

UNIVERSIDADE FEDERAL DE SANTA CATARINA  
PÓS-GRADUAÇÃO EM LETRAS/INGLÊS E LITERATURA CORRESPONDENTE

PAUSE DISTRIBUTION AND WORKING MEMORY CAPACITY  
IN L2 SPEECH PRODUCTION

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Dissertação submetida à Universidade Federal de Santa Catarina em cumprimento  
parcial dos requisitos para obtenção do grau de

MESTRE EM LETRAS

FLORIANÓPOLIS

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**To my mother, Marina,  
for being an example  
to be followed**

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## ABSTRACT

PAUSE DISTRIBUTION AND WORKING MEMORY CAPACITY  
IN L2 SPEECH PRODUCTION

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UNIVERSIDADE FEDERAL DE SANTA CATARINA  
2006

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Departing from a cognitive account of oral speech production, the present study aimed at (1) identifying the role silent pause distribution has in defining fluency, and (2) disentangling the relationship between working memory capacity (WMC) and second language (L2) fluency. Data was gathered at the Universidade Federal de Santa Catarina, from 12 Brazilians (native speakers of Brazilian Portuguese – BP – and L2 speakers of English) and 9 Americans (native speakers of American English – AE). All participants carried out picture description and narrative tasks, orally and spontaneously, in their first languages (L1s). The Brazilian participants also performed these oral tasks in their L2 (English) and a WMC test – the L2 Speaking Span Test (L2 SST). Participants' fluency was assessed through frequency of pauses *at* and *within* clause boundaries and mean length of run (MLR). The  $\alpha$  level was set at .05. The statistical analyses employed indicated that while the two first languages under scrutiny (AE and BP) did not differ regarding pause distribution or MLR, the L2 (English) speech of the Brazilians presented more pauses (especially *within* boundaries) and shorter MLRs than both their own L1 (BP) speech and the L1 (AE) speech of the Americans. Moreover, significant correlations were found between individuals' L2 SST scores and frequency of *within* boundary pauses and MLR. Concerning fluency, the results support the role MLR has in defining fluency and demonstrate the importance of frequency of pauses

*within* rather than *at* boundaries in distinguishing less and more fluent speakers. As regards the relation between L2 fluency and L2 WMC, it seems that due to being more controlled than L1, L2 oral speech is at least in part constrained by individuals' limited attentional resources, with larger-capacity speakers being better able to sustain L2 fluency (with fewer pauses *within* boundaries and longer speech runs) than those speakers with fewer resources.



## RESUMO

DISTRIBUIÇÃO DE PAUSAS E CAPACIDADE DE MEMÓRIA DE TRABALHO  
NA PRODUÇÃO ORAL EM L2

DONESCA CRISTINA PUNTEL XHAFAJ

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Partindo de uma perspectiva cognitiva para a produção oral, o presente estudo se propôs a (1) determinar o papel da distribuição de pausas silenciosas na definição de fluência e (2) esclarecer a relação entre capacidade de memória de trabalho (CMT) e fluência numa segunda língua (L2). Para tanto, 12 brasileiros (falantes nativos de Português Brasileiro – PB – e falantes de Inglês como L2) e 9 americanos (falantes nativos de Inglês Americano – IA) fizeram tarefas descritivas e narrativas, oralmente e espontaneamente, nas suas primeiras línguas (L1s). Os brasileiros também realizaram estas tarefas na sua L2 (inglês), além de um teste de processamento durante a produção oral – o Speaking Span Test (SST) – na L2. Fluência foi medida através da frequência de pausas *em* e *entre* demarcações sintáticas e da média do comprimento dos trechos de fala (MCT). O nível de significância foi estabelecido em .05. As análises empregadas indicaram que, enquanto as duas línguas (IA e PB) não apresentaram diferenças entre si em distribuição de pausas ou MCT, a fala na L2 (inglês) dos brasileiros apresentou mais pausas (especialmente *entre* demarcações) e um MCT mais curto do que o apresentaram na sua fala na L1 (PB) quanto na fala de nativos. Além disso, correlações significativas foram encontradas entre a pontuação dos indivíduos no SST na L2 e a frequência de pausas *entre* demarcações e a MCT. Com relação à fluência, os resultados salientam o papel da MCT e apontam para a importância da frequência de pausas *entre*, ao invés de

*em* demarcações, na distinção entre falantes mais e menos fluentes. No que tange a relação entre fluência na L2 e CMT na L2, parece que, devido a sua natureza mais controlada, a produção da fala na L2 é, pelo menos em parte, limitada pelos recursos atencionais do indivíduo, sendo que falantes com maior CMT conseguem ser mais fluentes.

## TABLE OF CONTENTS

	Page
CHAPTER I INTRODUCTION .....	1
1.1 Preliminaries .....	1
1.2 Information-processing .....	2
1.3 Fluency .....	3
1.4 Statement of Purpose.....	5
1.5 Significance of the Research.....	6
1.6 Organization of the Thesis .....	8
CHAPTER II REVIEW OF LITERATURE.....	9
2.1 Speech Production.....	9
2.1.1 Models of speech production .....	9
2.1.1.1 L1 – Levelt’s blueprint for the speaker (1989) .....	9
2.1.1.2 L2 – De Bot’s bilingual production model (1992).....	11
2.1.2 Pauses.....	13
2.1.2.1 Pause distribution and MLR.....	16
2.1.2.2 Crosslinguistic interference.....	21
2.2 Human Memory .....	25
2.2.1 The “modal model” .....	28
2.2.2 WM .....	29
2.2.3 WMC and speech production.....	32
CHAPTER III METHOD.....	40
3.1 Participants.....	42
3.1.1 The Brazilians .....	42
3.1.2 The Americans .....	43
3.2 Materials.....	44
3.2.1 Speech production tasks.....	44
3.2.2 L2 WMC task.....	46
3.2.3 Profile questionnaire .....	48
3.3 Procedures .....	49
3.3.1 The Brazilians .....	49

3.3.1.1 Speech production tasks.....	50
3.3.1.2 The L2 SST .....	51
3.3.2 The Americans .....	51
3.4 Data Transcription .....	53
3.5 Measures of Speech Production .....	56
3.6 Measures of L2 WMC .....	60
3.7 Data Analyses .....	62
CHAPTER IV RESULTS AND DISCUSSION .....	64
4.1 Descriptive Analyses.....	64
4.2 Means Comparisons .....	69
4.2.1 Brazilian Portuguese x American English .....	69
4.2.2. L1 x L2 speech .....	75
4.2.3 Nonnative x native speech .....	80
4.3 Pearson Correlations .....	89
4.4. Readdressing the Research Questions .....	96
CHAPTER V FINAL REMARKS .....	100
5.1 Conclusion .....	100
5.2 Limitations and Suggestions for Further Research.....	102
5.3 Methodological and Pedagogical Implications .....	106
REFERENCES.....	110
APPENDIXES.....	119

## LIST OF TABLES

	Page
Table 1 – Data Collection Procedures .....	53
Table 2 – Descriptive Statistics – Brazilians performing in BP .....	65
Table 3 – Descriptive Statistics – Brazilians performing in English .....	65
Table 4 – Descriptive Statistics – Americans performing in AE.....	65
Table 5 – Descriptive Statistics – Brazilians in the L2 SST .....	66
Table 6 – Means Comparisons between BP and AE .....	70
Table 7 – Scores and Ranking (BP and AE) – MLR description .....	71
Table 8 – Comparing Ranks (BP and AE) – MLR description .....	71
Table 9 – Means Comparisons between the L1 (BP) and the L2 (English) Performance of the Brazilians .....	76
Table 10 – Means Comparisons between the Performance of the Brazilians and that of the Americans, in English .....	81
Table 11 – Scores and Ranking (Nonnative and Native speakers of English) – MLR in the description and Pause Frequency <i>within</i> boundaries in the narrative .....	83
Table 12 – Comparing Ranks (Native and Nonnative speakers of English) – MLR description task .....	84
Table 13– Comparing Ranks (Nonnative and Native speakers of English) – Pause Frequency <i>within</i> boundaries in the narrative .....	85
Table 14 – Pearson Correlations – L2 SST and Speech Variables (whole group) .....	90
Table 15 – Pearson Correlations – L2 SST and Speech Variables (without outlier).....	91
Table M1 – Raw Scores – Brazilian participants – L2 SST and Description Task .....	134
Table M2 – Raw Scores – Brazilian participants – Narrative Task .....	134
Table M3 – Raw Scores – American participants .....	135
Table O1 – Pause Ratio - Group Statistics (BP x AE).....	167
Table O2 – Pause Ratio – Independent-samples Test (BP x AE).....	167
Table O3 – Pause Ratio - Group Statistics (L1 x L2).....	168
Table O4 – Pause Ratio – Paired-samples Test (L1 x L2) .....	168
Table O5 – Pause Ratio - Group Statistics (Nonnatives x Natives).....	168
Table O6 – Pause Ratio – Independent-samples Test (Nonnatives x Natives).....	169
Table Q1 – Frequency Table – L2 SST ( <i>strict</i> scores).....	179
Table Q2 – Frequency Table – L2 SST ( <i>lenient</i> scores).....	179

Table Q3 – Frequency Table – MLR English (Description).....	179
Table Q4 – Frequency Table – MLR BP (Description).....	180
Table Q5 – Frequency Table – MLR English (Narrative).....	180
Table Q6 – Frequency Table – MLR BP (Narrative).....	180
Table Q7 – Frequency Table – Pauses <i>at</i> boundaries English (Description).....	181
Table Q8 – Frequency Table – Pauses <i>within</i> boundaries English (Description).....	181
Table Q9 – Frequency Table – Pauses <i>at</i> boundaries BP (Description).....	182
Table Q10 – Frequency Table – Pauses <i>within</i> boundaries BP (Description).....	182
Table Q11 – Frequency Table – Pauses <i>at</i> boundaries English (Narrative).....	183
Table Q12 – Frequency Table – Pauses <i>within</i> boundaries English (Narrative).....	183
Table Q13 – Frequency Table – Pauses <i>at</i> boundaries BP (Narrative).....	183
Table Q14 – Frequency Table – Pauses <i>within</i> boundaries BP (Narrative).....	184
Table Q15 – Frequency Table – MLR AE (Description).....	184
Table Q16 – Frequency Table – MLR AE (Narrative).....	184
Table Q17 – Frequency Table – Pauses <i>at</i> boundaries AE (Description).....	185
Table Q18 – Frequency Table – Pauses <i>within</i> boundaries AE (Description).....	185
Table Q19 – Frequency Table – Pauses <i>at</i> boundaries AE (Narrative).....	185
Table Q20 – Frequency Table – Pauses <i>within</i> boundaries AE (Narrative).....	186

## LIST OF FIGURES

	Page
Figure 1 – Praat Sound Analysis .....	54
Figure C1 – The three-component model of working memory proposed by Baddeley and Hitch (1974) .....	122
Figure C2 – The current version of the multi-component working memory model ...	122

## LIST OF APPENDIXES

	Page
Appendix A - Levelt's Blueprint for the Speaker .....	120
Appendix B - Atkinson and Shiffrin's (1971) "modal model" .....	121
Appendix C - The working memory model .....	122
Appendix D - Profile Questionnaire – Brazilian Participants .....	123
Appendix E - Profile Questionnaire – American Participants .....	124
Appendix F - Picture used for the Picture Description task – woman .....	125
Appendix G - Picture used for the Picture Description task – man .....	126
Appendix H - Instructions for the Oral Tasks.....	127
Appendix I - Words used in the L2 Speaking Span Test .....	128
Appendix J - Instructions for the L2 Speaking Span Test .....	129
Appendix K - Consent form signed by the Brazilian participants .....	130
Appendix L - Consent form signed by the American participants .....	132
Appendix M - Raw data for the Brazilian and American participants .....	134
Appendix N - Transcriptions Oral Tasks.....	136
Appendix O - Statistics Pause Ratio.....	167
Appendix P - Transcriptions L2 Speaking Span Test .....	170
Appendix Q - Frequency Tables.....	179
Appendix R - Scatter plots – all group.....	187
Appendix S - Scatter plots – without outlier .....	188



# CHAPTER I

## INTRODUCTION

### 1.1 Preliminaries

In my short experience teaching a second language<sup>1</sup> (L2), I have often got puzzled by how learners differ in their level of achievement. Both in groups of children and of adults, I have been able to perceive that whereas for some of them learning and using an L2 is just a challenging task, for others there is no amount of hard work that enables them to perform at the same level as their peers. While adults often blame their tiredness and/or lack of time for their slow progress, when it comes to teenagers or children I have observed that there is a general consensus among school, parents, and many times the learner, that the problem can only be laziness from the part of the student, who is assumed not to be trying as hard as possible.

This biased, and many times, apparently unfair, attitude has made me observe, each semester more closely, how learners who apparently have a very similar profile develop at different paces. As time went by, I became fascinated by this conundrum and decided to pursue a Master's degree, in search for answers. It was at this time, when I was trying to decide on my line of investigation that I came across an article<sup>2</sup> that made me, for the first time, wonder if I was being fair when grading my students' oral performance. Until that moment I had always looked at interruptions in speech with unkind eyes and had never stopped to think that some phenomena I classified as

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<sup>1</sup> Following Ellis, (1994), unless otherwise stated, in the present study I will not make a distinction between the terms second and foreign language. Moreover, since the Brazilian participants of this research are speakers of English as a *foreign* language (i.e. they were learning English in Brazil rather than in an English speaking country) and the American participants are speakers of Brazilian Portuguese as a *second* language (i.e. they were learning Brazilian Portuguese in Brazil), adopting a single label will avoid confusion. In the same line, the terms learning and acquisition will also be used interchangeably.

<sup>2</sup> Riazantseva (2001).

disfluencies were actually integral parts of speech. By the time I started my M.A., I had two rather challenging questions guiding me: *What is it that distinguishes fluent from nonfluent speech?* and *Is this related to individual differences among people?* First, I tried to find the answers in the brain, but, in the end, turned to the mind. Little did I know when I embarked on the pursuit for the missing pieces of my puzzle that I was, like Alice in Wonderland, entering the rabbit's hole. Though I now comprehend that I might never find definite answers, at this point the riddle is too fascinating to be abandoned. The present study aims, thus, at scrutinizing how the distribution of silent pauses<sup>3</sup> in speech contributes to fluency in spontaneous<sup>4</sup> speech and whether limitations of a cognitive order might partially account for individuals' (in)ability to perform fluently in an L2.

## 1.2 Information-processing

Unveiling how different internal and external factors account for individual differences in the acquisition and use of an L2 is a goal that has been pursued for some time (e.g., Hoefnagel-Höhle, 1978; Carroll, 1965; Keefe, 1979; Gardner, 1980, 1985 all in Ellis, 1994). Among other internal factors, working memory capacity (WMC) has recently been found to be one of the variables that can partially account for individuals' performance in L2 speech production (e.g., D'Ely, Fontanini, Weissheimer, Bergsleithner, & Perucci, 2005; Fortkamp, 1999, 2005).

Since, according to information-processing theories, humans are capacity-limited and need to focus attention selectively (McLaughlin, 1987), succeeding in a task that involves the manipulation of information from different domains, such as communication, will depend in part on the information-processing ability of the

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<sup>3</sup> Only silent pauses of or longer than 0.1s were investigated (see section 3.4).

<sup>4</sup> Though all participants were given time to plan their speech before commencing the task, the term spontaneous was adopted so as to distinguish it from read speech.

individual (McLaughlin, Rossman, & McLeod, 1983). Individual differences in the amount of online processing and maintenance of information that can be handled by working memory (WM) at a given time will then constrain performance in demanding cognitive tasks such as L2 speech production. Schmidt (1992) advocated that in order for L2 speech to develop, controlled processes, which are slow, inefficient, effortful and limited by the capacity of short-term memory, must, with practice, be converted into automatic ones, which are fast, efficient, effortless and not limited by short-term memory capacity. Once a task is automatized, attentional resources are freed to be used in the performance of other concurrent tasks (Schmidt, 1992).

According to Lennon (2000), in most situations, and for most speakers, it is exactly these processing demands, rather than incomplete linguistic knowledge, that limit fluency. As Temple (1992) points out, while in the first language (L1) speakers are usually mostly concerned about the content and appropriateness of a message, when producing an L2, speakers also have to worry about the syntactic structure and the morphological forms needed to convey their message, all that without the benefit of having adequate devices (i.e. strategies) to deal with their difficulties.

### **1.3 Fluency**

A number of researchers (e.g., Johnson & Moore, 1997; Temple, 2000; Zellner, 1994) have observed the fact that though pauses<sup>5</sup> are part of speech, the only way they go unnoticed by the listener is if they are appropriately placed in a message. In fact, Butcher (1980 in Lennon, 2000) found that people's perception of pause duration is influenced by its location, with pauses at clause boundaries being more easily accepted. In a similar vein, Pawley and Syder (1983) claimed that listeners might even be tolerant

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<sup>5</sup> Unless otherwise stated, in the present study by "pauses" I mean silent pauses.

of mid-construction disfluencies in discourse that is unfamiliar to the speaker; however, this lenience goes only up to a point.

According to Lennon (1990), this kind of reaction from the listeners is justified since “fluency reflects the speaker’s ability to focus the listener’s attention on his or her message by presenting a finished product rather than inviting the listener to focus on the working of the production mechanisms” (p. 391). Indeed, it seems that listeners are not very tolerant when it comes to their interlocutors’ fluency. Fayer and Krasinski (1987), for example, found that the most distracting features in the speech of L2 speakers (to native speakers of the target language and to other L2 speakers) were pronunciation and hesitation, with grammar being much less important. Derwing, Rossiter, Munro, and Thomson (2004), in turn, found that fluency (or lack of it) affected comprehensibility more than accentedness. According to the authors, it might be that it is easier to attend to language that is not interspersed with hesitation devices, pauses and false starts. Unfortunately, as Riegenbach (1991) put it, while L1 fluency is never questioned, for L2 speakers this is a concept that has real consequences. Eisenstein (1983), based on the results from the studies of Kalin, Rayko, and Lowe (1979), Seligman, Tucker, and Lambert (1972), and Inman (1982), warned that a listener’s impression of an L2 speaker’s fluency may have an effect on job opportunities, teacher-student relations, and international business.

Then again, this desire for natural speech delivery is not present only in listeners. L2 speakers also dream of becoming native-like<sup>6</sup> in their performance (Lennon, 1990; Skehan, 1996) and hesitation is a criterion frequently found within rating scales of fluency (e.g., Cambridge exams, IELTS). Still, the chances are that this “native-like rapidity” (Lennon, 1990, p. 390) might never be achieved by a nonnative. As Levelt

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<sup>6</sup> I will abstain from going into what native-like fluency *is*, or if this should indeed be aimed at, since these are serious and troublesome issues that certainly deserve more than a cursory mention.

(1995) puts it, “the generation of speech from thought is not spontaneous (p. 14)”; thus, the simple occurrence of hesitations, pauses, and errors cannot distinguish between native and nonnative performance. I side with Lennon (1990) when he advocates that what effectively makes the difference between fluent and nonfluent speech is the frequency with which these phenomena occur, a claim that gains support from the results of the present research.

#### **1.4 Statement of Purpose**

This research aims at investigating the potential role silent pause distribution and mean length of run (MLR) have in discriminating more fluent from less fluent speakers. Moreover, this study will also inspect how individual differences in L2 WMC can partially account for the observed pausing patterns in the L2 (English) speech production of 12 adult Brazilian Portuguese native speakers.

Although research has proved that the speech of native speakers is not free from hesitation phenomena (e.g., Henderson, Goldman-Eisler, & Skarbek, 1966 in Goldman-Eisler, 1968; Lennon, 1990; Luoma, 2004), nonnative speakers tend to produce “disfluent-sounding” pauses, within sentences and clauses (Riggenbach, 1991, p. 427). The presence of such pauses makes the speech sound choppy, with shorter runs, possibly giving the impression of lack of fluency on the part of the speaker.

Since the present endeavor departs from psycholinguistics, and more specifically from an information-processing perspective, speech production, be it L1 or L2, is conceived as a complex skill and the speaker as a “highly complex information processor” (Levelt, 1989, p. 1). The contention is that, in an L2, speech generation is extremely attention demanding since most of its subprocesses are controlled. By allocating much of their resources to lower-level processes, L2 learners end up placing a

greater load on WM (Harrington, 1992), and, as a result, limitations in attentional resources (i.e., L2 WMC) are expected to have a certain impact on an individual's ability to perform a monological oral task in an L2.

#### **1.4 Significance of the Research**

Fluency often is the ultimate goal pursued by people who engage in the arduous, but not always rewarding, task of trying to learn a second language (Kormos & Dénes, 2004). However, as Freed (1995) denounced, “just what is meant by the term ‘fluent’ is rarely, if ever, discussed” (p. 123). Though oral fluency is not solely composed of temporal variables, there might be certain key measures that allow us to pinpoint the differences in fluency among individuals or to illustrate how fluency develops (Lennon, 1990). According to Skehan and Foster (2001), pauses seem to be one of these measures. Still, as it will become clear in the subsection (2.1.2) that reviews the literature on pauses, exactly how these temporary halts contribute to or hinder fluency is, at the present moment, still unknown. In this realm, Chambers (1997) and Hieke, Kowal, and O’Connell (1983) advocate that besides analyzing frequency and duration of pauses, there is also the need to investigate their location, for this aspect might be crucial in helping us define which pauses are indeed psychologically determined.

Chambers (1997), Freed (1995), Riggenbach (1991), Schmidt (1992), and Wennerstrom (2000) all agree that there is an urgent need to find quantitative variables that permit us to define fluent speech more efficiently and accurately than as “smooth” or “effortless” performance. Having such parameters would contribute not only to a better understanding of a construct that “is prone to vagueness and multiple interpretations” (Chambers, 1997, p. 538), but would also help develop standardized techniques for fluency assessment (Lennon, 1990) and identify learners’ difficulties, so

that remedial work can be done (Dörnyei & Kormos, 1998; Lennon, 1990). Moreover, Lennon (1990) and Ellis (2005 in Skehan and Foster, 2005) call for more investigations contrasting learner and native speech so that there can be a baseline to be aimed at. Finally, Chambers (1997) and Ejzenberg (2000) declare there is a need for more contrastive studies of languages so that, if there are fluency features that are language specific, learners can be appropriately instructed.

