="text" value="Select a Course"/>	Instructor: <input type="text" value="Select an Instructor"/>
Start Date: <input type="text" value="mm/dd/yy"/>	Today's Date: <input type="text" value="04/10/02"/>

Question 1

Approximately, how many hours of "seat time" did it take you to complete this course?

- < 30 hours
- 30-40 hours
- 50-60 hours
- > 60 hours

Question 2

Over how many months did you work on this course?

- < 1 month
- 1 month
- 2 months
- 3 months
- 4 months
- > 4 months

Question 3

Did you do most of your work at home or at school?

- Home
- School
- Equal amount at home and at school

Question 4

How well were the objectives of this course accomplished?

- Excellent

- Very well
- Well
- Fair
- Poor

Question 5

Was the level of this course appropriate?

- too basic
- just right
- too advanced

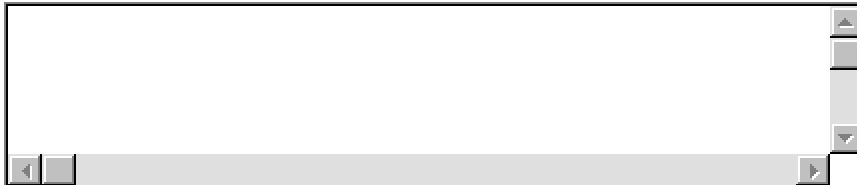
Question 6

Were the directions clear?

- Yes, always clear.
- Yes, usually clear.
- Sometimes not clear.
- No, usually unclear.
- No, not clear at all.

Question 7 (Optional)

If you felt lost in certain parts of the course, please let us know where, so that we can try to be more clear in the future.

**Question 8**

How long did it take to receive answers to questions that you sent to your instructor?

- Within a day
- 1-3 days
- 3 days
- More than 3 days
- Never got an answer to any of my questions.

Question 9

Did you feel that there was more or less interaction than during a face-to-face course (Interaction can be learner-to-learner, learner-to-instructor, or learner-to-content)?

- More
- Less
- About the same

Question 10

What did you like the most about this course?

Question 11

How could we improve this course?

Question 12

Would you take another online course?

- Yes
- No
- Maybe