Strengthening the correlation between WMC and oral performance, in turn, besides contributing to the theoretical discussion surrounding this system, might help us weaken the belief that many learners who have difficulties are lazy, unmotivated, or unwilling. Perhaps acknowledging the cognitive constraints encountered by learners will lead us to engage in discovering ways to help them overcome their limitations. Still, even though the research approaching language acquisition from a cognitive approach is vast, and studies correlating differences in WMC to performance in *reading* in *L1* have been conducted for some time and are well documented in the literature (e.g., Daneman & Carpenter, 1980, 1983; Engle, Cantor, & Carullo, 1992; Friedman & Miyake, 2004), research on individual differences in WMC is still scarce in L2 and more so in L2 *speech production*.

As Akmajian, Demers, Farmer, and Harnish (1995) noted, unlike speech comprehension research, in speech production there is no way to peek into subjects thoughts to observe the mental processes that are taking place. Accordingly, researchers in speech production must rely on phenomena such as hesitations, speech errors and language disorders to make inferences. Notwithstanding, Chafe (1985) admonishes that investigations of hesitation phenomena or pausology contribute as cues to the nature of the processes of language generation only if they are studied as natural consequences of these processes. Thus, combining the study of fluency and L2 WMC can equally shed

some light on pedagogical issues related to the teaching and testing of L2 speech production as well as contribute to the field of psycholinguistics and the discussion around such complex constructs as the ones under scrutiny.

## **1.6 Organization of the Thesis**

Besides this introductory chapter, the pres



## **CHAPTER II**

### **REVIEW OF THE LITERATURE**

The review of the literature on speech production will be organized as follows: first I will review Levelt's (1989) model for L1 speech production. Then, I will review the L2 speech production model proposed by de Bot (1992), which is an adaptation of Levelt's. In the following subsection (2.1.2), the issue of silent pauses in speech will be more directly addressed, and a comprehensive review of empirical studies conducted as attempts to identify the role of pauses and MLR in contributing to oral speech fluency will be provided. The section on speech production (2.1) will be followed by a review of the literature on human memory (2.2). Following a brief historical account of the research on human memory, subsections devoted to Atkinson and Shiffrin's (1968, 1971) model (2.2.1), to WM (2.2.2), and to a review of empirical studies where WMC has been related to speech production (2.2.3) will be found.

### **2.1 Speech Production**

#### **2.1.1 Models of speech production**

##### **2.1.1.1 L1 – Levelt's blueprint for the speaker (1989)**

Though Levelt's blueprint for the speaker is not the only model of L1 speech production<sup>1</sup>, the fact that its concepts and processes are ubiquitously cited in L1 and L2 speech production literature lends great power to it.

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<sup>1</sup> Another influential model was propounded by Dell (1986).

Levelt's (1989) proposed model is comprised of four components (see Appendix A) – the Conceptualizer, the Formulator, the Articulator, and the Speech Comprehension System. According to Levelt, our intention to speak is born in the Conceptualizer, the component responsible for the *macro-* and the *microplanning* of an utterance. This component draws on one's declarative knowledge of the world, the context, and the situation to build the plans for content and adequate form of a message, respectively. The end product of the Conceptualizer, the preverbal message, is what triggers the processes of the next component, the Formulator, responsible for transforming this information, at this point still conceptual, into linguistic. In order for that to happen, the first subprocess to take place is *grammatical encoding*, which consists of lemma<sup>2</sup> retrieval, from the mental lexicon, and of syntactic building procedures. The result of the lemma activation and syntactic building is a surface structure (strings of lemmas ordered and grouped in phrases and subphrases), which is temporarily deposited in a Syntactic Buffer. The next step is accomplished by the Phonological Encoder, a subcomponent of the Formulator, which retrieves or, if necessary, builds a phonetic or articulatory plan for each lemma and for the utterance as a whole, creating an internal representation of the articulation of the planned utterance, that is, a program for *articulation*. The final component involved in the production of speech, the Articulator, uses this phonetic plan as input and transforms it into overt speech. However, since it is unlikely that the Articulator produces speech at the same speed as *phonological encoding* occurs, the phonetic plan can also be temporarily stored, in an Articulatory Buffer.

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<sup>2</sup> Lemmas are units that contain the meaning and the syntax of a lexical item (Levelt, 1989).

Since speech production is only one side of the coin, besides *conceptualization*, *formulation*, and *articulation* of speech, *self-monitoring*, through the Speech-Comprehension System, also takes place.

Though all these operations seem (and I dare say are) complex, speech is generated apparently effortlessly, on a daily basis, by most people. That, Levelt (1989) claimed, is only possible thanks to processing happening incrementally (Kempen & Hoenkamp, 1982, 1987 in Levelt, 1989) rather than serially; that is, the system components work in parallel on different stages of speech production. This parallel processing, in turn, is only possible thanks to the automaticity of the Formulator and the Articulator (in L1), since the *conceptualizing* and *monitoring* processes are constantly under control and thus depend on the limited resources available to an individual, i.e., WM (Levelt, 1989).

I will now briefly describe one of the current models of L2 speech production that depart from Levelt's proposal.<sup>3</sup>

#### **2.1.1.2 L2 – De Bot's bilingual production model (1992)**

De Bot (1992) defends that speaking is not fundamentally different for bilinguals and monolinguals, and thus, in his adaptation of Levelt's (1989) model, he made only the changes he found to be necessary to explain empirical findings.

According to de Bot (1992), the knowledge component of the model (i.e., the declarative knowledge that informs the Conceptualizer) is not language-specific, and neither is the content plan of a message (result of *macroplanning*). Nevertheless, it is at this point of the message generation plan that the choice of language is made, based on the information provided by the knowledge component. *Microplanning* (the planning of the form of the message), consequently, is already language-specific. According to this

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<sup>3</sup> Another model that is based on Levelt's is Bierwisch and Schreuder's (1992).

model, bilinguals rely on a single lexicon that, though possibly large, is organized in subsets, so that word selection takes place quickly and accurately.<sup>4</sup> As for the processes occurring in the Formulator, de Bot predicts that probably the procedural knowledge needed for *grammatical encoding* of different languages will also have to be different, so different Formulators would be needed for each language. Moreover, since bilingual speakers are able to code-switch quickly and without deviating from syntactic norms, each Formulator must have the plan for the utterance ready in case the switch occurs. In other words, if a person speaks three languages, though only one will be overtly produced at a time, three plans must be made concurrently in the specific Formulators.

As regards *phonological encoding*, it is contended that, at least for the more advanced bilinguals, a single set of syllables subserves the different languages. De Bot follows Levelt (1989) and assumes a “model-referenced model” for *articulation*. According to this model, the only way for speech to be accurately produced by a bilingual speaker is if models for all syllables in the different languages are available. Finally, if, according to de Bot, each language has one Formulator, it would be natural to assume a separate Speech-Comprehension System for each language as well.

Though de Bot has proposed a plausible account of how L2 speech production might occur, his model is not without its limitations.<sup>5</sup> Nevertheless, for the purposes of the present research this model is the one I will be referring to, along with Levelt’s (1989), to predict and explain my results.

The next subsection brings the main subject of this investigation into focus. After a brief introduction to general issues surrounding the use of silent pauses in speech, I will review a series of studies that have investigated how the length of speech runs and

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<sup>4</sup> The subset hypothesis, adopted by de Bot, was originally proposed by Paradis (1987 in de Bot, 1992, p. 7).

<sup>5</sup> See Poulisse and Bongaerts (1994) for an insightful critique of de Bot’s proposal.

the distribution silent pauses differ between L1/native and L2/nonnative speech. A review of studies that investigated pausing patterns in different languages will follow.

### 2.1.2 Pauses

The study of pauses in monolingual contexts started in the 1950s, led mainly by Frieda Goldman-Eisler, who, without ever using the term, is considered to be the pioneer of pausology (Griffiths, 1991a).<sup>6</sup> In her 1968 book, Goldman-Eisler made the interesting observation that though speech is produced through organs that serve vital biological needs such as eating and breathing, such activity is, at the same time, not possible without the most complex organs of the nervous system. Regarding silent pauses, Goldman-Eisler lists three possible factors that can account for their occurrence: first, halts can happen during articulatory shifts (which, according to her, occur in less than 0.25s); second, they can be true moments of hesitation; and third, speech can be suspended for breathing purposes. What is specifically relevant for the current study is that Goldman-Eisler (1968), when reporting a study conducted by herself, in 1954, on the L1 speech of 4 subjects in conversations, found that the main reason for pauses in the participants' speech was hesitation rather than a biological need. Moreover, when looking at data produced in spontaneous L1 speech, by 5 subjects, collected by her for a 1955 study, she also noted that breathing did not choose non-grammatical places to occur independently of hesitation. The decisive factor in breaking up the linguistic grouping at non-grammatical places was hesitation.

Levelt (1989) reasoned that, if the language processors of his model did not work in parallel, "speaking would be more like playing chess: an overt movement now and then, but mostly silent processing" (p. 27). Though this is not what we generally

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<sup>6</sup>According to O'Connell and Kowal (1980 in Griffiths, 1991a), pausology can be defined as "the behavioral investigation of temporal dimensions of... speech" (1980, p.8 in Griffiths, 1991a, p. 345).

observe in L1 speech, Schmidt (1992) claims that, for the beginning L2 speaker, indeed it may be that speaking requires as much thought and effort as a movement in a game of chess, that is, much thinking goes on but very little is observable. Perhaps a little more explicitly, a number of scholars have linked these moments of “thinking” (i.e., of cognitive activity) to the occurrence of pauses in speech.

Indeed, as can be seen by observing the models of speech production, the feat of producing oral language spontaneously is anything but an easy task. Bygate (2001), Chafe (1985), Dechert (1984), Goldman-Eisler (1968), Lennon (1984), and Temple (1992) all draw attention to the inevitable presence of pauses and hesitations in speech due to the burden of online speech production. As Temple (1992) put it, though when we listen to speech we do not notice any “struggle” on the part of the speaker, if we see a transcription of the same text, it will be possible to notice that all kinds of disfluencies permeate even the most (apparently) fluent utterance. Not only pauses and hesitations are fundamental for organizing speech (Chafe, 1985; Dechert, 1984; Griffiths, 1990) but, since speaking is translating thought into speech (Chafe, 1985), it is only normal to expect that adjustments and readjustments will be part of this (hopefully accurate) translation. Hesitation phenomena are then nothing but evidence for the fact that speaking is very different from “regurgitating material already stored in the mind in linguistic form” (Chafe, 1985, p. 78). Perhaps a little less metaphorically, Bygate (2001) claims that pauses and corrections happen to slow down speech production, creating planning time, since the time pressure of producing speech on-line usually means that the processes of *conceptualization*, *formulation* and *articulation* are not properly planned, or implemented.

In fact, several analyses of native speaker talk have revealed that unless the speech is deliberately planned, hesitations, errors, and reformulations will abound

(Ferreira, 2000; Henderson et al., 1966 in Goldman-Eisler, 1968; Lennon, 1990; Raupach, 1983 in Lennon, 1990; Luoma, 2004; Temple, 2000). Nevertheless, as Riggensbach (1991) wisely points out, the fluency of L1 speech is rarely, if ever, questioned. In learner language, however, disfluencies are more evident, and do contribute to a real lack of fluency (Temple, 1992). Sajavaara (1987) advocates that the difference is that “the ‘good’ speaker ‘knows’ how to hesitate, how to be silent” (p. 62). According to her, in any community there is an expectation of what speech must be like to be considered “normal”. Accordingly, there will be situations where disfluent speech is acceptable due to a number of reasons such as the delicacy of the subject, situation, and/or role relations (Lennon, 2000).

Pawley and Syder (1983) were more specific than Sajavaara and revealed how an apparently pause-free speech can be achieved. They point out that pausing or slowing down at or near clause boundaries in lengthy connected discourse is normal even among speakers who are heard as very fluent. What happens is that these speakers rarely pause in the middle of clauses. Though pausing patterns are known not to be determined solely by the syntactic structure of an utterance (Gee & Grosjean, 1983; Levelt, 1989; Selkirk, 1984 all in Bock & Levelt, 1994), they do appear to be influenced by syntax (Chafe, 1985; Duez, 1982; Hawkins, 1971 in Duez, 1982; Grosjean & Deschamps, 1975 in Duez, 1982; Cooper & Paccia-Cooper, 1980 in Ferreira & Anes, 1994; Goldman-Eisler, 1968; Holmes, 1984; Pawley & Syder, 1983; Temple, 2000; and Zellner-Bechel, 1992 in Zellner, 1994).

Fulcher (1996) observed that the L2 learners’ reason for pausing seems to change over time. While beginners pause to allow time for word search, more advanced students hesitate only when they want to convey a complex idea, so though they may produce the same number of pauses, the reasons differ and, therefore, a different

impression is also created on the listener. A number of studies have been conducted to assess, empirically, how (and if) the distribution of silent pauses change over time and how this (and a number of other variables) help operationalize fluency. Among other findings, research has shown that, as an individual's proficiency increases, one tends to pause more at boundaries, following the native norm (Freed, 1995), and to have an increase in MLR (e.g., Freed, 1995; Lennon, 1984, 1990; Möhle, 1989; Möhle & Raupach, 1983 in Raupach, 1984; Raupach, 1984; Segalowitz & Freed, 2004; Towell, Hawkins, & Bazergui, 1996).

### **2.1.2.1 Pause distribution and MLR**

According to Raupach (1984), the results obtained in the crosslinguistic investigations conducted by the Kassel group made it possible to advocate that the number of words or syllables a subject produced in a "chunk" was one of the most reliable variables in the description of systematic differences between native and nonnative productions. What was observed was that generally learners tended to interrupt the flow of speech more often than native speakers, segmenting their utterances in relatively short strings of words uttered between two pauses.

Möhle (1989) obtained the same results in a small scale study where she gathered the L2 speech produced by 3 French native speakers (L2 speakers of German) and 6 German native speakers (L2 speakers of French) in a picture description task and answering two questions, before and after spending a semester in the target-language country. Besides investigating developmental changes, Möhle also compared the participants' L2 production to their L1 speech. In this analysis, the author found that for both languages, the L2 speech (syllables/min) and articulation (syllables/second, excluding pause time) rates were lower than the L1 rates and that the length of speech units in the L2 was shorter than in the L1. In a somewhat similar investigation, Towell



et al. (1996) collected the speech produced by 12 undergraduate British advanced learners of French, retelling a movie, before and after their stay in a French speaking

grammatical locations and less at grammatical locations than in the L1. A similar result was obtained by Lennon (1984), who compared the native speech produced by an English speaker (himself) with the speech of 12 nonnative English speakers (native speakers of German) and noticed some interesting differences between the idealized<sup>7</sup> speech and that of the nonnatives, retelling a story. While in the native speech there were no pauses within the integral elements of clauses, between 17 and 85% of pause time (the mean being 39%) occurred within the integral elements of clauses in the nonnative speech. Conversely, the percentage of pause time at clause and statement boundaries in the speech of the nonnative speakers was much lower than that in the model.

Temple (1992) contrasted 20 excerpts of speech produced by native French speakers with 22 excerpts produced by nonnative speakers, in interviews. Through an analysis of this data, Temple not only found significant differences in speech rate (syllables/second) between the two groups, with the nonnative speakers having a slower rate, but she also noticed that the low speech rate of the nonnative speech was a direct consequence of the amount of filled and unfilled pauses produced by them. In a more recent study, Temple (2000) again made use of interview excerpts (from 20 native and 30 nonnative speakers of French) to compare how these two kinds of speech, native and nonnative, differed. This time around, the author found that though there were significant differences between the groups in all variables investigated (silence ratio – percentage of total speaking time spent in pauses; pause rate – pauses/100 syllables; repair rate – including false starts and incomplete words; and error rate – any deviant form, including slips of the tongue), the two variables that discriminated these groups

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<sup>7</sup> It is important to point out that the speech produced by the native speaker in this study cannot be taken to be the best representation of native speaker fluency since the “model speech” was read, harmonizing the narrative, syntactic and temporal units. Nevertheless, Lennon speculates that native speakers would probably present a segmentation of speech quite similar to the model.

best were pause and error rate. Moreover, when contrasting the speech of one native and one nonnative participant, Temple (2000) observed that the native speaker's production was comprised mainly of syntactic units, while the nonnative speaker's was "produced step by step with pauses in between each phrase" (p. 290). According to the author, this slow and careful production, from the part of the nonnative speaker, serves as indication that for this subject the processes of speech production are still not automatized and thus are constantly under attentional control.

Riazantseva (2001), on which the present investigation draws heavily, examined the relationship between L2 proficiency and pausing patterns in the speech of 30 native Russian speakers (subdivided in high- and intermediate-proficiency levels of English as L2) performing a narrative and a description task in their L1 and in the L2. The speech produced by these two groups was also compared to that of 20 native speakers of English. One of her findings was that the high-proficiency speakers, when performing in English, had the ability to adjust the length of their pauses to conform to the native norm (that is, their pauses were shorter in the L2 than in the L1).<sup>8</sup> As for pause frequency, though the high-proficiency group made more pauses in English than in Russian, at least in the narrative task, their pauses were as frequent as the native speaker's. The intermediate-proficiency subjects, however, had longer pauses than both the native English speakers and the high-proficiency Russians, when performing in the L2 (English). As regards pause frequency, not only did the intermediate-proficiency subjects pause more frequently in the L2 than in the L1, but also they paused more frequently than the native speakers did. Regarding distribution of pauses, although all Russian subjects made more within-constituent pauses in the L2 (English) than in the L1 (Russian), the amount of within-constituent pauses in their L2 performance

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<sup>8</sup> See the following subsection (2.1.2.2) for the results of the comparison between the pausing patterns found in Russian (as L1) and those found in English (as L1).

conformed to the native-like norm. As this result was counterintuitive taking previous studies into consideration, a possible reason for this finding, brought forward by Riazantseva, was the high level of L2 proficiency of the Russian participants, since they had been living in the United States for at least 3 months previous to the experiment.<sup>9</sup> Overall, Riazantseva judged her findings as supportive of the view that following language pausing norms may lead to the perception of nonnative speech as more fluent and native-like. She speculates that one of the reasons why her Advanced level students were given this status might be their conformity to the target language pausing pattern.

On a different vein, Skehan and Foster (2005) conducted a study where one of the goals was to identify variables that could help in the operationalization of the construct “on-line planning”. Interestingly, in this quest, the authors found that filled pauses, mid-clause silent pauses, reformulations, false starts, and MLR all loaded together (being that MLR, understandably, loaded negatively) and took these to be the variables that allow us to infer that on-line planning is taking place. Another appealing finding was that MLR also loaded with the measure used for syntactic complexity (subordinate clauses/AS unit<sup>10</sup>). According to Skehan and Foster, it appears that once a proposition that had some subordination involved was identified; it was often produced as a whole. Also relevant for the present study was the finding that the 61 L2 (English) learners participating in the study produced more mid-clause than end-of-clause silent pauses, suggesting, according to the authors, that breakdown in the performance of nonnative speakers manifests itself at points other than clause boundaries. Indeed, previous investigations implied that in the case of native speech, the majority of pauses do fall at boundaries. Goldman-Eisler (1968), for example, when analyzing the L1 speech of five

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<sup>9</sup> See section 3.5 in the following chapter for a possible alternative explanation for such finding.

<sup>10</sup> An utterance consisting of an independent clause, or sub-clausal unit, together with any subordinate clause(s) associated with either (Foster, Tonkyn, & Wigglesworth, 2000).

subjects<sup>11</sup>, in interviews, found that in fluent stretches of speech, more than 60% of all pauses happened *at* grammatical boundaries.

Still, despite all the studies reviewed explaining differential pausing patterns between L2/nonnative and L1/native speech drawing on the cognitive constraints imposed by the generation of L2 speech, it is expected that other factors might also prevent the L2 speaker from conforming to the L1 pausing patterns. The next subsection is devoted to one alternative explanation for the findings reported, namely, the possibility that different languages segment speech in different ways and that speakers transfer pausing patterns from their L1 to the L2.

#### **2.1.2.2 Crosslinguistic interference**

Though the present research aims at studying pause distribution under a cognitive perspective, not all hesitations can be taken as “the behavioral concomitant of cognitive activity”, as Goldman-Eisler (1968, p. 85) suggested. It might indeed be that a great percentage of mid-clause pauses in L2 speech denote a speaker’s struggle (to use Temple’s term) with such demanding task. Conversely, it is also possible that this expected syntactic distribution of pauses holds for some languages but not for all and what happens is that the less proficient speaker is simply transferring the L1 profile to the L2.

As Bygate (1998) and Riazantseva (2001) point out, languages differ in their patterns. According to Bygate (1998), there are a number of reasons why it is likely that pause distribution in L2 speech will yield different pause distribution from that present in L1 speech. First, L2 speech, differently from L1, requires attention in the grammatical and phonological encoding phases and, therefore, its processes take place serially rather than incrementally, making the L2 speech slower and more hesitant than

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<sup>11</sup> Data collected by Henderson, Goldman-Eisler, and Skarbek (1965 in Goldman-Eisler, 1968).

the L1. Second, L2 speakers' knowledge of the target language is rarely complete. Finally, L2 verbalization is often influenced by the L1. In a similar vein, Raupach (1984) observes that, in the L1, an individual's pausing pattern is determined by his/her personal style, the speech situation, and the structure of the language. In L2 productions, however, he predicts that the way the learner performs in and the structure of the L1 will also impact his/her L2 pausing pattern.

The issue of whether pausing patterns are universal or language specific is still unresolved in the literature, with studies comparing different languages presenting somewhat mixed results. Allwood, Nivre, and Ahlsén (1990) pointed out that although pauses are probably universal features of speech management, it is expected that the speech rate and the speech rhythm of different languages will affect their distribution. While Kowal, Wiese and O'Connell (1983 in Riazantseva, 2001), when comparing five languages (English, Finnish, French, German, and Spanish) during storytelling and interviews, found only evidence for an effect of task type on pausing patterns<sup>12</sup>, a number of investigations have found different languages to present slightly different pausing patterns.

Stuckenberg and O'Connell (1988), for example, when contrasting their findings with those of Chiappetta, Monti, and O'Connell (1987 in Stuckenberg & O'Connell, 1988) found that while German and English were very similar spoken languages, both were notably different from Italian, which presented shorter pauses and a faster articulation rate. Interestingly, while Stuckenberg and O'Connell found that the English language had longer pauses than the Italian, Grosjean and Deschamps (1975 in Chambers, 1997) found that pauses were *shorter* in English than in French (though they were more frequent). As regards the distribution of pauses, Grosjean and Deschamps

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<sup>12</sup> In all five languages, pauses were longer in the storytelling task than in the interviews.

found that pauses inside the verb phrase were more common in English than in French, suggesting that pause distribution might indeed be a language specific parameter. Also comparing the L1 production of French and English speakers, Holmes (1995) obtained different results, with the French speech having as many silent pauses as the English. In contrast, the French produced many more vocalized hesitations than did the English speakers. Also investigating pause frequency in different languages, Johnson, O'Connell, and Sabin (1989 in Riazantseva, 2001) found that their Spanish subjects made more silent and vocal hesitations than the Americans. Möhle (1989), in the same study where she found differences in MLR between L1 and L2 speech productions, also contrasted the L1 speech of her 3 French and 6 German speakers. In this comparison she found that the French tended to make longer pauses than the Germans, and more frequently, causing their speech rate to be slower and comprised of shorter speech units.

Finally, in Riazantseva's (2001) study, the results contrasting the L1 speech of the Russian speakers and that of the English speakers were mixed. She proposed that these two languages, when being performed monologically, be characterized as having somewhat different pause conventions since though there were no significant differences between the two languages regarding pause frequency and distribution, pauses in Russian were longer than in English, corroborating Grosjean and Deschamps' (1975 in Riazantseva, 2001) finding (amongst others reviewed above) that languages might be characterized by different pause-duration patterns.

Grosjean (2001 in Treffers-Daller & Mougeon, 2005) claimed that there is considerable evidence that the two languages of a bilingual interfere with each other even in the most monolingual situation. More specifically, the idea that L2 pausing patterns might be influenced by L1 patterns is advocated by Chambers (1997), Raupach (1980 in Chambers, 1997), Freed (1995), Möhle and Raupach (1989), Sajavaara (1987)

and Tedlock (1983). In fact, such an effect was found by Loveday (1982), who observed that the relation of the Japanese with silence is different from that of the English so that, when performing in English, Japanese speakers often do not realize how much distress is caused by their long silences. Similarly, Ejzenberg (2000) suggested that fluency, or at least some of its elements, may be culture specific. In a study conducted with 46 Brazilian subjects, performing monological tasks in English, she noticed that they tended to use repetition of ideas<sup>13</sup>, an accepted norm of speech in the Brazilian community, to help maintain an “air of fluency” (p. 288). This culture specific feature, however, might be considered pointless and even annoying to a North American.

As Fulcher (1996) put it, the real question that remains is: why *is* the speech of native and nonnative speakers permeated by hesitation? Though as O’Connell and Kowal (1983 in Smyth, Collins, Morris, & Levy, 1994) point out, it is likely that the frequency and pattern of pauses are multiply-determined; it is interesting to conduct research so as to attempt to identify which are the possible, and maybe the more probable, determiners of these patterns. In the present study, besides ruling out any possible crosslinguistic interferences, I shall search the potential role L2 WMC has in limiting individuals’ L2 speech performance and thus contributing to differential pausing patterns.

In the next session, I will provide an overview of human memory, and more specifically, WM. Along with a historical perspective of WMC and of the Speaking Span Test (SST), some studies that have related this construct to L1 and L2 speech production will be reviewed.

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<sup>13</sup> The example, provided by the author, is of one participant who kept insisting that his interlocutor “must meet the then-president Fernando Collor de Mello” (Ejzenberg, 2000, p.303).



## 2.2 Human Memory

As humans, we cannot escape our memories. The experiences we have been through, the knowledge we have acquired, shape our existence and influence our future (Gregg, 1986). Aristotle was perhaps the first to propose a theory of memory, in 384 B.C. (Hothersall, 1984 in Ashcraft, 1994) and, since then, philosophers of every age have brought forward their insights on the nature of thought and memory (Ashcraft, 1994). It was Hermann Ebbinghaus, in a study which took place in the years 1879 and 1880, who initiated the experimental investigation of human memory. The results of this investigation were published in 1885, in a monograph entitled “Memory” (Gregg, 1986; Ashcraft, 1994).

One possible approach towards the understanding of memory is cognitive psychology and the three assumptions that inform this field are (1) that mental processes exist, (2) that people are active information processors, and (3) that mental processes and structures can be revealed by time and accuracy measures (Ashcraft, 1994). In cognitive psychology it is believed that, by observing patterns of behavior, together with private subjective experiences, it will be possible to infer the “mental” events causing such behavior (Gregg, 1986). Since mental events take time, one way to infer the workings of the mind is by observing how long a given mental process takes to be completed (Ashcraft, 1994).

Baddeley (1990) warns that the use of a single term might suggest that memory is a unitary system, a view that has long been disputed. Despite Waugh and Norman (1965 in Gregg, 1986) having coined the terms Primary and Secondary memory, William James, in 1890, was the first to use them (Gregg, 1986) to define, respectively, the memory immediately available, the one we are aware of, and a larger one, usually hidden or passive, which holds past experiences. As Ashcraft (1994) notes, what is

interesting is that much later, in the 1950s and 1960s, when the first serious models of information-processing were brought forward, these same two kinds of memory were included.

More recently, Baddeley (1990) claimed that there is strong empirical evidence against a unitary view of memory. The first source of evidence comes from experiments of free recall, where a list of unrelated words is presented to an individual, who is asked to recall as many words as possible, in any order. Postman and Phillips (1965 in Baddeley, 1990) and Glanzer and Cunitz (1966 in Baddeley, 1990) showed that when recall is immediate, the last few items presented tend to be remembered – a phenomenon termed *recency effect*. Since this effect disappears after a short delay, it was suggested that the recent items are, at the moment of recall, still temporarily kept in some fragile short-term store while the earlier items are being retrieved from long-term memory (LTM).

A second argument brought by Baddeley (1990) is that while short-term memory (STM) has a limited storage capacity, though with relatively fast input and retrieval, the LTM has an enormous capacity for information storage, though it tends to be slower to register this information and to retrieve it. Other evidence for the separate stores is related to the code with which information is retained in each. Evidence for that comes from experiments such as Conrad's (1964 in Baddeley, 1990), where he found that the patterns of errors made when subjects had to remember sequences of consonants presented visually was the same as the patterns of errors found when the consonants were presented aurally, against background noise. This finding served as basis for Conrad to argue that immediate memory of consonants was stored in some kind of speech-based code (even when presented visually). Baddeley (1966b in Baddeley, 1990), on the other hand, presented his participants with a long-term learning memory

task in which he asked his participants to recall, after a filled delay, sequences of ten words presented to them. Under these circumstances the phonological similarity of items no longer interfered with recall; what helped (and hindered) learning this time was similarity in meaning.

Still, according to Baddeley (1990), perhaps the strongest evidence in favor of a distinction between STM and LTM came from studies with brain damaged patients. One specific case, described by Milner (1966 in Baddeley, 1990), was that of H.M., an epileptic patient who had his capacity to remember dramatically affected after he had substantial tissue from the temporal lobes and from the hippocampus surgically removed. Nonetheless, whereas H.M. was incapable of learning new material, his immediate memory span was completely normal, suggesting the combination of an impaired LTM with a spared STM. Shallice and Warrington (1970 in Baddeley, 1990) found that the converse condition could also occur. The presence of two such contrasting deficits denotes what is usually termed double dissociation and it offers particularly robust evidence for the existence of two separate systems.

Yet, in spite of all the evidence presented for separate STM and LTM, this division has received critiques. Searleman and Herrmann (1994) point out that much of the empirical evidence supporting this distinction “has eroded” (p. 74). Neither the coding of information, the method of information retrieval, the causes for forgetting, the recency effect, nor data obtained from patients with memory disorders provide undisputable evidence for separate STM and LTM. Nevertheless, one of the first and most cited models of human memory was constructed under the assumption of separate stores, which were not much different from James’s (1890) proposal of Primary and Secondary memories. This model is briefly reviewed in the next subsection.

### 2.2.1 The “modal model” (see Appendix B)

Thomas Reid (1719-96 in Gregg, 1986) defended the idea that it is natural to portray the way the mind works through images taken from things material. The clustering of similar memories, for example, has already been compared to the flocking of birds of the same species; and with the advent of computers, in the 1950s, some psychologists likened their behavior to that of the human mind (Baddeley, 1990). One of the first models of human memory to receive acceptance, the “modal model”, proposed by Atkinson and Shiffrin (1968, 1971), has its roots in the analogy proposed by Newell and Simon, between information-processing in the computer and information-processing in humans (Ashcraft, 1994).

Ashcraft (1994) describes the Atkinson-Shiffrin model (1968, 1971) as follows. Each environmental stimulus would be encoded by its own sensory register or memory, which would hold, for a very short time, a very large amount of information. This encoded stimulus would then be passed on to the STM, a working memory system with smaller capacity storage than the sensory memory, where the information an individual is aware of is held for further mental processing. If information from LTM (unlimited in capacity and uncertain regarding duration<sup>14</sup> i n fns o r (n m 2

1970; Baddeley & Levy, 1971; Bjork & Whitten, 1972, 1974; Tzeng, 1973; Baddeley & Hitch, 1977; Nickerson & Adams, 1979; and Bekerian & Baddeley, 1980 all in Baddeley, 1990) that provided evidence incompatible with Atkinson and Shiffrin's proposal. First, if the way to transfer information to LTM is through rehearsal in STM, patients with STM deficits should also have problems with long term learning, but such deficits were not apparent. Second, the assumption that rehearsal of an item in STM would guarantee its transfer to LTM also proved to be poorly supported. Third, the existence of a long term recency effect and the fact that this was not affected by a concurrent task that engaged the STM were also inconsistent with the modal model. Finally, the assumption that STM relied exclusively on acoustic coding while LTM relied exclusively on semantic coding was over-simplified since it was observed that the nature of a task can determine whether semantic coding can occur.

Baddeley and Hitch (1974 in Turner & Engle, 1989) argued that the focus had to shift from the storage function of STM to the processing and thus they preferred to term the mechanism responsible for processing and temporary storage of information "working memory" (though this term was first used by Newell, 1973 in Harrington, 1992). In order to gather evidence for the vital role WM played in cognitive tasks, Baddeley and Hitch (1974 in Gregg, 1986) initiated their research effort to unfold the nature and function of this mechanism.

### **2.2.2 WM**

Logie (1996) notes that within cognitive psychology there are seven distinct ways in which philosophers and psychologists have conceived the mechanism responsible for processing and temporary storage of information. The labels ranged from "contemplation", to "primary memory", to "short- term memory", and to the now

current term “working memory”. As mentioned above, though the term WM was not coined by Baddeley and Hitch, the fact that their model was a “WM model” makes many of us immediately associate the term to their proposal.

According to Gregg (1986), one of the main assumptions of Baddeley and Hitch was that, if the STM serves as a WM and it is unitary, then a cognitive task performed simultaneously with a STM task should compete for its limited capacity. Indeed, this was confirmed through a set of experiments (Baddeley & Hitch, 1974 in Gregg, 1986) where subjects performed a reasoning task<sup>15</sup> while, at the same time, remembering from 1 to 6 digits. While a memory load of 1 or 2 digits hardly hindered performance, a memory load of 6 digits significantly affected subjects’ performance in the reasoning task. Baddeley and Hitch took these results to mean that WM was indeed limited in capacity but perhaps not unitary. Apparently, an individual’s resources were shared between an executive processor, probably involved in non-routine cognitive activities, and the articulatory loop, which would act like a temporal store for verbal items.

Later on, Baddeley and Hitch (1986, 1991) presented further evidence that, unlike the proposal made by Atkinson and Shiffrin, where the STM was a single system, STM, or WM, was comprised of multiple, separable subsystems (Searleman & Herrmann, 1994). In the 1986 and 1991 studies, Baddeley and Hitch (in Logie, 1996) asked their subjects to perform two demanding tasks concurrently. The reasoning behind the experiment was that if WM was a single system, involved in both tasks, when subjects carried out the tasks at the same time they would either disrupt each other considerably or one task would be given preference while the other would suffer all the deterioration. The results, however, did not confirm this possibility. What happened was that when subjects performed the two tasks concomitantly, there was a slight drop in the

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<sup>15</sup> Subjects were presented with a statement such as “A is preceded by B – BA”, to which they had to respond “true” or “false”.

performance of both, suggesting that there were at least two cognitive systems, which appeared to be able to be called upon concurrently and more or less independently from each other, involved in the completion of the tasks.

In the face of the findings cited above, Baddeley and Hitch's WM model, originally proposed in 1974, but revised after that (Logie, 1996), comprises 3 components: the phonological loop, the visuo-spatial sketchpad, and the central executive (see Appendix C). In a few words, any perceived auditory stimuli automatically gains access to the passive store of the phonological loop, which retains this information for a brief period of time (if rehearsal is prevented or if a new auditory stimulus is attended to) in a phonological form. The visuo-spatial sketch pad, in turn, is thought to serve a similar function for visual or spatial material and to play a role into visual-imagery tasks. The central executive provides the coordinating function during dual-task performance; it is this system that allocates attention to different activities (Logie, 1996). In 2000, Baddeley published an article in which he proposed a fourth component for the WM model, the episodic buffer. This new subsystem would be responsible for integrating information from the phonological loop and the visuo-spatial sketch pad and from LTM (see Appendix C).

At this point it is wise to note that, for the purposes of the present study, whenever the terms WM or WMC are used, unless otherwise stated, what I will be referring to are the limited attentional resources at the disposal of the central executive only. In others words, the capacity of the other subsystems proposed by Baddeley and Hitch (1974) and Baddeley (2000) will not be taken into consideration whenever WMC is discussed.

### 2.2.3 WMC and speech production

Since Baddeley and Hitch's (1974) proposal, the construct of WM has attracted a considerable amount of interest and research by a number of scholars who have proposed different models to deal with the nature, functions and structure of WM (e.g., Cowan, 1999; Engle, Kane, & Tuholski, 1999; Just & Carpenter, 1992).

From an individual differences perspective, the psychometric correlational approach to WM focuses on the correlation found between individuals' WMC (measured through complex span tasks such as the SST) and their performance in complex cognitive tasks. The prediction made by this approach, and supported by empirical research, is that individuals with more WMC will perform better in tasks that are cognitively demanding than individuals with less capacity (Fortkamp, 2005). Within this approach, the work of Daneman and colleagues (e.g., Daneman & Carpenter, 1980, 1983; Daneman & Green, 1986) was decisive in developing effective tools to assess individuals' WMC – the reading, speaking, and listening span tests.

In 1980, Daneman and Carpenter developed the Reading Span Test (RST) as an alternative to the traditional digit and word spans, claiming that a possible reason why individuals' scores in these tests did not correlate with their performance in reading comprehension tasks was that they failed to tax the processing component of WM sufficiently.<sup>16</sup> In their study of 20 college students, Daneman and Carpenter (1980) found a significant correlation of almost 70% between the participants' scores in the RST and their performance in an L1 reading comprehension task and made a case for

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<sup>16</sup> Tests such as the word and digit spans did not require any form of information-processing, only storage.



the test being used subsequently, in a series of investigations relating WM and reading comprehension (e.g., Daneman & Carpenter, 1983; Tomitch, 1996).<sup>17</sup>

Daneman and Green (1986) used, for the first time, a different version of the test, created to correlate with speech production performance – the SST. The authors correlated individuals' WMC (as measured by the RST and the SST) with their ability to use context clues to comprehend and produce words in L1 and, despite speech production in this study being limited to the word level, their 34 undergraduate students' performance in the SST correlated significantly with their results in the contextual vocabulary production task. Daneman (1991) took a step further and investigated the predictive power of the SST in relation to individuals' performance in three L1 verbal fluency tasks: a speech generation task (in which individuals talked about a picture), a reading aloud task and an oral-slip task<sup>18</sup>. Regarding the speech generation task, individuals' SST *lenient* scores<sup>19</sup> correlated positively and significantly with fluency (words/min) and richness of content (rated by two independent judges) of their performances. The participants' *strict* scores in the SST correlated significantly only with richness of content.

Mota (1995, published as Fortkamp, 1999), partially replicating Daneman's (1991) research, was the first study to correlate L2 speech production and L2 WMC. Among other tasks, her 16 Brazilian participants performed a picture description in their L2 (English), whose results she later correlated to the participants' *lenient* and *strict* scores in an L2 version of the SST. Though a significant and positive correlation was

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<sup>17</sup> More recently, the complex span tasks have been submitted to scrutiny and were found to be reliable measures of capacity for cognitive activities (Conway, Kane, Bunting, Hambrick, Wilhelm, & Randall, 2005; Lépine, Barouillet, & Camos, 2005).

<sup>18</sup> Devised by Baars, Motley, and MacKay (1975 in Daneman, 1991).

<sup>19</sup> For a thorough explanation of the difference between the *strict* and the *lenient* scores in the SST, the reader is referred to section 3.6 in the following chapter.

found between both scores and fluency (words/min), unlike Daneman, Fortkamp found the *strict* SST score correlated better with fluency ( $r = .640$ ) than the *lenient* ( $r = .610$ ).

Fortkamp (1998) also focused on the relationship between L2 WMC and L2 fluency. In this study, her 11 Brazilian participants performed a picture description and a narrative task in their L2 (English), as well as an L2 SST. Besides other variables, following Riggenbach (1991), the author used three measures that directly assessed the incidence of silent pauses in the participants' speech, namely, micropauses (of 0.2s or less), hesitations (from 0.2 to 0.4s) and unfilled pauses (larger than 0.4s). Counterintuitively, none of the measures used correlated significantly with either the participants' *strict* or *lenient* scores in the L2 SST. The authors' explanation for this finding was that the kind of storage necessary for the completion of the SST (more related to quantity of items) was different in nature from the storage necessary in speech production (more related to the quality of information).

Fortkamp (2000, published as Fortkamp, 2005) conducted a more thorough investigation of the relationship between L2 WMC and L2 speech production, taking the dimensions of fluency, accuracy, complexity and weighted lexical density into consideration. In this study, 13 undergraduate students, of different nationalities, produced a narrative and a picture description in their L2 (English), as well as an Operation-word Span Test (Engle & Turner, 1989)<sup>20</sup> and an L2 SST (only the *strict* scores in the tests were taken into consideration). Statistical analyses showed significant correlations between L2 WMC and all dimensions but weighted lexical density, probably due to trade-offs between the different aspects of speech. Concerning fluency, a positive and significant relationship was found between individuals' L2 WMC and

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<sup>20</sup> In this test, participants are presented with 60 operation strings (one at the time), with one English word next to the operation (e.g.,  $4 + 3 = 7$  duck), in sets of increasing size (starting with 2 operations and ending with 6). Participants have to decide if the result of the operation presented is "true" or "false" and retain the word for recollection at the end of the set.

speech rate pruned (semantic units/min, excluding partial words and immediate repetitions) and unpruned (semantic units/min) and MLR in both tasks. Simply stated, individuals with more L2 WMC tended to speak faster and to produce longer stretches of speech between hesitations, as expected. However, a positive, although not always significant, correlation found between L2 WMC and number of hesitations (pauses of less than 0.5s, filled nonlexical pauses, and immediate repetitions) per minute (i.e., individuals with higher scores in the L2 SST hesitated more) coupled with a not always significant negative correlation between the L2 SST scores and the number of silent pauses (larger than 0.5s) per minute were somewhat surprising findings. According to Fortkamp, these correlations may suggest that individuals with more L2 WMC make use of more hesitations in order to cope with processing demands, whereas individuals with less capacity do not have the ability to produce fillers while planning a new stretch of speech and are forced to halt speech completely. Linear regressions showed that individuals' scores in the L2 SST were significant predictors of their L2 speech performance (as measured by speech rate, MLR, accuracy, and complexity) in monologic tasks, with L2 WMC (as measured by the L2 SST) accounting for 49% of the variation in MLR in the description, and 38% in the narrative task.

Lima and Françaço (2001) conducted a study that supposedly investigated the constraints imposed in oral speech production by limitations in WMC (measured through an RST adapted to Brazilian Portuguese). The crucial problem with this investigation is that oral speech "production" was operationalized as reading the sentences in the Reading Span Test aloud. Since reading aloud mostly involves different processes than those necessary for oral speech production (no *conceptualization* or *formulation* are necessary), any findings from this investigation are irrelevant to the present research.

With a slightly different focus, Weissheimer (2004) conducted a study with 16 undergraduate students, relating their L2 WMC (as measured by the *strict* and *lenient* L2 SST scores) to their L2 pruned and unpruned speech rates. The author hypothesized that, if the participants received treatment on the SST (training and use of strategies) their L2 WMC could be enhanced and, consequently, their fluency would increase. This hypothesis was not confirmed, however, for although subjects' scores in the SST increased, their rate of speech did not. Hence, a significant correlation between L2 WMC and speech rate pruned and unpruned was found only in the pre-test. D'Ely et al. (2005) also examined the relationship between L2 WMC and L2 speech performance and, in spite of using the same version of the L2 SST used by Fortkamp (2005), a significant correlation between the participants' scores in the L2 WMC test and their L2 fluency was not found. To explain this rather surprising result, the authors pointed to the fact that subjects had time to plan their performance, which might have reduced the burden of the task. Another important issue brought forward is the fact that speech rate depends directly on time, a feature that is not taken into consideration in the completion of the SST.

A similar result was obtained by Guar Tavares (2005). For this study, 10 Brazilian participants performed two similar narratives, in their L2 (English), under different conditions (i.e., spontaneously or after 10 min of planning time<sup>21</sup>). The participants' performances were correlated to their *strict* and *lenient* scores in an L2 SST and, once more, a correlation between fluency (again measured by speech rate), in either of the renderings, and L2 WMC was not found. The author's tentative explanation for the lack of correlation between L2 fluency and L2 WMC was that speech rate is perhaps too general a measure to assess fluency and one which can be

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<sup>21</sup> A series of studies have found beneficial effects for allowing speakers some time prior to performing a task (e.g., Foster & Skehan, 1996; Mehnert, 1998; Ortega, 1999).

influenced by a variety of factors such as sex, age, and emotional state (Verhoeven, de Pauw, & Kloots, 2004). Alternatively, and in line with D'Ely et al. (2005), it might be that the lack of time control in the SST prevented the correlation between the scores on this test and speech fluency. Prebianca and Finardi (in press) had more encouraging results. In this investigation, the L2 (English) speech produced by the 12 Brazilian participants in a picture description task was assessed in terms of fluency (as measured by speech rate unpruned), accuracy, complexity and lexical density. Interestingly, taking some of the previous findings into consideration, in this study, only fluency correlated significantly with L2 WMC (as measured by participants' *lenient* scores in an L2 SST). The authors' suggestion was that perhaps trade-offs between the different dimensions prevented other correlations.

Guará Tavares (2006) conducted a similar study to her 2005 endeavor. In this investigation, each of her 25 Brazilian participants, divided in two groups, performed two narratives in their L2 (English). One group carried out both tasks spontaneously and the other realized one task spontaneously and one after 10 min of planning time. When she correlated their *strict* and *lenient* scores in an L2 SST with fluency (as measured by speech rate pruned and unpruned), the performance in the first renderings (i.e., spontaneous) of all participants once more did not correlate with L2 WMC. On the other hand, when she correlated the performance in the second task (i.e., spontaneous for one of the groups and planned for the other) to the participants' results in the L2 SST, the fluent performance of both groups correlated with their L2 SST scores. One interesting finding was that fluency in the spontaneous speech (in the second rendering only) correlated with the *lenient* scores, while fluency in the planned speech correlated with the *strict* scores.

Finally, there were two studies that investigated whether WMC could be somehow related to the occurrence of within boundary pauses. Using the same pool of data as Guará Tavares (2005), Xhafaj (2005) attempted to find a correlation between the use of silent pauses in L2 speech and L2 WMC. Once more the results were somewhat disappointing. No significant correlations were found between any of the variables investigated (pause proportion – the percentage of speech made of pauses; pause frequency – pauses/100 words; pause length; and pause ratio – within clause boundaries pauses/total number of pauses) and L2 WMC in the unplanned condition. Unpredictably, a significant and *positive* correlation was found between the measure proportion of silent pauses and the *lenient* L2 SST scores in the planning condition. The finding that the participants with more L2 WMC were the ones who paused more when time was allowed for planning before task completion was taken to possibly reflect a trade-off among the goals of fluency, accuracy and complexity (Skehan, 1996) since Guará Tavares (2005) found a significant correlation between these subjects' *strict* scores and accuracy in their planned performance. Mizera (2006) had his 44 native speakers of English perform an L1 SST and a monological narrative in their L2 (Spanish), among other tasks, to assess if WMC (as measured by the L1 SST) was related to L2 fluency (as measured by 7 variables, among them, frequency of intraclausal pauses/100 words). To his surprise, the scores in the SST only correlated significantly and weakly with two of the fluency measures. One of them was the individuals' scores in an Imitation/Grammaticality Test designed to assess participants' ability to monitor speech quickly and accurately ( $r = .331$ ), the other was speech rate – syllables/min – ( $r = .340$ ). The author's conclusion was that speech production might tax other faculties more than WM. Alternatively, Mizera hypothesized that perhaps

affective factors, such as anxiety, prevented his subjects from using their resources successfully and/or fluently.

To summarize, the review of literature presented in this chapter indicates that, as of now, there are still uncertainties regarding precisely how pausing patterns may contribute to fluency. As for the relation between L2 WMC and L2 fluency, the findings from empirical results can be described as at least intriguing for there does not seem to be enough evidence to either associate or separate L2 fluent performance from one's limitation in attentional resources (as measured through L2 SSTs). The next chapter will describe the design of the present study, which aimed at contributing to the discussion on these issues.

## CHAPTER III

### METHOD

As shown in the Review of Literature, a number of researchers have proposed that one of the characteristics of disfluent speech is the number of pauses occurring *within* grammatical boundaries, which makes it more fragmented than the usual, since it is broken into smaller units. One possible explanation for this phenomenon is that the cognitive strain under which L2 speech is produced, where most processes of speech generation are under the control of limited attentional resources (i.e., WMC), does not allow fast and effortless speech production. With this in mind, the main objective of the present study is twofold: (1) to assess differences in the distribution of silent pauses between L1 (Brazilian Portuguese – BP) and L2/native<sup>1</sup> (English/American English – AE) speech production and (2) to disentangle the relationship between pause distribution, as an indicator of lack of fluency in L2 speech, and L2 WMC.

The present study is thus motivated by the following research questions:

1. Are there differences in the distribution of pauses (*at* and *within* boundaries) and MLR between pauses in the speech produced by native speakers of Brazilian Portuguese in their L1 and that produced by native speakers of American English in their L1? In other words, is there a difference between the two languages?
2. Are there differences in the distribution of pauses (*at* and *within* boundaries) and MLR between pauses in the speech produced by native speakers of Brazilian Portuguese in their L1 and that produced by the same subjects in English as L2?

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<sup>1</sup> Both these labels will be used to refer to the speech produced in English. When it is being produced by nonnative speakers (i.e., the Brazilians) the speech will be labeled as “English”. When the speech is being produced by the native speakers (i.e., the Americans) it will be labeled as American English or AE.



In other words, is there a difference between the speech of the same individual when delivered in the L1 and when delivered in the L2?

3. Are there differences in the distribution of pauses (*at* and *within* boundaries) and MLR between pauses in the speech produced by native speakers of Brazilian Portuguese in English as L2 and that produced by native speakers of American English? In other words, is there a difference between the speech produced by a nonnative speaker and that produced by a native speaker?

4. Is the Brazilian participants' L2 fluency (as measured by pause distribution and MLR) related to their L2 WMC (as measured by the L2 SST)?

In order to answer these questions, data was gathered from Brazilians (L1 speakers of BP and L2 speakers of English) performing two oral tasks in BP and in English and from Americans<sup>2</sup> (L1 speakers of AE and L2 speakers of BP) performing two oral tasks in AE. The L2 (English) performance of the Brazilians was correlated to their scores in a test of L2 WMC.

This chapter describes in detail the method applied in the experiment. The first section (3.1) presents information about the participants of the research; in the next (3.2), the materials used are described. The procedures adopted are described in section 3.3, which is followed by a section (3.4) on issues related to data transcription. Sections 3.5 and 3.6 are devoted to the measures of oral speech production and to the measures of L2 WMC, respectively. The last section (3.7) addresses the procedures adopted for data analysis.

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<sup>2</sup> Two reasons led me to assume that American English would be the 'model' the Brazilians would aim at in their English productions. First, the language course these participants were attending at the time of data collection made use of a textbook of AE (American Inside Out). Second, their teacher was a native speaker of AE.

### 3.1 Participants

Two groups participated in this study, namely, Brazilians and Americans. The main reason for choosing these two groups is that the design of the present study required speech data gathered from native speakers of English so that it could serve as a baseline against which the L2 performance of the Brazilians could be compared. Moreover, since it is possible that pausing patterns vary between languages, a decision was made that only native speakers of *American* English would contribute with data. Finally, it was beyond the scope of the present study to collect and analyze L2 (BP) speech data from the Americans, since the focus of the research is on the speech of the Brazilians (both in BP and in English). The AE speakers, accordingly, were not asked to perform tasks in their L2 (BP) or to take a memory test.

#### 3.1.1 The Brazilians (native speakers of BP and L2 speakers of English)

The 12 Brazilians (7 male and 5 female) were all College students who were, at the time of data collection, attending English classes at the Extracurricular language program at Universidade Federal de Santa Catarina (UFSC). Though I did not assess these participants' proficiency level in English (their L2), they were attending the "Advanced 2"<sup>3</sup> class and possibly formed a reasonably homogeneous group in terms of L2 knowledge.

These participants' ages varied from 18 to 27 years ( $M = 21$ ). The group, therefore, consisted of a young adult population, which should be uniform in terms of temporal aspects of speech.<sup>4</sup> Furthermore, their profile – young undergraduate students who, presumably, have highly developed cognitive skills – fits with the profile of

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<sup>3</sup> In addition to a conversation class, the Extracurricular English program offers to students 10 levels, each of them with 60 hours. The level in question, Advanced 2, is the last before Conversation.

<sup>4</sup> Up to adulthood, as age increases, there is a decrease in the frequency and length of silent pauses (Kowal & O'Connell, 1980 in Olynyk, Sankoff, & d'Anglejan, 1983).

subjects who usually take part in psychometric correlational studies of WM (Fortkamp, 2005). Using the data provided by the participants in the profile questionnaire (see subsection 3.2.3 and Appendix D), it was possible to keep some variables under control. All Brazilian subjects had BP as their L1, and their use of the L2 (English) was mainly restricted to the English classes in the Extracurricular course (three hours per week). Only one participant reported sometimes speaking English outside class hours; all others declared they never or hardly ever use English when not in class.

All subjects in this group had been learning English as a foreign language, as opposed to as a second language, since they were being instructed in Brazil, in formal settings. Only 2 participants reported having been to an English speaking country; one of them for a 5-month period – one year and a half before the data collection took place – and the other for 2 weeks – 6 years before taking part in the present study. Besides having had English classes during their school years, all but one participant had also had extra instruction in the L2. The mean length of time these subjects had been studying English, in addition to classes in school, was 4.05 years.

### **3.1.2 The Americans (native speakers of AE)**

According to the answers given in the profile questionnaire (see subsection 3.2.3 and Appendix E), all 9 Americans (7 male and 2 female) who contributed to this research had AE as their L1. Their age ranged from 22 to 48 years ( $M = 34.1$ ) and all, at the time data was collected, were residing in Brazil. Six of them were taking “Portuguese as a second language” classes at the Extracurricular language program at UFSC in three levels: 1, 2, and 3. Their length of stay in Brazil varied from 3 months to 6 years ( $M = 1.7$  years) and they all held a University degree.

Only one participant had ever spent time (4 weeks) in a Portuguese speaking country before coming to Brazil. Another participant was the only one to have been living outside of the United States (for 2 years) prior to coming to Brazil. One participant had never received formal instruction in BP while the other 8 declared to have already received, at the time of data collection, from 2 months to 4 years of formal instruction ( $M = 1.2$  years). At the time of data collection, 4 Americans reported using more BP in their daily lives than AE, 3 stated they used more AE than BP, and one stated that he used both languages to the same extent. Since none of these participants had been away from the United States for an extended period of time and taking into consideration that they still use AE in their daily lives, it can be inferred that their potential characteristic AE pausing pattern might still be uncontaminated by their experience with BP. They should thus be adequate representatives of the University educated American population (native speakers of AE).

## **3.2 Materials**

### **3.2.1 Speech production tasks**

American and Brazilian participants' oral speech data was elicited through the use of two monological spontaneous tasks – a narrative (retelling a movie of their choice) and a picture description. Though researchers such as Clark (1996) claim that “face-to-face conversation is the cradle of language use” (pg.9), so far, most studies attempting to identify L2 fluency features (e.g., Eijzenberg, 2000; Holmes, 1995; Kormos & Dénes, 2004; Lennon, 1990; Riazantseva, 2001; Towell et al., 1996) and all studies relating L2 WMC and L2 speech production have made use of monologues (D'Ely et al., 2005; Fortkamp, 1998, 1999, 2005; Guará Tavares, 2005, 2006; Weissheimer, 2004; Xhafaj,

2005; Finardi & Prebianca, in press). In addition to that, monological tasks were found to yield more fluency than interactive ones (Foster & Skehan, 1996; Skehan & Foster, 1999).

Though investigating task type effects<sup>5</sup> is not the purpose of the present research, having two kinds of tasks – a narrative and a description – permits a somewhat more comprehensive insight into speech production (Duff, 1993). The narrative (retelling a movie) was a task of the there-and-then type, which is expected to impose greater demands on memory and discourse planning than here-and-now tasks since stored events have to be retrieved from semantic memory at the time of performance (Robinson, 1995). However, a narrative task is also less structured than a picture description task and gives the participant more freedom to choose the linguistic means of expression and content of the message (Riazantseva, 2001). In the description task – a here-and-now task – participants described one of two pictures (which they could keep during their performance) and gave their opinion about it.

The two pictures were chosen for their richness of detail and the possibility of conveying a message to viewers. One of them was taken from Newsweek magazine (Vol. CXLIV, No. 15, October 11, 2004) and portrays an Indian scientist with six arms, like a Hindu Goddess (Appendix F); the other was taken from a site (<http://www.ircc.iitb.ac.in/~webadm/update/archives/December03/glob-deb.html>) on globalization and it shows, in the background, some modern skyscrapers while in the foreground a man sweeps shabby houses under the tarmac (Appendix G). In the Appendixes, both pictures were reduced to fit within the established margins.

Prior to being used in this experiment, both pictures were shown to a group of Brazilian L2 learners of English, enrolled in the Extracurricular language program in the

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<sup>5</sup> There is a great body of literature on the effects of task type and conditions on speakers' performance. See, for example, Ellis (2003), Mehnert (1998), Robinson (1995, 2001), and Skehan and Foster (1996, 1999).

same level as the Brazilian participants. They were asked whether they found the pictures interesting for describing and talking about and which of the two pictures they would prefer to describe. All students showed interest in the illustrations and stated they would enjoy talking about either, though 5 out of 8 respondents stated they preferred the picture with the woman. It was therefore assumed that both pictures would yield similar interest and reaction from the participants of the study.

Task instructions were given in writing and orally, in English (Appendix H), though subjects were allowed to ask questions in BP. For both tasks subjects were allowed unlimited planning time prior to task completion. During this time they were free to make notes (which could be consulted while the task was being carried out) and ask me questions regarding vocabulary, grammar or pronunciation. Also, no time limit (either minimum or maximum) was imposed for the performance of either of the tasks. It is important to reiterate that these tasks were performed by both groups – Brazilians and Americans – under the same conditions. In the case of the Brazilian group, which performed tasks in their L1 (BP) and in the L2 (English), the tasks and conditions were also the same for both languages.

### **3.2.2 L2 WMC task**

Unlike the oral production tasks, the L2 WMC task was performed only by the Brazilian participants, since, as stated in section 3.1 only these participants contributed with L2 speech and the relationship sought in the present research was between L2 WM capacity and L2 speech production.

In experimental studies conducted under the psychometric correlational approach to the study of WM, a series of complex span tests have been used to measure WMC.<sup>6</sup>

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<sup>6</sup> Some of the best known examples are the Reading Span Test (Daneman & Carpenter, 1980) and the Operation-word Span Test (Engle & Turner, 1989).

Following this tradition, the instrument used in the present research was the SST. The version of the test used in this study is an adaptation of Daneman's 1991 test made by Fortkamp (2005), for the L2 speaker. To put it more plainly, it is an L2 SST.

This task comprises 60 unrelated one-syllable words organized in three trials. Each trial has five sets of increasing size; the first set has 2 words and the last 6 (Appendix I). The words are shown in white, centered in the middle of a black computer screen in font Arial bold size 72, for one second each, and are immediately followed either by the next word in the set or by a totally black screen, which signals the end of a set. When the black screen appears, the test taker must immediately start producing, orally, sentences for the words shown in the given set. For example, for the 3-word set **snow paper cheese**, one subject produced the following sentences:

*I like snow.*

*The paper is white.*

*Mice like cheese.*

The sentences should be constructed in English, with the words in the exact form and order as they appeared in the set. Additionally, the sentences must be grammatically correct and semantically acceptable. In the present study, participants were also instructed to avoid generating the same kind of sentence for most of the words (e.g., "I like the ball" – "I like to drink tea."). Before starting the test, participants were given oral and written instructions (Appendix J), in Portuguese; they also had a training session, which was equivalent to one trial. The training session was comprised of five sets of words of increasing size, starting with 2 and ending with 6 words and was built following the exact same format and requirements of the actual test. All subjects had to complete the whole training session. There are only two differences between the trial in the training session and an actual trial in the test. First, unlike the test, the training

session was not recorded. Second, during the training session participants could interact with me, clarifying doubts.

### **3.2.3 Profile questionnaire**

The main objective of having a profile questionnaire was to gather information about participants' L2 learning history and the contact they had had or were having with the L2 at the time data was collected. In addition to that, in the case of the Brazilian participants, part of the questionnaire was also designed to assess their beliefs in relation to L2 fluency and speech production so that I could investigate if perhaps those participants who were found to be less fluent were not the same ones who perhaps stated they favored accuracy or vocabulary richness over fluency.

The questionnaire designed for the Brazilians had 17 questions (see Appendix D). Besides 2 questions regarding contact information, the other first 6 questions concerned the participant's general characteristics (age, gender, schooling, occupation, L1, Extracurricular level). The next 6 questions were specifically about L2 learning and the participants' past and present contact with the language. Finally, the last 2 questions asked the subjects' opinions regarding their speech (if they considered it fluent or not and why, and if they focused on any aspect of speech when talking). Due to lack of space, this last part of the questionnaire will be reported somewhere else.

The profile questionnaire answered by the Americans, shorter than the one used with the Brazilian participants, contained 14 questions (see Appendix E). The first part (contact information and general characteristics) was identical to the Brazilians' questionnaire. The second, containing 5 questions, asked about their present contact with AE (since those participants were living in Brazil at the time) and about their previous and present contact with the L2 (BP). One of these questions requested information about their L2 learning history.



### 3.3 Procedures

Prior to engaging in the research, all participants were informed of the nature of the study and signed a consent form (Appendixes K and L). Through this document participants stated that they were aware of what was expected from them as well as of the main objectives of the investigation. Subjects were also asked to fill in the profile questionnaire (Appendixes D and E) so that I could gather information about their experience with English (in the case of the Brazilians) and with BP (in the case of the Americans).

#### 3.3.1 The Brazilians

The Brazilian participants carried out the tasks in three sessions, each lasting an average of 30 minutes. One session was devoted to the L2 SST, one to the oral production of a narrative and a picture description in the L1 (BP), and one to a narrative and a picture description in the L2 (English). In order to avoid task order effects, 5 participants did two of the oral tasks first and 7 did the L2 SST first. Moreover, since the Brazilians had four oral tasks to perform (one description in English, one description in BP, one narrative in English, one narrative in BP), task type and language were counterbalanced so as to avoid task type and/or language effects. Hence, 6 participants first engaged in the oral tasks in English while the other 6 did them in BP first. Six started a session describing the picture while the remaining 6 first retold a movie. In addition to that, since there were two pictures to be described, 6 participants described the picture of the woman in the first session and the other 6 the picture of the man.<sup>7</sup> This information can be better visualized in Table 1.

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<sup>7</sup> There was a problem on the second oral data collection of participant 5. Due to an unknown technical reason, her description in BP was not recorded. As a consequence, the data pool of descriptions in BP comprises the performance of 11 Brazilians.

### 3.3.1.1 Speech production tasks

The first oral speech data collection session was done during class time on November 9<sup>th</sup>, 2005, in the Language Laboratory, at Centro de Comunicação e Expressão (CCE), at UFSC. Participants were given a TDK A60 tape each and, after receiving instructions and clarifying doubts, were left free to start recording whenever they felt ready. Before performing the second task participants were allowed to listen to their first rendering if they wished to do so. The recording was done in a Sony Educational Recorder ER-5030. Some students who were not in class on this date volunteered to come to the laboratory on an alternative date to perform the first description and narrative; the procedures in these cases followed the ones adopted with the larger group. One participant, who was not part of this specific group of students but who was attending the “Advanced 2” class at the Extracurricular language program at the time of data collection, performed the first two oral tasks (one description and one narrative) on June 1<sup>st</sup>, 2006, at the Language Lab.<sup>8</sup>

The second oral speech data collection session happened outside class hours, on a day and at a time arranged with the group (December 6<sup>th</sup>, 2005). The procedures adopted followed the ones of the first session. This time participants were asked to tell a different movie from the one they had narrated previously and the picture used for the description was also different from the one they had already talked about. Once more, one participant was absent from the group on this date so he performed the last two tasks on a different date, though following the same procedures. One participant (the one from the “Advanced 2” 2006.1 class) performed the last narrative and description on June 21<sup>st</sup>, 2006.

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<sup>8</sup> Due to the small number of participants from the 2005.2 “Advanced 2” class who performed all 5 tasks, an attempt was made to gather data from more participants. Another group of “Advanced 2” learners was contacted in 2006.1 but, unfortunately, only one student volunteered as a contributor to the present study. Data collection with this participant was conducted in the same setting, by this researcher, and followed the same procedures as the ones adopted with the larger group.

### **3.3.1.2 The L2 SST**

In the first contact I had with the participants, they were informed they would be performing a memory test that required concentration and should thus take this into consideration when deciding on a date and time to take the L2 SST. The test was administered individually, by this researcher, in room 409 at CCE “B”, at UFSC, between October 27<sup>th</sup>, 2005 and November 21<sup>st</sup>, 2005 and on May 24<sup>th</sup>, 2006. All participants performed the L2 SST before the date they performed the last two oral tasks (one narrative and one description). Room 409 is a quiet room containing only a couple of computers, some desks and chairs and, during data collection, only the test taker and I were present.

The test was set up as a PowerPoint presentation, which was both computer-paced (going from one word to the other and to the black screen in the sets) and researcher-paced (going from one set or trial to the other). After receiving the instructions for the test and clarifying doubts, participants had a training session, which, as mentioned in subsection 3.2.2, was equivalent to one trial (sets of 2, 3, 4, 5, and 6 words respectively). If, after training, participants still did not feel comfortable with the task, they could repeat the training until they felt ready to complete the test at their best. When the participant declared to be ready to start the test, I started the recording and stopped it only at the end of the last trial. Participants’ responses were recorded in Bulk Standard tapes, by a Panasonic cassette recorder RQ- L11.

### **3.3.2 The Americans**

Speech data collection with the Americans took place on different dates, in May/2006, in one individual and single session, which lasted 30 minutes on average, since these individuals performed only two oral tasks, in their L1. Data collection with 7

participants happened in the same lab where the Brazilians had performed (at CCE – USFC). The other 2 participants had their data collected at their workplaces. In each case, data was collected in a quiet room and at the time of data collection only the participant and I were present. In these two cases data was recorded in a Panasonic cassette recorder RQ- L11. All participants used TDK A60 tapes.

The oral tasks performed by the American participants were the same performed by the Brazilians, that is, a narrative (retelling a movie of their choice) and a picture description (4 participants described the picture of the man while the other 5 described the picture of the woman). Once more task type was counterbalanced so as to avoid task effects. This information can be better visualized in Table 1. The conditions and procedures for this data collection followed the ones adopted with the Brazilians.

Table 1

*Data Collection Procedures*

Task	Brazilians	Americans
1	<b>7 P – L2 SST</b> <b>2 P – narrative</b> (1 = English; 1 = Portuguese) <b>3 P – description</b> (1 = Portuguese, man; 1 = Portuguese, woman; 1 = English, man)	<b>4 P – narrative</b> <b>5 P – description</b> (2 = man; 3 = woman)
2	<b>7 P – narrative</b> (4 = Portuguese; 3 = English) <b>5 P – description</b> (1 = Portuguese, woman; 1 = Portuguese, man; 2 = English, man; 1 = English, woman)	<b>5 P – narrative</b> <b>4 P – description</b> (2 = man; 2 = woman)
3	<b>5 P – L2 SST</b> <b>3 P – narrative</b> (2 = English; 1 = Portuguese) <b>4 P – description</b> (2 = Portuguese, man; 1 = English, man; 1 = English, woman)	
4	<b>6 P – narrative</b> (3 = Portuguese; 3 = English) <b>6 P – description</b> (3 = English, woman; 2 = Portuguese, man; 1 = Portuguese, woman)	
5	<b>6 P – narrative</b> (3 = Portuguese; 3 = English) <b>6 P – description</b> (3 = Portuguese, woman ; 2 = English, man ; 1 = English, woman)	

*Note.* P = participants; man = picture of the man; woman = picture of the woman.

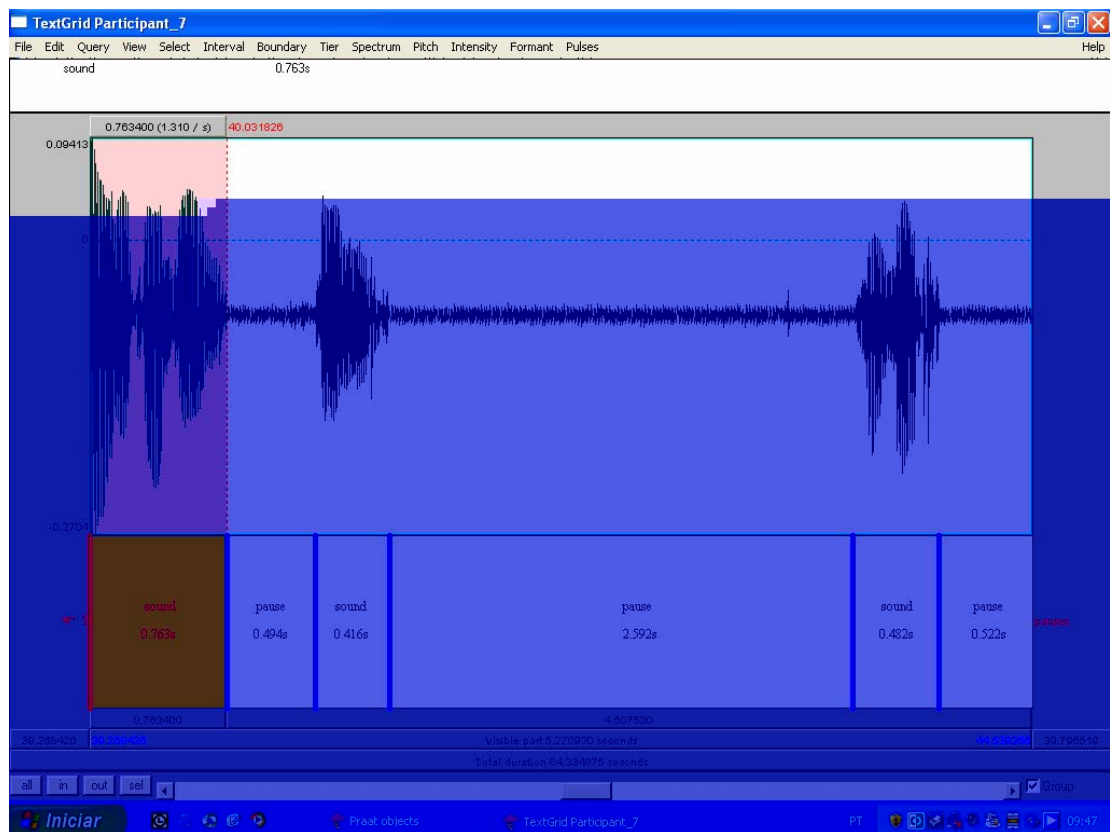
### 3.4 Data Transcription

Speech data was transcribed in its entirety and subsequently digitized with the help of the software Sound Forge 6.0 so as to be submitted to pause identification. At this point, due to the great variation in the duration of speech yielded by the same type of task, within the same group<sup>9</sup>, a decision was made to analyze up to 5 minutes of speech of a participant in each task. The choice of 5min was based on Skehan and Foster's (2005) finding that, even if L2 speakers are allowed time for planning prior to

<sup>9</sup> Just to cite one example, in the narratives, in BP, the Brazilian participants spoke between 2min 21s and 15min 29s. For more details see the raw data in Appendix M.

task performance, the beneficial effects of such planning cannot be sustained for longer than 5min.

Silent pauses were identified perceptually and with the help of the software Praat 4.3.20. This software provides a sound analysis that allows for the precise identification of pause length and location. To illustrate, Figure 1 shows a screen displaying the sound analysis of 5.27 seconds of the speech of Participant 7.



*Figure 1. Praat Sound Analysis.*

The precise measurement of pause length can be made by selecting silent and voiced portions of the data, as in the figure above. In this example we have, from left to right, 0.763s of speech followed by a pause of 0.494s. This pause is followed by 0.416s of speech, a long pause of 2.592s, another stretch of speech of 0.482s and finally a pause of 0.522s. To make this measurement more reliable, the analyses of the waveform

displays were complemented by perceptual crosschecks of the corresponding recordings.

Whenever silent pauses are used in experimental studies aiming at defining fluency features an issue arises: how can one distinguish silent pauses serving articulatory purposes in speech from those pauses signaling disfluency? Most researchers base this decision on the duration of the pause and establish a cut-off point. Any pauses that are shorter than this cut-off are considered articulatory while pauses longer than this are taken to indicate hesitation. Though this decision is not without its risks<sup>10</sup>, Holmes (1984) claims it is still preferable to have some kind of objective basis for decision than to adopt purely subjective criteria.

When L2 speech is taken into consideration, the cut-off used by different researchers has varied greatly - from 0.1s (Riazantseva, 2001) to 2.0s (Robinson, 1995). Since the present study contrasted L1 and L2 speech, the cut-off adopted – 0.1s – was lower than what is usually adopted in analyses of L2 speech (e.g., Towell et al., 1996 used 0.28s; Freed, 1995 used 0.4s; Foster & Skehan, 1996, Mehnert, 1998, and Skehan & Foster, 2005 used 1.0s). The choice of such a low cut-off was made taking into consideration the fact that most of the speech samples analyzed in the present research were in the participants' L1. Goldman-Eisler (1972 in Duez, 1982) and Hieke et al. (1983) found that short pauses are the norm in L1 speech. In addition to that, Riggensbach (1991) claims that even micropauses (shorter than 0.2s), when happening within clause boundaries, are disfluent sounding. Bearing that in mind, in the present

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<sup>10</sup> Towell et al. (1996) point out that when this cut-off is too low there is the risk of taking the stop phase of germinated plosives or other normal phenomena as a pause whereas too high a cut-off may lead the analyst to omit significant amounts of time. Hieke et al. (1983) for example, found evidence for many short pauses in L1 speech (shorter than 0.25s) serving other purposes than articulation. Even if the cut-off is high, Fillmore (1979) states it is still difficult to make a difference between a disfluency and a pause made for rhetorical purposes on the sole basis of its length.

research, each silent pause of 0.1s or more was measured and located precisely in the speech transcript.

In the transcripts, the duration of silent pauses is given between parentheses. For instance, (1.350) means a pause of 1 second and 350 milliseconds. Filled pauses are represented by “uh”, “uhm” and “eh” in the transcriptions in English and by “ah” and “eh” in the transcriptions in BP. Elongations are signaled by a colon (e.g., he:) and words that were only partially uttered are followed by a hyphen (e.g., the mo-). Italics indicate that a given word is inexistent in the language being spoken (e.g., *mensagem*). Laughter is indicated by the words “laugh” or “riso”, between parentheses. Unintelligible portions of speech are represented by “XXX”. Boundaries are marked by square brackets (e.g., [there’s a picture with a butler (.458) ok]) and underlined portions indicate a stretch of speech that was subsequently repeated, reformulated or abandoned (e.g., who is (.310) who has six arms). See Appendix N for full transcriptions of participants’ speech.

### 3.5 Measures of Speech Production

Once pauses were identified, measured, and located on the speech transcript, it was necessary to classify them as “natural” (the ones that would be expected as part of the message packaging and served speech comprehension) or “unnatural” (the ones that probably occurred as a reflex of cognitive strain and thus would possibly make a speaker be perceived as nonfluent). Originally, the clause boundary was chosen to guide this classification and any pause occurring *at* a clause boundary would be considered as



serving discourse, while the ones occurring *within* clause boundaries were taken to hinder it.<sup>11</sup>

However, since oral data is frequently messy and does not fit the simple definitions of units (Foster et al., 2000), this simple definition of clause boundary as the “accepted” boundary had to be further specified, so that typical oral speech phenomena such as false starts, reformulations and repetitions could be appropriately contemplated. Thus, though the basic boundary continued to be the clause, a number of other features were taken into consideration to help define a grammatical boundary<sup>12</sup>. Following Goldman-Eisler (1968), any pause that occurred between words and phrases repeated was considered non-grammatical. For example:

“he would send her (.411) he would send her to another trainer]” – Part. 12

In this excerpt, though the underlined portion constitutes a whole clause, the 0.411s pause between the first clause and the repetition was considered a *within* boundary pause.

Still following Goldman-Eisler, a pause occurring due to a reconsideration or false start was also considered to be occurring at a non-grammatical boundary. For example:

“so she goes (2.095) so they go to another (.322) to a beautiful (.526) room]” – Part. 5

Once more the only grammatical boundaries in this stretch are the two brackets; the 2.095s and the 0.322s pauses located between the original utterances and the reformulations were considered *within* boundary pauses.

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<sup>11</sup> As Foster et al. (2000) put it, syntactic units are adequate to use with speech data for, besides being genuine, they are easier to identify than semantic or phonological ones. As for the choice of clauses, besides Holmes’ (1984) own finding, she cites a number of other studies (Boomer, 1965; Hawkins, 1971; Fodor, Bever, & Garret., 1974; Goldman-Eisler, 1972; Henderson et al., 1966) that have found the clause to be a basic unit of speech planning. Further evidence for the clause as a planning unit comes from speech errors (Garret, 1975, 1976; Bock & Cutting, 1992 in Smyth et al., 1994) and spoonerisms (Garret, 1975, 1976 in Smyth et al., 1994) which usually do not cross clause boundaries.

<sup>12</sup> Nevertheless, despite all the specifications that follow, all accepted boundaries will continue to be labeled as and referred to as “clause boundaries” in an attempt to avoid confusion.

There were, however, a few cases where blindly obeying the criteria set above could potentially mask the figures obtained. Consider the examples below, from Participant 4 (a Brazilian performing in the L2) and Participant 18 (an American performing in his L1).

[and it's a (1.060) it's a sad story actually] [**i:t end ups**] (.395) uh: (.523) [well I'm gonna tell the end] – Part 4

[a:nd (.763) try to encounter try to find someone] [**who'll take them (.172) to:**] (1.102) uh [where were they going there] – Part. 18

Participant 4 abandons the beginning of a new clause (in bold) but, as can be seen by her comment, this was not due to difficulties in formulating the message. The speaker realized she was about to tell her interlocutor<sup>13</sup> the end of the movie, something not always welcome, and thus warns him/her of her intention. According to Rehbein (1987), including the interlocutor in the planning process might be a good strategy adopted by the speaker in order to compensate for deficiencies in fluency.<sup>14</sup> In this case, the 0.395s and 0.523s pauses were considered to be located *at* a boundary. The excerpt from Participant 18 also shows an abandoned clause (in bold). Once more the reason for the interruption does not seem to be a cognitive struggle in formulating the message; the speaker simply forgot the name of the place and, as a result, had to leave that clause unfinished. His 1.102s pause was thus also considered to be occurring *at* a boundary. Cases such as these were not numerous though they did occur in the speech of Americans and Brazilians and in the latter case, both in the L1 (BP) and in the L2 (English) speech.

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<sup>13</sup> Clark (1996) and Fox Tree (1999) advocate for the fact that a speaker always has an interlocutor in mind, even if imaginary.

<sup>14</sup> Nonetheless, the reader is referred to Lennon (1990), cited in section 1.3, where he advances that the listener *does not* want to take part in the speaker's production process.

Finally, Goldman-Eisler (1968) also treated as grammatical boundaries those that happened at the beginning and at the end of parenthetical remarks. Indeed, Fulcher (1996) claims pauses *are* oral parentheses. In the present study, these remarks were generally produced as appositives. For example:

[but then the headmaster] (.634) [**Albus Dumbledore**] (.288) [gets in time to save (.307) to save him] – Part. 7

The measures of fluency in the present study were:

- **MLR:** following Fortkamp (2005), this variable reflects the mean unpruned number of semantic units (i.e., the number of words and partial words<sup>15</sup>, including repetitions) produced between silent<sup>16</sup> or filled pauses. Whenever a cluster of pauses occurred, they were counted as one single pause. For example:

“I think (.339) **uhm** (1.609) at the same time there is some (.895) strange clouds” - Part. 13

In this stretch of speech the cluster of disfluencies formed by the 0.339s and 1.609s silent pauses and the filled pause “uhm” were counted as *one* instance. This measure was adopted since taking all pauses into consideration would lead to a mistaken final figure for there are no semantic units between these pauses.

- **Pause distribution ratio:** in part following Riazantseva<sup>17</sup> (2001), this variable reflects the ratio of silent pauses occurring *within* boundaries (as opposed to *at* boundaries) to the total number of silent pauses. Originally, this would be the only variable used to reflect pause distribution. However, since this measure proved to be a poor indicator of differences in pause distribution in oral speech<sup>18</sup>, a decision was made

<sup>15</sup> As long as the partial word could be recognized as a syllable (Fortkamp, 2005; Riggenbach, 1991).

<sup>16</sup> Of 0.1s or longer.

<sup>17</sup> Riazantseva (2001) used *constituents* rather than *clauses* as boundaries.

<sup>18</sup> There were no significant differences in the means in the description. As for the narrative, though there were significant differences between the L1 (BP) speech and the L2 (AE) speech of the Brazilians, the mean difference was very small. The same happened when BP as an L1 was compared to AE as an L1. Though the mean difference was significant, it was again very small. See Appendix O pause ratio statistics.

to abandon it and to turn to two different variables to investigate pause distribution, namely, pause frequency *at* and *within* boundaries.

- **Pause frequency *at* boundaries:** the number of pauses occurring *at* boundaries per 100 unpruned semantic units. To reach this number, the total number of pauses that were located *at* boundaries was multiplied by 100 (one hundred) and divided by the total number of unpruned words produced (up to 5 min).

- **Pause frequency *within* boundaries:** the number of pauses occurring *within* boundaries per 100 unpruned semantic units, calculated in the same way as the “pause frequency *at* boundaries” variable was.

### 3.6 Measures of L2 WMC

Participants’ responses in the L2 SST were transcribed, and each subject received two scores. Following Daneman (1991) and Fortkamp (2005), the *strict* score was calculated as the total number of sentences produced for the words in a given set in the exact form they appeared, in the same order, and which were grammatically correct and semantically acceptable.

Daneman and Fortkamp also had another score, a *lenient* one, for their participants. In this count, sentences that were syntactically and semantically acceptable but that were produced in the wrong order and/or with a different form of the word<sup>19</sup> were also included. Furthermore, in the study conducted by D’Ely et al. (2005), the authors observed that many of the sentences generated by their L2 learners, probably due to their limited linguistic knowledge, were ungrammatical and thus decided to include in their participants’ lenient scores sentences which perhaps were made with the correct word form and in the correct order but contained grammar mistakes. The same

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<sup>19</sup> For example, the word in the set was *love* but the subject used the form *lover*, *lovely* or *loved* in the sentence.

procedure was adopted in the present study since the test takers are also L2 learners rather than native speakers.

Each test taker, therefore, had two scores in the L2 SST - a very strict one, for which only sentences that met *all* the criteria counted, and a very lenient one for which even a sentence produced in the wrong order and with grammar mistakes counted. Since this scoring was still somehow subjective, two other researchers, besides me, rated the sentences of all individuals as belonging to the *strict* score, to the *lenient*, or to none (sentences that did not contain any word of a given set or that did not make sense). The three ratings were subjected to an interrater reliability analysis and the alpha coefficient of reliability was of .998 for the *strict* score and .992 for the *lenient* one, which means that the three raters agreed in almost 100% when scoring the L2 SST. See Appendix P for full transcriptions of the SST.

Conway et al. (2005) argue that the processing component of a complex span task (in this case sentence production) should not be assessed too rigorously. Still, typically, in their investigations, any subject with less than 85% of accuracy in the process component is eliminated from the analyses.<sup>20</sup> Surely the same rule cannot be adopted with L2 speakers without a lot of caution since the variable assessed by the L2 SST should be L2 WMC and not L2 knowledge. At the same time, as has been pointed out, L2 language production is under more control from the part of the speaker and hence it is attention robbing. If a subject then chooses to focus on accuracy it might be that the price to pay for this choice is having fewer resources available to store words for subsequent processing. Moreover, as shown in the Review of Literature, different studies have found correlations between L2 fluency and both of these measures. Hence,

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<sup>20</sup> In this comprehensive article on tasks assessing WMC, the SST is not mentioned though. It can only thus be inferred that their advice would also apply to this modality of the test.

until a more reliable test for measuring L2 WMC arises, it might be best to keep the *strict* and *lenient* scores so as to avoid being biased either way.

### 3.7 Data Analyses

Descriptive statistics were obtained for each variable in the different tasks. With the exception of the variable MLR in the description produced by the American participants, all other variables yielded a normal distribution. That is to say that none of them had significant problems of kurtosis or skewedness.

Independent-samples *t* tests were employed to compare the Brazilians' performance in the L1 (BP) with the Americans' performance in the L1 (AE) for all variables in each task (besides MLR in the description). To deal with the not normally distributed data, a non-parametric version of the independent-samples *t* test – Mann-Whitney – was run. In order to compare the performance of the Brazilians in the L1 (BP) and in the L2 (English), paired-samples *t* tests were employed for each variable in each task.

So as to compare the L2 (English) production of the Brazilians with the L1 (AE) production of the Americans, independent-samples *t* tests were run for each variable in each task (besides MLR in the description). Once more a Mann-Whitney test was employed in the means comparison where the data was not normally distributed. In addition to that, when the means comparison of the variable “pause frequency *within* boundaries” in the narrative was run, it was found that one of the necessary assumptions for running an independent-samples *t* test, namely the equal variances assumption (Levene's test  $p = .038$ ), was not met. This test was then abandoned for this specific means comparison (between the English performances of the Brazilians and the Americans for the variable pause frequency *within* boundaries in the narrative task) and a Mann-Whitney test was used instead.

A Pearson correlation was run, relating the Brazilians' L2 SST *strict* and *lenient* scores and their pause distribution (pause frequency *at* and *within* boundaries) and MLR variables, in the two tasks performed in their L2 (English), in order check how much an individual's pausing profile matched his/her amount of available attentional resources, that is, L2 WMC.

The next chapter will bring the results of the above mentioned analyses as well as a discussion of these results in light of the studies reviewed in the previous chapter (Review of Literature). All analyses were made using the software SPSS 10.0 for

## CHAPTER IV

### RESULTS AND DISCUSSION

This chapter presents and discusses the results of the statistical analyses conducted in order to answer the research questions posed in the Method. Section 4.1 presents the descriptive analyses for each of the groups separately and, in the case of the Brazilian participants, the descriptives are also presented separately for each language (i.e., BP and English). Section 4.2 first presents the results of the means comparison between the Brazilians' and the Americans' L1 performance (i.e., it contrasts BP and AE), then, the comparison between the performance of the Brazilians in the L1 (BP) and in the L2 (English), and finally the comparison between the performance of the Brazilians and that of the Americans, in English (i.e., it contrasts nonnative and native performances). In each section a discussion of the results is provided. Section 4.3 presents the results of the Pearson correlation analysis, along with a discussion of the relationship between L2 WMC and L2 fluency (as measured by pause distribution and MLR). The last section (4.4) answers each of the research questions in turn.

#### 4.1 Descriptive Analyses

Tables 2, 3, 4, and 5 report the minimum (*Min*) and maximum (*Max*) scores, the mean (*M*), and the standard deviation (*SD*) for each variable, in each task, for each group. The first two tables (2 and 3) refer to the oral performance of the Brazilians in the L1 (BP) and in the L2 (English), respectively. Table 4 presents the results for the group of American participants, performing in their L1 (AE). Table 5 presents the



results for the L2 SST (performed only by the Brazilians). See Appendix Q for the frequency tables.

Table 2

*Descriptive Statistics – Brazilians’<sup>1</sup> performance in BP*

Variables	Min	Max	M	SD
Pauses description				
at boundaries	3.15	16.16	8.51	4.20
within boundaries	4.92	16.16	11.79	3.74
Pauses narrative				
at boundaries	5.66	11.55	8.12	1.97
within boundaries	5.34	16.33	9.75	3.44
MLR				
description	3.15	7.50	5.40	1.49
narrative	4.16	9.13	6.07	1.47

Note. Min = minimum score; Max= maximum score.

Table 3

*Descriptive Statistics – Brazilians’ performance in English (12 participants)*

Variables	Min	Max	M	SD
Pauses description				
at boundaries	6.47	17.07	10.72	3.22
within boundaries	9.46	35.20	20.07	6.85
Pauses narrative				
at boundaries	8.23	14.45	10.47	1.93
within boundaries	7.14	38.78	19.28	8.45
MLR				
description	2.45	4.82	3.46	0.73
narrative	2.27	5.74	3.60	1.03

Note. Min = minimum score; Max= maximum score.

Table 4

*Descriptive Statistics – Americans’ performance in AE (9 participants)*

Variables	Min	Max	M	SD
Pauses description				
at boundaries	4.36	13.80	8.83	2.87
within boundaries	3.60	17.60	12.54	4.25
Pauses narrative				
at boundaries	4.70	11.67	7.10	2.19
within boundaries	7.75	15.48	10.90	2.44
MLR				
description	3.89	6.92	4.81	0.93
narrative	3.94	7.11	5.71	1.11

Note. Min = minimum score; Max= maximum score.

<sup>1</sup> As stated in the Method, data from one participant in the description in BP could not be used. Hence these means are for 12 participants in the narrative and for 11 participants in the description task.

Table 5

*Descriptive Statistics – Brazilians in the L2 SST (12 participants)*

Variables	Min	Max	M	SD
SST scores				
<i>strict</i>	7	40	22.33	8.74
<i>lenient</i>	25	44	34.75	4.88

*Note.* *Min* = minimum score; *Max*= maximum score.

Looking at the means from tables 2 and 4 it can be noticed that there is not much difference in the means between the two languages under scrutiny (BP and AE, being performed as L1) in any of the variables under investigation. What can be seen is that the standard deviation is higher in BP than in AE in 4 out of the 6 variables (pauses *at* boundaries in the description, pauses *within* boundaries in the narrative, and MLR in both tasks), indicating that there was a greater variation in the scores in the L1 speech produced by the Brazilians than there was in the L1 speech of the Americans.

A visual inspection of the means obtained by the Brazilians when they performed in their L1 (BP) and their means when producing speech in the L2 (English), shown in tables 2 and 3, respectively, indicates that indeed there were differences between the L1 and the L2 performances of these individuals. In the L2 performance, it is interesting to note that the means for pause frequency *at* boundaries increased a lot less than those for pause frequency *within* boundaries, indicating that the Brazilian participants, when performing in English (L2) made a lot more pauses *within* boundaries than they did when performing in BP (L1). Consequently, the means for MLR decrease to almost half of what they were in the L1. Also interesting is the fact that though the standard deviation in the L1 performance is higher for MLR and for pause frequency *at* boundaries in the narrative and in the description, the standard deviation in the frequency *within* boundaries is much larger when the same participants are performing in the L2, indicating a greater variation in scores within the group. The

minimum and maximum scores in the variable frequency of pauses *within* boundaries in the description, in BP (L1), were 4.92 and 16.16 pauses per 100 words ( $SD = 3.74$ ), respectively. In English (L2) however, the variation was greater ( $Min = 9.46$ ,  $Max = 35.2$ ,  $SD = 6.85$ ). In the narrative task, whereas the within group variation in scores for this same variable – frequency of pauses *within* boundaries – in the L1 performance was slightly smaller ( $Min = 5.34$ ,  $Max = 16.33$ ,  $SD = 3.44$ ) than it was in the L1 description, in the L2 it was even greater ( $Min = 7.14$ ,  $Max = 38.78$ ,  $SD = 8.45$ ).

Contrasting the means from Table 3 and 4 (i.e., contrasting nonnative and native performance in English), once more, differences in means can be observed, and, once again these differences are larger in pause frequency *within* boundaries and MLR in both tasks. In other words, when speech was being produced by native speakers of AE, the number of pauses produced was smaller than that of the nonnative speakers and, accordingly, the MLR was longer. Once more the means are not much smaller when the variable is pause frequency *at* boundaries. Conversely, when we look at pause frequency *within* boundaries, it can be seen that the means of the nonnative speakers (the Brazilians) are almost twice as high as the means of the native speakers (the Americans).

If we look at the standard deviations of the variables pause frequency *at* and *within* boundaries it can be noticed that the within variation in the American group (native speakers) is quite similar, for both variables in both tasks (with the exception of the variable pause frequency *within* boundaries in the description). If we look at the variation in the scores of the Brazilian participants (nonnative speakers) though, not only was the within group variation usually bigger, but there was also a great difference in means among the pause frequency variables, the lowest standard deviation being 1.93 and the highest 8.45. In other words, in general, the differences in the speech among the

different native speakers were stable across variables. In the case of the nonnative speakers, however, while they did not differ much among themselves in frequency of pauses *at* boundaries, they had great differences in frequency of pauses *within* boundaries.

Another interesting tendency that can be noticed is the effect the task exerted on the performance of participants. The frequency of *at* and *within* boundary pauses was greater in the description than in the narrative for Americans and Brazilians and, in this case, both in the L1 (BP) and in the L2 (English). As a result, MLR was a little shorter in the description than in the narrative for both groups when they were performing in their L1, and for the Brazilians when performing in English (L2).

Taken together, the results from the descriptive statistical analyses so far indicate that while not much difference can be noticed between the pausing patterns of the two languages, the performance of the Brazilians in English (L2) was different from that of the same subjects in BP (L1) and from that of the native speakers of AE. The L2 performance of the Brazilians also varied greatly from individual to individual in the variable frequency of pauses *within* boundaries. As for task effect, for both groups, and in the case of the Brazilians, irrespective of the language, the descriptive task seems to have been more demanding, yielding a less fluent performance (as measured by pause frequency *at* and *within* boundaries and MLR).

Finally, the descriptives for the *strict* and *lenient* scores in the L2 SST show the inevitable higher means for the *lenient* score (since this score takes into consideration not only all the instances that are valid for the *strict* one but also a few others).<sup>2</sup> It is interesting, nevertheless, to notice that there is a much greater variation in scores in the *strict* scoring than in the *lenient*, this being the highest variation among all the variables

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<sup>2</sup> The reader is referred back to section 3.6 for further clarification between the two scores.

investigated. We might speculate then, at this point, that the *strict* score may be more appropriate to capture within group variation.

Having reported the results of the descriptive analyses of the data, I shall now report the results from the paired-samples and independent-samples *t* tests and the Mann-Whitney test, which were employed to assess whether these perceived differences in means were indeed significant.

## **4.2 Means Comparisons**

Statistical tests were run to verify the significance of the means differences in participants scores in the three comparisons addressed by this study, namely (1) the comparison of BP and AE when being spoken by native speakers, (2) the comparison of the Brazilians' speech when performing in BP (L1) and English (L2), and (3) the comparison between the English speech of the Brazilians (nonnative speakers) and that of the Americans (native speakers). The results of each of these means comparisons will be presented separately, in subsections 4.2.1, 4.2.2, and 4.2.3.

### **4.2.1 Brazilian Portuguese x American English**

As stated in the Review of Literature, a number of scholars caution that temporal features of speech might be transferred from the L1 to the L2. If two languages then are found to have different pausing patterns, it might be that the reason for an individual presenting a different pause distribution in the L2 than that of the native speakers is the result of negative transfer of the pausing pattern of one's L1 to the L2. However, whether there are different pausing patterns for different languages or this is a universal feature is still not clear, with empirical findings being mixed. Thus, the first comparison

to be made in the present study is between the two languages under scrutiny (BP and AE), so that possible differences in pausing patterns can be identified. For that, independent-samples *t* tests were employed to compare the means of the Brazilians and those of the Americans, performing in their respective L1s, in the variables frequency of pauses *at* and *within* boundaries in the narrative and description tasks and MLR in the narrative. To compare the means for MLR in the description, a Mann-Whitney test was used instead since the assumption for normal distribution was not satisfied for the scores of the Americans. Table 6 presents the means comparisons made with independent-samples *t* tests.

Table 6

*Means Comparisons between BP and AE (performed by native speakers of each language)*

Variable	Language	<i>M</i>	<i>SD</i>	MD	<i>p</i>
Pauses description					
<i>at</i> boundaries	BP	8.51	4.20	0.31	.846
	AE	8.83	2.87		
<i>within</i> boundaries	BP	11.79	3.74	0.75	.682
	AE	12.54	4.25		
Pauses narrative					
<i>at</i> boundaries	BP	8.12	1.97	-1.01	.290
	AE	7.10	2.19		
<i>within</i> boundaries	BP	9.75	3.44	1.15	.383
	AE	10.90	2.44		
MLR narrative					
	BP	6.07	1.47	-0.36	.527
	AE	5.71	1.11		

*Note.* MD= Mean difference between the 2 groups.

Looking at Table 6, it can be noticed that there are small differences between the speech produced in BP and that produced in AE. The AE speech had more pauses, in general, than did the BP speech (only in one variable – frequency of pauses *at* boundaries, in the narrative task – did the Americans make less pauses than the Brazilians). As for MLR, in the narrative, the speech produced in AE had slightly

shorter runs than that produced in BP. However, as can be easily seen in the fifth column of the table – mean difference between the two groups – those differences, though existent, were very small. Differences in pause frequency barely exceeded one pause every 100 words and, as regards MLR, the difference was less than one word per chunk. Moreover, these differences were not only small, but also they were not significant ( $p > .05$ ).

Before discussing these results, I will turn to the last means comparison – MLR in the description task – to verify if there were differences in that variable. Table 8 brings the means comparison done with the help of the Mann-Whitney test. In order for this test to be run, it is necessary to convert any scale variables into ordinal and thus rank the subjects. To help the interpretation of such comparison, Table 7 brings each subject's score and rank.

Table 7

Scores and Ranking (BP x AE) – MLR description

Language	Score	Rank
Brazilian Portuguese	4.12	6
	5.9	14
	7.5	20
	6	15
	6.78	18
	5.81	13
	6.15	16
	6.73	17
	3.72	3
	3.15	1
3.57	2	
American English	4.6	9
	3.89	4
	3.9	5
	6.92	19
	4.37	8
	5.3	12
	4.32	7
4.84	10	
5.2	11	

Table 8

Comparing Ranks (BP x AE) – MLR description

Language	Mean rank	$p$
BP	11.36	.470
AE	9.44	

Looking at Table 7 it can be verified that there is not one group that is ranked best. Though the performance in BP seems to have attained higher ranks (in this case the higher numbers)<sup>3</sup>, there are low and high ranks in both groups, suggesting that there was not a great difference between the AE and the BP speech. This lack of difference is confirmed when we look at Table 8, with very similar means for the ranking of each group and a  $p$  level which indicates the lack of a significant difference between the groups ( $z = -0.72, p > .05$ ).

The final conclusion here is that the two languages (AE and BP) do not differ in relation to the variables investigated. It might still be that they differ in the relation to pause length, as has been found in other crosslinguistic studies (e.g., Grosjean & Deschamps, 1975 in Chambers, 1997; Möhle, 1989; Riazantseva, 2001; Stuckenberg & O'Connell, 1988), or in type of hesitation used, a difference also found in crosslinguistic studies (e.g., Ejzenberg, 2000; Holmes, 1995). Still, as far as pause distribution and MLR go, no significant differences were found between AE and BP. This result corroborates Riazantseva's (2001) finding of similar pause distribution between the English and Russian languages, though she used a different measure to reflect pause distribution (i.e., pause ratio). Regarding MLR, the present findings go against Möhle (1989), who found differences between the French and English languages.

Though the present findings seemingly support the view of a universal pause distribution pattern, dictated by clause boundaries, such conclusion must be drawn with care. First, differences in pause distribution have been found between other languages, such as English and French (Grosjean & Deschamps, 1975 in Chambers, 1997). In this study, pauses inside the verb phrase happened more often in English than in French. A

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<sup>3</sup> The performance ranked last (20<sup>th</sup>) has the longest MLR.



way to conciliate these apparently contrasting findings was proposed by Stuckenberg and O'Connell's (1988), who suggested that it is likely that some languages are more similar than others. Second, though the pattern of pause distribution did not differ, it is somehow difficult to claim for the alleged L1 speakers' preference in locating pauses *at* clause boundaries rather than *within*.

At least in the present study, speakers, when performing in their L1, irrespective of the language, did not seem to favor clause boundaries for pause occurrence. On the contrary, the results show that pauses occurred more *within* than *at* boundaries in the performance of both Brazilians and Americans, irrespective of task type. While in BP, in the description, 8.51 pauses happened *at* boundaries every 100 words, 11.79 happened *within* them. In the narrative, 8.12 pauses were placed *at* boundaries while 9.75 were located *within*. In AE it was not different; in the description 8.83 pauses occurred *at* boundaries and 12.54 happened *within*. The same pattern was seen in the narrative, where 7.10 pauses happened *at* boundaries every 100 words and 10.90 were placed *within* them.

Though the number of participants in the present research is too small to allow for any generalizations, the finding that most pauses did not coincide with clause boundaries even when *L1* speech was being produced is interesting enough to be highlighted. The general consensus seems to be that it is the L2 speech that is characterized by a high number of pauses occurring within grammatical boundaries, not the L1 (Chafe, 1985; Duez, 1982; Freed, 1995; Goldman-Eisler, 1968; Holmes, 1984; Lennon, 1984, 1990; Pawley & Syder, 1983; Rehbein, 1987; Riggensbach, 1991; Skehan & Foster, 2005). Taking the present results into consideration, it seems that the idealized delivery of speech, in chunks where syntactic and temporal boundaries match, is a utopian goal even for native speakers.

There are, however, a number of reasons that may explain such an unexpected division of speech. First, in spontaneous speech production speakers do tend to make more *within* boundary pauses than in planned speech (Henderson et al., 1966 in Goldman-Eisler, 1968), shortening their speech runs (Goldman-Eisler, 1968). Second, according to Krass and Weinheimer (1966 in Clark & Krych, 2004) and Robinson (1995), when speakers do not receive feedback from their addressees, as was the case in the present study, they tend to make more elaborate references to be sure they make themselves understood. Third, in the present research, a pause happening after the initial adverb of a clause was taken to be a *within* boundary pause. There have been studies, however, which found that pauses can be expected in such locations (Ford, 1984; Holmes, 1988 both in Holmes, 1995). Smyth et al. (1994) claimed that a speaker might utter the first conjoining word of the next clause before pausing to signal that such pause does not imply the end of a turn. Though in the present research the participants did not have real interlocutors, they probably had imaginary ones and might be applying a strategy used in real life situations.

As for task type effect, as mentioned previously, present results corroborate Kowal et al.'s (1983 in Riazantseva, 2001) findings of a task type effect on performance while there does not seem to be an effect for language. The differences in the performance of Americans and Brazilians in the two tasks were small. Still, the fact that these differences in all variables, and for three product yields, before public, in

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All in all, the possibility that an expected syntactic distribution of pauses would hold for one of the languages, but not for the other, was not confirmed. Accordingly, any differences in pause distribution between the L1 (BP) and the L2 (English) speech of the Brazilians and between the L2 (English) speech of the Brazilians and the L1 (AE) speech of the Americans cannot be explained by a possible transfer in pausing pattern from the L1 to the L2, or to an attempt to conform to the L2 rule.

Before going any further with this discussion, it is necessary to check whether those apparent differences in means observed in the Descriptive Analyses are significant. The next subsection will present the results of the statistical tests employed to verify differences in means in the performance of the Brazilian participants when performing in the L1 (BP) and in the L2 (English).

#### **4.2.2 L1 x L2 speech**

According to Goldman-Eisler (1968), provided that the cognitive task is not too demanding, attention can be devoted to the grouping of linguistic units in such a way that the pausing pattern will serve communication. The best pattern, according to Goldman-Eisler, and Lennon (1984), would be following semantic groupings, and pausing at the end of complete ideas. The idea defended by a number of scholars is that such grouping is common in the L1, where parallel processing allows fluent speech (Levelt, 1989), but more difficult to be attained in the L2 (Schmidt, 1992). As could be seen in the previous subsection, the suggestion that L1 speakers tend to package their speech in complete units so as to help comprehension might be somehow farfetched, at least for spontaneously generated speech. The results presented above are evidence that, even when speaking in their L1 (AE and BP, respectively), Americans and Brazilians produced a greater number of pauses *within* boundaries than *at* boundaries. What

remains to be investigated is if, despite having a high number of pauses located *within* boundaries in their L1 speech (BP), Brazilians had an even higher number of such pauses when performing in the L2 (English). Paired-samples *t* tests were employed to verify the difference in means between the Brazilians' performance in the L1 (BP) and their own performance in the L2 (English) in pause frequency *at* and *within* boundaries and MLR in the description and narrative tasks. Table 9 presents this information.

Table 9

*Means Comparisons between the L1 (BP) and the L2 (English) Performances of the Brazilians*

Variable	Language	<i>M</i>	<i>SD</i>	MD	<i>p</i>
Pauses description					
<i>at</i> boundaries	L1	8.51	4.20	2.13	.063
	L2	10.65	3.36		
<i>within</i> boundaries	L1	11.79	3.74	8.16	.005
	L2	19.95	7.17		
Pauses narrative					
<i>at</i> boundaries	L1	8.12	1.97	2.35	.001
	L2	10.47	1.93		
<i>within</i> boundaries	L1	9.75	3.44	9.53	.001
	L2	19.28	8.45		
MLR					
description	L1	5.40	1.49	-1.92	.002
	L2	3.47	0.76		
narrative	L1	6.07	1.47	-2.46	.000
	L2	3.60	1.03		

*Note.* MD= Mean difference between the performances in each of the languages.

A visual inspection of the means in Table 9 is enough to notice the differences between the L1 and the L2 performances of the Brazilians. The L2 speech had more *at* and *within* boundary pauses and shorter speech runs in both tasks. Focusing on pause occurrence, when we look at the mean difference between the two performances, in the fifth column, it is clear that the differences in means were smaller or greater depending on the location of the pauses. Though the number of pauses *at* boundaries was larger in the L2 speech than in the L1, the differences were not substantial. In the L2 description

task, the Brazilians' speech had 2.13 (25%) more pauses *at* boundaries, every 100 words, than their L1 speech. In the L2 narrative, 2.35 (almost 29%) extra pauses were made *at* boundaries every 100 words. If we look at the means difference for the *within* boundaries pauses, the numbers are much higher. In the L2 description, the number of pauses increased almost 70% (8.16 pauses) from what it was in the L1. For the narrative this difference was even larger, with an increase of almost 100% (9.53 pauses). More important, both these means differences attained significance ( $p < .05$ ), while only the means difference for the narrative was significant for frequency of pauses *at* boundaries.

Regarding MLR, the differences between L2 and L1 performance are somewhat similar in both tasks. In the description, the runs were almost 2 words shorter ( $MD = -1.92$ ), in the narrative, they were more than 2 words shorter ( $MD = -2.46$ ). Though these numbers might not cause much impact after the large difference in frequency of *within* boundary pauses, the speech runs were more than 35% shorter in the L2 description and more than 40% shorter in the L2 narrative than they were in the L1. Finally, the  $p$  levels ( $< .05$ ) for both means differences leave no doubt about the significance of such variation in performance.

Taken together these results corroborate predictions (Bygate, 1998; Raupach, 1984; Schmidt, 1992) and findings from previous studies (Deschamps, 1980 in Chambers, 1997; Möhle, 1989; Möhle & Raupach, 1983 in Möhle & Raupach, 1989; Rehbein, 1987; Towell et al., 1996; Wiese, 1984). As regards pause distribution, in spite of the high number of *within* boundary pauses that permeate the L1 speech of the Brazilian participants, this number increases drastically when speech is being performed in the L2. As for *at* boundary pauses, whereas there was not such a high increase in their frequency, also there was not a decrease, as happened in Deschamps' (1980 in Chambers, 1997) study.

Irrespective of whether the *within* boundary pauses happened to permit repairs, lexical search, or grammatical encoding, they nevertheless denote the inability of the L2 speaker in dealing with the demands of L2 speech production, and allow the speaker to slow down the process (Bygate, 2001; Lennon, 1984; Skehan, 1998; Wiese, 1984).

The present research draws on the information-processing approach, according to which humans are limited capacity processors and as such, can devote only so much attention to the subtasks of a complex task (such as speaking) at the same time (McLaughlin & Heredia, 1996). As Levelt (1989) put it, fluent L1 speech production is possible only because some of the subprocesses of speech generation are automatic, which permits them to work in parallel, since they do not demand attentional resources (i.e., WM).<sup>4</sup> Thus, while in the production of L1 speech most of an individual's attentional resources are used for the planning of the message content, in the L2, it is likely that all subprocesses of speech generation (i.e., *conceptualization, formulation, articulation, and monitoring*) will be controlled to some extent (Dörnyei & Kormos, 1998; Lennon, 2000; Wiese, 1984) and as such will not be able to occur in parallel (Gagné, Yekovich, & Yekovich, 1993) making L2 speech production more effortful.

The contention that many more pauses happened *within* boundaries in the L2 speech than in the L1 because most processes of L2 speech generation are under attentional control gains power when we look at findings from previous studies, where an increase in proficiency was matched with a decrease in the number of *within* boundary pauses, allowing for longer stretches of speech (Freed, 1995; Lennon, 1990; Möhle, 1989; Raupach, 1984; Segalowitz & Freed, 2004; Towel et al., 1996). Lennon (2000) argued that for L2 speakers, even low level processes, such as phonological articulation, will be imperfectly automatized, robbing energy that could be dedicated to

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<sup>4</sup> A debate still surrounds the idea that

higher-order processes such as *conceptualization*. Additionally, while Towell et al. (1996) claim that lack of fluency could be due to *conceptualization* and/or *formulation* problems, Lennon claims the main difficulties are in message *formulation* and provides three arguments to support his position. First, according to de Bot's (1992) model, during *formulation*, two (or more) systems are competing for attention; second, in L1 speech production this stage will be highly automatized while in the L2 the *formulation* is likely to be controlled; finally, there may exist deficits in linguistic storage, and the speaker might have to resort to compensatory strategies in order to convey his/her message. In line with Lennon, it is my contention that, as L2 speakers automatize some of the processes necessary for the generation of speech, through practice<sup>5</sup>, less energy is consumed by basic processes such as articulation or word search, freeing resources for those processes which have to necessarily be under control (i.e., *conceptualization* and *monitoring*).

Regarding the effects of task type, while the L1 performances of Brazilians and Americans (performing in BP and AE respectively) were somewhat affected by task type, with the description seemingly being slightly more demanding than the narrative task, the picture changes a little when the L2 performance of the Brazilians is taken into consideration. This time the differences in the performances in the two tasks were even smaller, though they continue to show a slight advantage in fluency (as measured by frequency of pauses *at* and *within* boundaries and MLR) for the performance in the narrative task. It is my belief, however, that on this occasion the language impact was so marked that any possible effect caused by the type of the task vanished, making both the narrative and the description equally demanding.

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<sup>5</sup> My opinion on how automaticity can be developed will be given in the Methodological and pedagogical implications section (5.3), in the final chapter.

To conclude, as could be expected taking into consideration the very cognitively demanding nature of L2 speech production, the English performance of the Brazilians was undeniably less fluent than their BP performance. As pointed out, the smaller runs produced by these subjects in the L2, resulting mainly from the larger number of *within* boundary pauses produced, cannot be explained by arguing that the Brazilians are following a particular BP pausing pattern, for there were no significant differences in pause distribution or MLR between BP and AE in neither of the tasks. It is suggested that this phenomenon happens due to the greater difficulty speakers have in planning and producing complete units of speech in the L2. This difficulty would be due to the complexity of the processes necessary for the production of speech, which, in the L2, are mainly under the attentional control of the speaker.

Still, to confirm the role of the variables pause frequency *at* and *within* boundaries and MLR in defining fluency, it is necessary to investigate if the pattern displayed by the Brazilians, when performing in English (L2), differs from that of the native speakers of English. The next subsection is devoted to such means comparisons.

#### **4.2.3 Nonnative x native speech**

Though studies have shown that the speech of native speakers is also punctuated by disfluencies (Ferreira, 2000; Henderson et al., 1966 in Goldman-Eisler, 1968; Luoma, 2004; Raupach, 1983 in Lennon, 1990; Temple, 2000), there is no denying that these features hardly ever contribute for a native speaker being judged nonfluent as so often happens when nonnative speakers are producing speech with those same disfluency features. According to Sajavaara (1987), hesitations can be used in such a way that they are not perceived as unnatural, which, according to Pawley and Syder (1983), can be done by having pauses *at* rather than *within* clause boundaries (p. 202).



As pointed out in subsection 4.2.1, at least in the present study, L1 speech also yielded a high number of *within* boundary pauses. Still, when a comparison was made between the L1 and the L2 speech of the Brazilians it was found that the speakers' difficulty in pausing only *at* expected boundaries was much greater in the L2. It could be, then, that though native speakers do make pauses outside the expected locations, nonnative speakers make even more.

In order to investigate this possibility, independent-samples *t* tests (for the variables frequency of pauses *at* and *within* boundaries in the description, and frequency of pauses *at* boundaries and MLR in the narrative) and Mann-Whitney tests (for the variables MLR in the description, and frequency of pauses *within* boundaries in the narrative) were run to compare the means of the Brazilians performing in their L2 (English) with the means of the Americans performing in their L1 (AE). Table 10 brings the results for the independent-samples *t* tests.

Table 10

*Means Comparisons between the Performance of the Brazilians and that of the Americans, in English*

Variable	Speaker	<i>M</i>	<i>SD</i>	MD	<i>p</i>
Pauses description					
<i>at</i> boundaries	Nonnative	10.72	3.22	-1.89	.173
	Native	8.83	2.87		
<i>within</i> boundaries	Nonnative	20.07	6.85	-7.52	.006
	Native	12.54	4.25		
Pauses narrative					
<i>at</i> boundaries	Nonnative	10.47	1.93	-3.36	.002
	Native	7.10	2.19		
MLR narrative	Nonnative	3.60	1.03	2.10	.000
	Native	5.71	1.11		

*Note.* MD= Mean difference between the performance of the two groups.

Looking at the means for each of the groups in Table 10, a difference can be seen between the performance of the native and that of the nonnative speakers of English. In

all variables, the performance of the native speakers appears to be more fluent than that of the nonnative speakers, with fewer pauses *at* boundaries in the description and in the narrative task, fewer *within* boundary pauses in the description, and longer speech runs in the narrative. If we look at the differences in means, the picture somehow resembles that obtained for the comparison between the L1 and the L2 speech of the Brazilians. The mean differences for pause frequency *at* boundaries once more are not so striking, at least in the description task, where the nonnative speakers made 21% (1.89) more pauses *at* boundaries every 100 words than the native speakers. In the narrative, this difference is more marked, with the nonnative speakers making 47% (3.36) more pauses than the native speakers. Nonetheless, when we look at the frequency of *within* boundary pauses in the description, the difference in means is a lot more salient than the difference found for *at* boundary pauses, with the nonnative speakers making 7.52 more pauses than the native speakers, an increase of almost 60%. Once more, while the *within* boundaries difference was significant ( $p < .05$ ), the mean difference for pause frequency *at* boundaries was significant only for the narrative task ( $p < .05$ ). With regards to MLR, in the narrative, the means difference is also large and significant ( $p < .05$ ), with the native speakers producing runs that were on average 60% (2.10 words) longer than the runs of the nonnative speakers.

Once more, before discussing the results for the means comparison between the speech of native and that of nonnative speakers of English, I will present the results for the two variables that were submitted to non-parametric tests (i.e., Mann-Whitney). To help with the interpretations of the results, Table 11 presents each subject's raw score for MLR in the description and that for pause frequency *within* boundaries in the narrative, each followed by the individual's rank in the group.

Table 11

*Scores and Ranking (Nonnative and Native speakers of English) – MLR  
in the description and Pause Frequency within boundaries in the narrative*

Speaker	Score MLR	Rank	Score PWB	Rank	
Nonnative	3.11	5	18.91	15	
	3.18	6	23.23	19	
	2.75	3	23.34	20	
	4.2	13	8.45	4	
	3.35	7	21.47	16	
	3.95	11	18.39	14	
	4.82	17	7.14	1	
	2.45	1	38.78	21	
	3.94	10	13.83	12	
	2.94	4	22.85	18	
	2.73	2	22.72	17	
	4.17	12	12.29	9	
	Native	4.6	16	9.24	5
		3.89	8	11.34	8
3.9		9	15.48	13	
6.92		21	8.19	3	
4.37		15	11.03	7	
5.3		20	9.94	6	
4.32		14	12.77	11	
4.84		18	12.39	10	
5.2	19	7.75	2		

*Note.* MLR= Mean length of run, in the description; PWB = Frequency of pauses *within* boundaries per 100 words, in the narrative.

Looking at the variable MLR in the description, in Table 11, we can see how this ranking differs from that of the same subjects when they were all performing in their respective L1s (see Table 7). While in that case the ranks were spread in both groups, here we can notice a clear trend. All the lowest ranks (the first 7) belong to the group of nonnative speakers and all but one of the highest (the last 8) belong to the group of native speakers. Though there were native speakers with somewhat short runs, this was not the rule. The opposite applies to the performance of the nonnative speakers, where,

on average, the runs were short, though a couple of Brazilians had longer runs than most. Table 12 presents the result for the Mann-Whitney test.

Table 12

*Comparing Ranks (Nonnative and Native speakers of English) – MLR description*

Speaker	Mean rank	<i>p</i>
Nonnative	7.58	.004
Native	15.56	

The results from the test confirm the apparent differences noticed in the descriptive statistics (nonnative speakers:  $M = 3.46$ ; native speakers:  $M = 4.81$  words) and now, in the ranking of the groups. There was a significant difference in ranking ( $z = -2.91$ ;  $p < .05$ ), with the nonnative speakers occupying lower positions, that is, having in general shorter runs, and the native speakers taking most of the high ranks.

I will now turn to the raw scores and ranking of the groups for the last variable, frequency of pauses *within* boundaries in the narrative task. Again, a trend can be observed in the ranking. While the nonnative speakers are ranked in the 8 highest positions (i.e., they are the ones who had the 8 highest number of pauses *within* boundaries in the narrative task), most of the low positions are taken by the native speakers.

There are, however two interesting exceptions. Two of the lowest positions (awarded to those participants who produced less *within* boundary pauses in the narrative), namely 1 and 4, were granted to nonnative speakers. Though within group variation is expected, the fact that the person with the fewest *within* boundary pauses in the narrative task is a nonnative speaker is somehow puzzling. However, if we look at the rankings for MLR, it is possible to observe that this subject (Participant 7) is the same one that broke the ranking pattern in this variable, attaining one of the highest ranks (17), with speech runs longer than those of most native speakers. This pattern

might indicate an idiosyncratic feature of this participant, or it might be an artifact of his approach towards the tasks.

For instance, during data collection, I noticed that Participant 7 was the one who took longer planning his speech, in the L1 and in the L2. Moreover, while few participants actually took advantage of the possibility of taking notes before commencing the task, participant 7 devoted most of his time during data collection to making notes and, apparently, planning his performance. Another characteristic of this participant is that, after such long and seemingly careful preparation, his speech samples were quite short when compared to the samples of the group.<sup>6</sup> It might be that quickly delivering a previously thoroughly planned message allowed him to be even more efficient than many native speakers.<sup>7</sup> Table 13 presents the results for the Mann-Whitney test.

Table 13

*Comparing Ranks (Nonnative and Native speakers of English) – Pause Frequency within boundaries narrative*

Speaker	Mean rank	<i>p</i>
Nonnative	13.83	.016
Native	7.22	

Once more the statistical test confirms what was speculated by looking at the groups' raw scores and rankings. The mean ranking for the nonnative group (the Brazilians, this time performing in English) is much higher than the mean rank of the native speakers of English, indicating that, in general the nonnative group produced

<sup>6</sup> Narrative BP – 2min 26s; narrative English – 1min 7s; description BP – 2min 30s; description English – 1min 24s. See Appendix M for the raw scores of both groups, in all variables.

<sup>7</sup> In a study conducted by Cohen, Weaver, and Li (1998), they found that the participants who used more written notes before performing two descriptive tasks were considered by four raters as having higher self-confidence (i.e., presenting smooth and uninterrupted speech).

many more pauses *within* boundaries in the narrative task than did the native one ( $z = -2.41$ ). The  $p$  level attained ( $< .05$ ) confirms the significance of such result.

Summing up, the results of the comparison between the performance of the nonnative and that of the native speakers resemble the comparison between the performance of the Brazilians performing in the L1 and in the L2. Though the nonnative speakers paused more often *at* boundaries than did the native speakers, this difference was marked and significant only in the narrative task. When we look at the frequency with which pauses happened *within* boundaries, however, the picture is different. Both in the narrative and in the description task there were significant and evident differences in means between the performance of the native speakers and that of the nonnative speakers. In the description, while the native speakers paused on average 12.54 times every 100 words, the nonnative speakers paused almost 60% more often (i.e., producing 20.07 pauses per 100 words). The same pattern was observed in the narrative task, with the nonnative speakers making almost 77% more pauses *within* boundaries every 100 words than the native speakers (i.e., making 19.28 pauses). As could be expected, the difference in MLR for the groups, in both tasks, was also significant, with the native speakers producing runs that were on average 40% longer in the description (i.e., 4.81 words) and 60% longer in the narrative (i.e., 5.71 words).

Regarding task type effects, the same pattern observed in the other means comparisons is confirmed here. For native and nonnative speakers the description task appears to have been more demanding, yielding more *at* and *within* boundary pauses and thus, shorter runs of speech. Nevertheless, once more these differences were small and the speaker status (i.e., nonnative x native) appears to have had a much greater influence in the performance of the Brazilians than did the task type. Looking at the differences in means between the two groups in the different tasks it is possible to

notice that the greater differences were in the narrative task, for all variables. It seems that, when performing in an L2, the Brazilians had as many difficulties to perform a narrative as they did to perform a description task.

To conclude, the results from the comparison between the L2 (English) speech of the Brazilians and the L1 (AE) speech of the Americans showed significant differences between the groups in the variables frequency of pauses *at* boundaries in the narrative task and frequency of pauses *within* boundaries and MLR in both tasks. These results corroborate the findings from the Kassel group investigations (e.g., Lennon, 1984; Möhle & Raupach, 1983 in Möhle & Raupach, 1989), who found that learners tend to present choppier speech than that of native speakers. Once more it is interesting to note that while Lennon (1984) found that nonnative speakers made more *within* boundary and less *at* boundary pauses than the native speakers, the same was not found in the present study. The results also corroborate other empirical studies that have identified pause distribution and MLR as good indicators of L2 fluency (Ejzenberg, 2000; Freed, 1995; Kormos & Dénes, 2004; Lennon, 1990; Shin, 1989 in Lennon, 1990; Möhle, 1989; Raupach, 1984; Rehbein, 1987; Riggenbach, 1991; Segalowitz & Freed, 2004; Skehan & Foster, 2005; Towel et al., 1996; Wennerstrom, 2000), though they present different results from those of Riazantseva (2001). However, as pointed out previously, it might be that the measure used in that study is not adequate to capture variation in performance.

The results from the means comparisons of the L1 and the L2 speech of the Brazilians and between the L2 speech of the Brazilians and the L1 speech of the Americans confirm the crucial role MLR has in distinguishing more (+) and less (-) fluent speakers. As for the role of pauses, what seems to be decisive in helping define fluency is the frequency with which pauses happen *within* boundaries. Though a regular

measure of pause frequency would have allowed the same conclusions reached in the present study, it is worthy of notice that while the frequency of pauses *within* boundaries was much higher in the L2/nonnative speech, the number of pauses *at* boundaries not always was effective in setting the groups apart.

All in all, the results from the means comparisons indicate that the Brazilian participants of the study had a different pausing pattern (especially due to the frequency of *within* boundary pauses) when performing in the L2 (English) from the one they had when performing in the L1 (BP). Accordingly, their MLR in English (L2) was shorter than that found in their BP (L1) samples. In addition to that, not only was their performance in the L2 (English) less fluent in the variables under investigation than their performance in the L1 (BP) but it was also, understandably, less fluent than the performance of native speakers of AE. As Lennon (1984) observed, it seems that pauses *at* boundaries are insufficient for planning in L2 speech. It appears that individuals start the statements with a general plan, but are forced to stop mid-clause to finish it.

A possible reason considered for such a difference in pause distribution was that BP has a different pausing pattern from AE and that the Brazilian participants, when performing in their L2 (English), were transferring their L1 pattern. Such a difference in pausing patterns was not found between the two languages in the variables under investigation. The alternative explanation for the different pattern followed by the Brazilians when performing in the L2 is that more pauses occurred *within* boundaries due to the higher cognitive load that L2 speech production imposes on WMC since in L2 speech production most of the processes necessary for speech generation are controlled (Fortkamp, 2005; Lennon, 1990a, 2000; Sajavaara, 1987; Schmidt, 1992; Wiese, 1984). According to Ashcraft (1994), a slower performance in a cognitive task indicates that most processes are conscious rather than automatic. To test such



alternative account, the performance of the Brazilian participants, in the L2, was correlated to their *strict* and *lenient* scores in a test that assesses L2 WMC – the L2 SST. The results for this correlation are the subject of the next section.

### 4.3 Pearson Correlations

Though there are a number of models that see WM under different lights, all have in common the fact that its capacity, however conceived, is limited (Miyake & Shah, 1999). This limitation has been found to determine, to a certain extent, individuals' performances in a number of tasks besides L2 speech production, such as L1 reading comprehension (e.g., Daneman & Carpenter, 1980, 1983; Engle et al., 1992; Tomitch, 1996, 1999-2000), L2 reading comprehension (Harrington & Sawyer, 1992; Torres, forthcoming), L1 contextual vocabulary production (Daneman & Green, 1986), and L1 speech fluency and creativity (Daneman, 1991). In the present study, Pearson correlations tests were run to verify whether part of the individuals' L2 pause distribution could be accounted for by limitations in this system (measured by the L2 SST).

At this point, before proceeding to the correlations, it is important to detail the behavior of one participant, Participant 10, who was later excluded from this part of the analysis. As the transcriptions for the oral tasks were completed, it was possible to predict a problem in the correlation between the scores in the L2 SST and the fluency measures. Participant 10, who had the highest *strict* (40) and *lenient* (44) scores in the L2 SST, clearly was not the most fluent speaker. Not only did this participant pause frequently, but also he paused for long periods of time. Once data was analyzed, it became clear that this was not just a matter of speech perception. Though Participant 10's pause frequency *at* boundaries was similar to the mean of the group in the narrative

(Part.10 = 10.35;  $M = 10.47$ ), and even smaller in the description (Part.10 = 7.73;  $M = 10.72$ ), the main problem was in the number of pauses produced *within* boundaries and, as a result, in MLR. Since he made more *within* boundary pauses than the group's mean in both tasks, his runs were shorter than the group's average in both tasks as well. Indeed, when the statistical tests were run, with Participant 10 in the group, no significant correlations were found between any of the variables and the *strict* or *lenient* scores in the L2 SST. Table 14 presents the correlation matrix.

Table 14

*Pearson Correlations- L2 SST and Speech Variables (whole group)*

L2 SST scores		Pauses description		Pauses narrative		MLR	
		at	within	at	within	description	narrative
<i>strict</i>	<i>r</i>	-.243	-.316	-.088	-.440	.358	.302
	<i>p</i>	.447	.317	.786	.153	.253	.341
<i>lenient</i>	<i>r</i>	-.376	-.088	.014	-.182	.193	.091
	<i>p</i>	.229	.784	.966	.572	.548	.780

*Note.* at= Frequency of pauses *at* boundaries, per 100 words; within= Frequency of pauses *within* boundaries, per 100 words.

As expected, due to the small number of subjects, Participant 10's particular behavior greatly affected the correlation<sup>8</sup> (see scatter plots Appendix R). According to Bachman (2005), since a correlation is the intersection of two measures, the only reason not to consider data from an extreme case is if one of the measures is not valid. In the case of Participant 10, I will argue that his scores in the L2 oral tasks do not reflect his L2 speech performance, but rather his idiosyncratic speech pattern, irrespective of the language being spoken. I delve into that in what follows.

When looking at the raw scores and the means for the group, it was possible to observe that while Participants 10, 3 and 8 had less fluent L2 (English) performances

<sup>8</sup> Though Participant 10's performance was not the least fluent, it was quite similar to the performance of Participants 3 and 8, the ones with the lowest *strict* (7 and 9, respectively) and *lenient* (25 and 32, respectively) scores in the memory test. See Appendix M for raw scores.

than the group's average; the same did not happen with their BP speech. When speaking in his L1, Participant 10 still was less fluent than the average performance of the group, but the same did not hold for Participants 3 and 8, who were more fluent than average in almost all variables. It seems then that the pausing patterns Participants 3 and 8 had in English were characteristic of their L2 performance while the pausing pattern of Participant 10 was characteristic of his speaking style. As Raupach put it, "a speaker can hardly be expected to be more fluent in the L2 than in the L1" (1980, p. 270 in Riazantseva, 2001, p. 503). Since a number of studies have found that individual styles play a role in defining one's fluency and tend to be transferred from the L1 to the L2 (Möhle & Raupach, 1983 in Möhle & Raupach, 1989) with an increase in frequency and length (Raupach, 1980; Deschamps, 1980 both in Riazantseva, 2001), I took Participant 10's L2 pausing pattern to be an artifact of his personal L1 speech rhythm and thus ran a new correlation between the fluency variables and the group's scores in the L2 SST, excluding him. Table 15 presents the matrix for this correlation.

Table 15

*Pearson Correlations –L2 SST and Speech Variables (without outlier)*

L2 SST scores	Pauses description		Pauses narrative		MLR		
		at	within	at	within	description	narrative
<i>strict</i>	<i>r</i>	-.077	-.639*	-.097	-.686*	.668*	.607*
	<i>p</i>	.823	.034	.777	.020	.025	.048
<i>lenient</i>	<i>r</i>	-.262	-.309	.033	-.328	.419	.300
	<i>p</i>	.436	.356	.924	.325	.199	.370

*Note.* at= Frequency of pauses *at* boundaries, per 100 words; within= Frequency of pauses *within* boundaries, per 100 words.

\* Correlation is significant at the .05 level (2-tailed).

As previously speculated, it was indeed Participant 10's idiosyncratic behavior that prevented a correlation between the variables assessing L2 fluency and the scores in

the L2 WMC test. Once Participant 10's scores are eliminated, interesting findings are observed (see scatter plots Appendix S).

As shown in the Review of Literature, so far, fluency (as measured through speech rate pruned and unpruned, MLR, hesitations/min, pauses/min, and pause proportion) has been found to correlate both with *lenient* and *strict* L2 SST scores in different studies. In the present investigation, though both scores were used, only one of them correlated with the participants' L2 performance, namely the *strict*. As stated in the Method, in this test participants are shown unrelated words and have to produce sentences, in English (L2), for each of them. The maximum score is the total number of words (i.e., 60) and, for a sentence to count for the *strict* score, besides being grammatically correct and semantically acceptable, it is necessary for it to be made with the words shown in a given set, in the same order and form. This is a very demanding task, especially in the L2, and it yielded a wide range of scores (from 7 to 29, without Participant 10). The *lenient* score, however, had a much lower variation in scores (from 25 to 41, without Participant 10), possibly due to the less demanding nature of this scoring since it accepts sentences made in a different order from the one shown on the set, or with a different form of the word, or still, with grammar mistakes. According to Daneman (1991), allowing participants to make sentences with a different form of the word makes the test less demanding, since a participant might intentionally use an alternative form of a word, changing its syntactic role, in order to have greater flexibility in sentence generation. Since it has been supported that differences in WMC appear only when individuals operate beyond their capacity (Just & Carpenter, 1992), it might be that these differences have been reflected only in the *strict* scores.

Second, it is interesting to note that there were no correlations between either of the L2 SST scores and the variable pause frequency *at* boundaries. As it has been

argued in the previous section, frequency of pauses *at* boundaries does not systematically distinguish L1 from L2 speech, or the speech of native from that of nonnative speakers. As such, it might not be a robust indicator of fluency. However, the two variables that proved to be good indicators of L2 fluency – pause frequency *within* boundaries, and MLR – did correlate with the *strict* score of the L2 SST, a variable used to operationalize L2 WMC, in both oral tasks. These correlations not only were significant ( $p < .05$ ) but also were reasonably meaningful, since they are all moderate correlations (pause frequency *within* boundaries –  $r = -.639$  description,  $r = -.686$  narrative; MLR –  $r = .668$  description,  $r = .607$  narrative). In other words, regarding frequency of pauses *within* boundaries, L2 WMC, as measured by the *strict* score of the L2 SST, accounted for 40,8% of the variation in the description task ( $r^2 = .408$ ) and 47% of the variation in the narrative ( $r^2 = .470$ ). As expected, this correlation was negative; that is, the higher the score in the L2 SST, the lower the score in the oral variable in question. Or, to put it more plainly, the more L2 WMC an individual had, the less frequent were his/her pauses *within* boundaries. As for MLR, the correlation was positive, with L2 WMC accounting for 44,6% of the variation in the description ( $r^2 = .446$ ) and 36,8% of the variation in the narrative ( $r^2 = .368$ ). That is to say that the more L2 WMC, the longer were an individual's speech runs.

Taken together, these results indicate that at least part of the characteristic L2 pausing pattern of the Brazilian participants may be accounted for by a limitation in L2 WMC. Though correlations do not allow causal relationships, it can be inferred that the two constructs under investigation (L2 WMC and L2 fluency) are related to some extent. In spite of being impossible to assert that all pauses that have been classified as unnatural are effectively caused by cognitive difficulties in generating speech, if we take that most of them do reflect cognitive strain, it makes sense to find that the less

attentional resources an individual has, the more instances of such unnatural pauses there will be, and the shorter the runs. Indeed, this seems to be the case for the participants of the present study.

So far, in the few studies that have attempted to disentangle the relationship between WMC and L2 fluency, more specific measures of fluency such as those investigated in the present study were hardly ever used. Fortkamp (1998, 2005) did correlate L2 WMC and silent pauses but no distinction was made concerning pause location. In both studies the results were not encouraging. In the first, no significant correlations were found between silent pause occurrence and L2 WMC; in the second, only some correlations were significant. These counterintuitive findings might have been the result of treating all pauses equally, since in the present study no correlations were found between pause frequency *at* boundaries and L2 WMC.

To the best of my knowledge, only two studies to date have taken the location of pauses in L2 speech into consideration when investigating L2 WMC, namely, Mizera (2006) and Xhafaj (2005). As shown in the Review of Literature, in Mizera's study no correlation was found between individuals' scores in the SST and the rate of intra-clausal pauses produced by these subjects in an L2 monological task. Nonetheless, this lack of correlation might be due to the SST having been done in the participants' L1. Still, Xhafaj (2005) also did not find a correlation between L2 WMC (as measured by an L2 SST) and the measure adopted to express pause distribution, namely pause distribution ratio. Yet, it might have been that such lack of correlation was due to the measure chosen, which, in the present investigation, proved not to be the most favorable measure to assess pause distribution. Unlike these studies, the present investigation brings further support for the role of WMC in the production of fluent L2 speech and

corroborates the findings of Fortkamp (1999, 2005), Guar Tavares (2006), Weissheimer (2004), and Prebianca and Finardi (in press).

Regarding MLR specifically, the present result corroborates Fortkamp's (2005) findings, where WMC correlated positively and significantly with MLR. It is also interesting that the strength of the correlations was similar in both investigations. In Fortkamp's study, in the description, L2 WMC accounted for 49% of the variation in MLR in the L2 speech of her participants while in the present study this percentage was 44,6. In the narrative the correlation was weaker in both studies, with L2 WMC accounting for 38% of the variation in individuals' scores in Fortkamp's investigation, and for 36,8% of the variation in the present study, again, very similar. To the best of my knowledge, no other studies correlated L2 WMC and MLR in L2 speech.

The correlations found between L2 WMC and the L2 fluency measures are in line with the cognitive reasoning advanced for the different pausing patterns the Brazilians presented when performing in the L1 and in the L2. The possibility that the Brazilian participants, when performing in English, had a different pause distribution from the one they had in BP due to transfer of the L1 pausing pattern was dismissed, since the two languages did not show differences in pause distribution or MLR. The explanation proposed for the greater amount of pauses *within* boundaries and shorter speech runs in the L2 than in the L1 was that L2 speech production, unlike L1 speech generation, relies mostly on controlled processes, which demand more attention (i.e., WMC) than automatic ones. Such a view is shared by a number of scholars (e.g., Fortkamp, 2005; Lennon, 1990a, 2000; Sajavaara, 1987; Schmidt, 1992; Wiese, 1994).

Moreover, besides having to devote more attentional resources for the generation of L2 speech, the bilingual speaker also has to engage some of these resources in suppressing the L1, which is likely to be highly activated and thus might interfere with

the L2 speech plan. This view is in line with Engle et al.'s (1999) view of WMC, which they define as “the capacity for controlled, sustained attention in the face of interference or distraction” (p. 104). According to them, individual differences in WMC reflect “differences in capability for controlled processing” (p. 104). Such reasoning is supported by the results found for the correlations between L2 WMC (as measured by the *strict* score of the L2 SST) and L2 fluency (as measured by pause frequency *within* boundaries and MLR).

The last section of this chapter will address each of the proposed research questions in turn.

#### **4.4 Readdressing the Research Questions**

The present study was designed to answer the 4 research questions stated in the Method, which will now be restated and answered in light of the results obtained.

Research question 1 was: Are there differences in the distribution of pauses (*at* and *within* boundaries) and MLR between pauses in the speech produced by native speakers of Brazilian Portuguese in their L1 and that produced by native speakers of American English in their L1? In other words, is there a difference between the two languages?

The answer to this question is **NO**. There were no statistically significant differences between the two languages investigated in any of the variables used to assess fluency (pause frequency *at* and *within* boundaries and MLR) in any of the tasks. At least regarding the variables investigated in the present study, both languages presented the same distribution pattern, corroborating the view that, at least for some languages, pausing patterns might be the same. An interesting finding was that though both languages presented the same pattern in pause distribution, most of the pauses



encountered in the BP and the AE speeches were located *within* rather than *at* boundaries, a finding somewhat surprising seeing that it is expected that, in an L1, pauses would tend to be placed *at* clause boundaries.

Research question 2 was: Are there differences in the distribution of pauses (*at* and *within* boundaries) and MLR between pauses in the speech produced by native speakers of Brazilian Portuguese in their L1 and that produced by the same subjects in English as L2? In other words, is there a difference between the speech of the same individual when delivered in the L1 and when delivered in the L2?

The answer to this question is **YES**. There were statistically significant differences between the speech produced by the Brazilians in their L1 (BP) and that produced in the L2 (English) in all variables under investigation, though for in one of them significance was only attained in the narrative task. Without exception, all differences found favored the L1 speech. Whereas for the variable pause frequency *at* boundaries the differences were not large and only significant for the narrative task, in the measures pause frequency *within* boundaries and MLR, the differences were much larger and significant for both tasks. The results pointed to the importance of distinguishing between *at* and *within* boundary pauses when assessing L2 fluency since while the number of pauses *at* boundaries did not increase much from the L1 to the L2 rendering, the high increase in the number of *within* boundary pauses greatly affected the way speech was delivered, breaking it in smaller parts.

Research question 3 was: Are there differences in the distribution of pauses (*at* and *within* boundaries) and MLR between pauses in the speech produced by native speakers of Brazilian Portuguese in English as L2 and that produced by native speakers of American English? In other words, is there a difference between the speech produced by a nonnative speaker and that produced by a native speaker?

The answer to this question is **YES**. There were significant differences between the L2 (English) renderings of the Brazilians and the L1 (AE) renderings of the Americans in all variables; though for one of them significance was only attained in the narrative task. Once more there was a significant, though not striking difference between the groups in the variable pause frequency *at* boundaries in the narrative task. The differences in the variables pause frequency *within* boundaries and MLR, however, were significant and more notable, in both tasks. These results support those from Research Question 2. Once more the role of *within* boundary pauses is greater than that of *at* boundary pauses in distinguishing fluent from nonfluent performance.

The reason advanced for the greater number of pauses *within* boundaries and shorter speech runs in the L2/nonnative speech than in the L1/native was that individuals' cognitive limitations prevented them from performing the more controlled processes of L2 speech generation as fluently as they did in L1 speech production, where most subprocesses are automatized.

Finally, research question 4 was: Is the Brazilian participants' L2 fluency (as measured by pause distribution and MLR) related to L2 WMC (as measured by the L2 SST)?

The answer to this question is **YES, at least in part**. The two measures found to be good indicators of L2 fluency (i.e., pause frequency *within* boundaries and MLR) correlated significantly with individuals' *strict* scores in the L2 SST. No significant correlations were found between the scores in the L2 SST and the variable frequency of *at* boundary pauses. A significant and negative correlation was found between L2 WMC (as measured by the L2 SST) and frequency of pauses *within* boundaries in both tasks (i.e., the more L2 WMC, the less *within* boundary pauses). A significant and positive correlation was found between L2 WMC (as measured by the L2 SST) and MLR in

both tasks (i.e., the more L2 WMC, the longer the speech runs). These findings suggest that L2 fluency, as measured by pause distribution and MLR is at least in part determined by an individuals' L2 WMC and lend support to the cognitive account of L2 fluency pursued by the present research.

The next chapter will present the concluding remarks, limitations, suggestions for further research and methodological and pedagogical implications of the results obtained in the present study.

## CHAPTER V

### FINAL REMARKS

The central objectives of the present study were (1) assessing differences in the distribution of silent pauses in the L1 (BP) and the L2 (English) oral speech production of 12 Brazilian participants when performing two monological tasks, and (2) disentangling the relationship between pause distribution as an indicative of lack of fluency in L2 oral speech and L2 WMC. The main purpose of this chapter is to summarize the finds of the present investigation. For that, section 5.1 presents the conclusions drawn from the major findings obtained with the analyses of data, section 5.2 brings the limitations of the study as well as suggestions for further research, and, finally, section 5.3 highlights the methodological and pedagogical implications of the present findings.

#### 5.1 Conclusions

The most important findings obtained from the data analyses were:

1. The two languages investigated – American English and Brazilian Portuguese – did not follow different pausing patterns as regards pause frequency *at* and *within* boundaries and MLR. This finding supports the view that some temporal features of speech might be universal, or at least might be shared by a number of languages.

2. Americans and Brazilians, when performing in their respective L1s (AE and BP), did not favor clause boundaries for pause occurrence. Counterintuitively, taking the literature into consideration, the participants of the present study made more pauses *within* than *at* boundaries when performing, orally, a description and a narrative task.

3. As one would expect, the L2 performance of the Brazilians was less fluent than their L1 performance, with smaller speech runs, resulting mainly from the larger number of pauses produced *within* boundaries. Understandably, the L2 (English) speech of the Brazilian participants was also found to be less fluent than that of the native speakers of AE. It was suggested that the complexity of the speech generation processes, which in the L2 are less automatized than in the L1, and thus more attention-demanding, poses a greater difficulty for the speaker to plan and produce complete units of speech in the L2 than in the L1.

4. The findings from the present research confirmed the variable MLR as an efficient measure in distinguishing more (+) and less (-) fluent speakers. As for the role silent pauses play in helping define fluency, the present results indicate that not only were there significant differences in pause frequency between the L1/native and the L2/nonnative performance of the participants, but also that these differences originated mainly from the greater number of pauses located *within* boundaries in the L2/nonnative speech. Conversely, the variable frequency of pauses *at* boundaries did not systematically set the groups apart.

5. As for task type effect, when the task was being performed in the participants' L1 (either in BP or AE) a slight effect was possible to be noticed, indicating that the description task was perhaps a little more demanding than the narrative task. When the tasks were being performed in the L2 (only English), however, this effect virtually disappeared. It was speculated that the burden of having to perform in an L2 was so overwhelming that any positive effects caused by the type of the task vanished, making the narrative task as demanding as the description.

6. Though two scores were given to each subject in the L2 SST, only the *strict* score correlated with the participants' L2 performance. The conclusion drawn was that

allowing for ungrammatical sentences, or sentences with a different form of the word, or in a different order from the one presented, makes the task less demanding, preventing individual differences from being captured.

7. While there were no correlations between L2 WMC (as measured by the L2 SST) and the variable pause frequency *at* boundaries, significant correlations were found between individuals' *strict* scores in the L2 SST and the two variables found to be consistent indicators of fluency, namely, pause frequency *within* boundaries and MLR. These results indicate that at least part of the characteristic L2 pausing pattern of the Brazilian participants may be accounted for by differences in L2 WMC.

In spite of the results being appealing, it is wise to keep in mind the fact that this was a small-scale, exploratory study, and, as such, it has a number of limitations. Such limitations will be addressed in the following section.

## **5.2 Limitations and Suggestions for Further Research**

Despite the fact that the present study was anchored in the theoretical and methodological foundations of the literature on L2 speech production and WMC, the results here presented should be treated with caution. In this section, besides presenting the limitations of the present investigation, I also present some suggestions for further research.

1. Sample size: the limited number of subjects that informed this study does not allow for its findings being generalized. While there seems to be no reason to suspect that the participants who contributed with data were atypical of the groups as a whole, larger samples of speech are necessary to substantiate the present conclusions.

2. L2 proficiency level: though the group of Brazilian participants, who contributed with L1 and L2 data, was treated as homogeneous in terms of L2

knowledge, their L2 proficiency level was not rigorously controlled. Possible differences in L2 knowledge, within the group, may have had an effect in their performance in the oral tasks and in the L2 SST. In addition to that, the L2 (BP) proficiency level of the American participants was not controlled in any way. It could be thus argued that an American who had been living in Brazil for a long period (6 years), such as Participant 13, could have had her pause distribution affected by her contact with BP and this might be masking possible differences in distribution between the two languages here investigated. As can be seen on Appendix M (Raw Data), this does not seem to be the case. Clearly Participant 13's pause profile resembles much more her American peers' than the profile of the Brazilian participants. Nevertheless, caution is in order and the suggestion is that future studies have a more strict control of participants' L2 proficiency level.

3. Differences in planning: in the present study participants were given as much time as they needed for planning. It was possible to notice, however, that the amount of time used by different participants varied greatly, with some taking several minutes before recording the task and others announcing to be ready immediately after reading the instructions. In a 1998 study, Mehnert found that the longer her subjects planned their speech (a maximum of 10 min) the more fluent<sup>1</sup> they were, so it cannot be ruled out that at least some of the differences in participants' performance was not due to the differences in amount of time devoted to planning. Another related aspect that might have had an impact on the performance of participants is how individuals planned their performance. Despite the fact that they were allowed to take notes while planning their performance (which could be later consulted while the task was under way), participants again varied greatly in how much they took advantage of such condition. As mentioned,

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<sup>1</sup> Fluency was measured by speech rate pruned and unpruned, number of pauses, MLR, and total pausing time.

in subsection 4.2.3, while some participants used this opportunity to organize their thoughts and wrote a number of sentences and phrases, others did not make any notes. In that subsection I cited the findings of Cohen et al.'s (1998) study, where the participants who used more written notes also were the ones considered to have smooth and uninterrupted speech, according to four raters.

4. Pauses serve a number of functions: As Duez (1982) observed, it is not possible to assign one sole function for pauses. Though the perspective adopted in the present investigation was cognitive, as mentioned before, that does not mean that pauses do not happen for other reasons than cognitive difficulties. Smyth et al. (1994) list a number of reasons, other than cognitive, for the occurrence of pauses in speech, such as rhetorical purposes (e.g., pausing before a dramatic utterance), discomfort, difficulty in finding the best word to convey your thought and attempting to downplay one's enthusiasm. In addition to that, there may also be physical reasons behind pausing patterns, such as weak respiration or low muscular tone (Zellner, 1994). In the present study, however, all pauses were treated equally. It is perhaps wise to keep in mind that a more detailed and qualitative analysis is vital to eliminate the threat that many of the pauses judged unnatural in the present study are actually legitimate and expected features of oral speech, and hence do not contribute to lack of fluency.

5. Clause boundaries: another point, related to the one above, is that the criterion used to classify silent pauses in the present research was based solely on the syntactic structure of speech.<sup>2</sup> However, studies have found that temporal segmentation is not necessarily equivalent to the syntactic structure of utterances (Grosjean & Dommergues, 1983 in Zellner, 1994; Tedlock, 1983). Additionally, even when the choice is made to opt for the syntactic division of speech and, among other units the clause is chosen as a

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<sup>2</sup> In the present investigation, pauses occurring *at* clause boundaries were considered as natural (i.e., serving speech comprehension) and those occurring *within* these boundaries were taken to be unnatural (i.e., hindering speech comprehension).



boundary, there still remain other issues that were not taken into consideration in the present research. First, as stated in the discussion of results (subsection 4.2.1), a possible boundary that was not taken into consideration is the one after the initial adverb of a clause. Second, the clause unit adopted was the surface clause<sup>3</sup>; nevertheless, there have been studies that found that basic clauses might be planned independently in oral speech production (e.g., Ford & Holmes, 1978 and Ford, 1982 both in Holmes, 1984; Holmes, 1988 in Holmes, 1995; Holmes, 1995). It would be interesting if researchers took also these criteria into consideration when conducting studies on pause distribution in oral speech.

6. Limited number of tasks to elicit speech: In the present study speech data was elicited through only two tasks, both monological. As Duff (1993) suggested, to attempt any claims that the data gathered reflect the interlanguage of participants, a series of different tasks must be used. Besides, as discussed, different types of tasks have been found to yield speech that is different in a number of ways, including fluency. It is therefore suggested that future studies use a greater variety of tasks to elicit data, if possible also including dialogical ones.

7. Limited features analyzed: another point to be made is that fluency, in the present study, was investigated only through the distribution of silent pauses and MLR. Many other features that contribute to fluency, such as repairs, filled pauses, and drawls were not taken into consideration and thus might have shown a different picture from the one obtained. Moreover, since no other features of speech such as accuracy, complexity, or lexical variety were investigated, it might be that, for some learners, the main focus was on one (or more) of these other features, causing fluency to be penalized (Skehan, 1998).

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<sup>3</sup> A surface clause would be equivalent to a clause such as “It is very hard to get books from the library”, which actually consists of two deep clauses, “It is very hard” and “to get books from the library” (Holmes, 1995).

8. Artificiality: the present study might be criticized for lacking ecological validity. Despite the fact that all participants seemed comfortable during data collection, their speech was recorded in a laboratory, without a “real” interlocutor, a setting that does not truly resemble the everyday use of language. Still, there do not seem to be any reasons to suspect their speech would be drastically different had they been in a more realistic context. Furthermore, as wisely defended by Duff (1993), sometimes it is necessary to sacrifice ecological validity for methodological compromise.

The next section will address the possible methodological and pedagogical insights that can be gained from the results obtained.

### **5.3 Methodological and Pedagogical Implications**

In light of the findings of the present research, it seems that the concern a number of researches have, in finding objective measures to operationalize fluency, is justified. Though the present results confirmed the predictions that less fluent (L2/nonnative) speech will tend to present more pauses at locations other than clause boundaries, thus dividing the speech into smaller and deficient segments, they also showed a somewhat unexpected distribution of pauses in L1/native speech. I doubt it, however, that the native speech of the participants of the present study would be considered anything but fluent.

The point here is that attempting to simplify such a complex construct as fluency might end up obscuring some of its characteristics. As Skehan (2003) advises, to have a comprehensive picture of fluency, there is a need for analyzing all of its sub-dimensions such as (1) silence, (2) reformulation, replacement, false starts, and repetition, (3) speech rate, and (4) automatization (through measures of length of run). Moreover, even within each of these dimensions there might be further characteristics, of each of the

features cited above, that assist researchers in their quest for a more concrete operationalization of fluency. One such characteristic seems to be the distribution of pauses in speech.

Hieke et al. (1983) claimed that pause location is crucial in determining their articulatory or psychological nature (especially in the case of brief pauses). In the present investigation it was possible to notice that while a general measure of pause frequency might suffice to differentiate between more (+) and less (-) fluent speakers, it is actually the amount of pauses *within* boundaries that makes this difference.

A possibly important pedagogical contribution provided by the present study is related to testing. Generally, silent pauses are seen as negative and the performance expected from test takers could be defined as virtually impossible since more than often the ultimate aim is “native-like” performance. Yet, such rapidity might be achieved by both native and nonnative speakers only at the cost of errors, which, unfortunately, would not be accepted in nonnative speech (Lennon, 1984). As Luoma (2004) pointed out, features such as lexicalized phrases, fillers, hesitation markers, and repetitions, which are common in native speech, usually are seen as negative when they appear in the speech of nonnative test takers. By the same token, we can speculate that the occurrence of pauses *within* boundaries, which are thought to be extremely rare in native speech, in the speech of nonnative speakers, might result in a test taker being awarded a lower grade. Whereas frequency of pauses *within* boundaries *does* play a role in defining fluency, what needs to be emphasized is that these pauses are not present only in the non-fluent speech. Though in a much smaller amount, they also pervaded the L1 speech of all participants in the present research.

Finally, the finding that L2 fluency (as measured by pause distribution and MLR) is at least to some extent determined by humans’ innate cognitive limitations might shed

some light on the apparently unexplainable behavior of some L2 speakers/learners. As Harrington (1992) stated, research on aptitudes is often abandoned in favor of the study of interventions that facilitate learning. Nonetheless, such traits can provide instructors, parents and learners with an “independently motivated explanation for observed differences in L2 development” (Harrington, 1992, p. 124). Moreover, a better understanding of the factors accounting for this variation might also provide us with a greater understanding of the systematic characteristics of L2 development and use.

Though the research conducted was on L2 speech performance rather than L2 speech acquisition or development – since it is my contention that speech production is a complex skill which needs to become automatized in order to happen fluently – a final point concerning how this automatization might come about is in order. According to McLaughlin (1987), to improve one’s L2 language production, especially at advanced levels, lexico-grammatical processes must be automatized, through practice. An appealing proposal that might serve this purpose is that put forward by Swain (1995), the output hypothesis. Basically, according to Swain, during comprehension learners can bypass the syntactic analysis of speech by relying on semantic cues and strategies. Since this is not possible when speech is being generated, it is speech production that will drive interlanguage development. Without disregarding the role of input, Swain advances four functions for output production – a hypothesis-testing function, a metalinguistic function, a noticing/triggering function, and a *fluency* function. According to the author, providing learners with opportunities to produce the same structures repeatedly, in meaningful contexts, can help develop the speed with which L2 knowledge is accessed (i.e., automaticity).

To conclude, as I have said somewhere else (Xhafaj & Prebianca, 2006), oral speech production is such a challenging task that rather than feeling frustrated with the

difficulties presented by L2 speech generation, one should feel powerful for accomplishing such task so skillfully in the L1.

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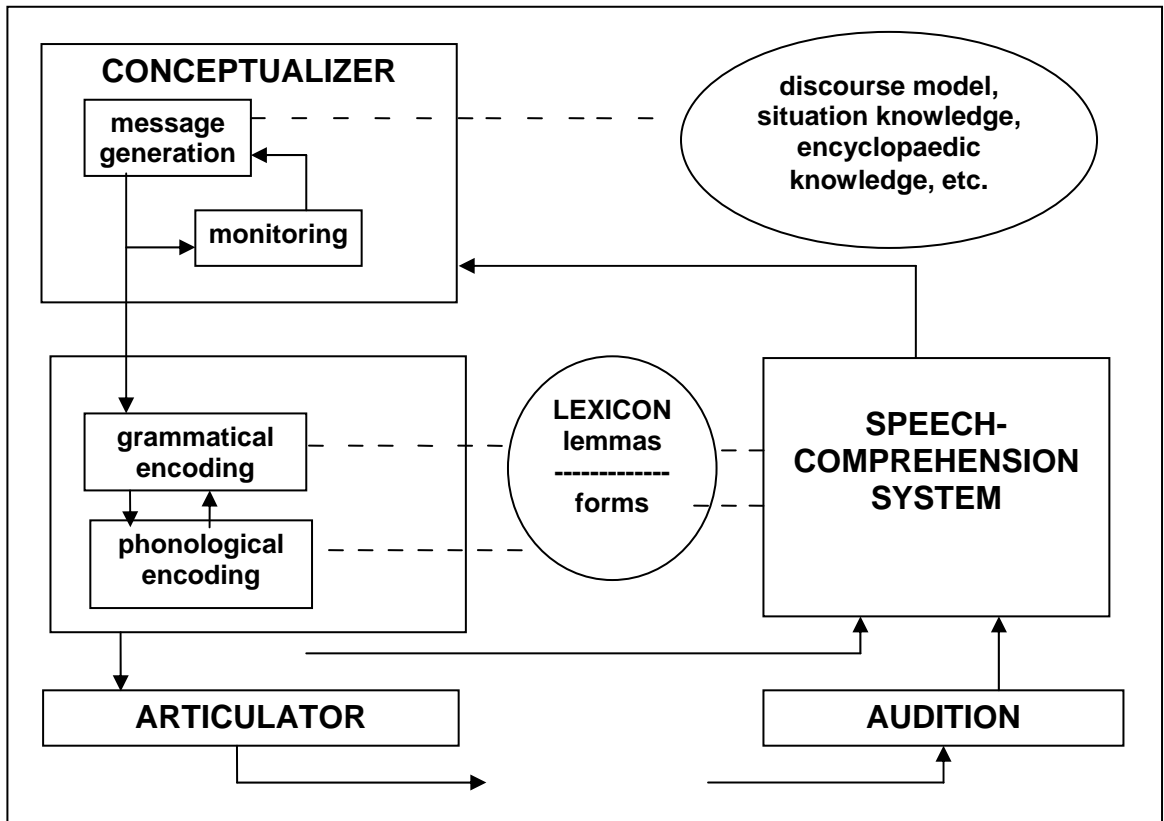
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## **APPENDIXES**

APPENDIX A

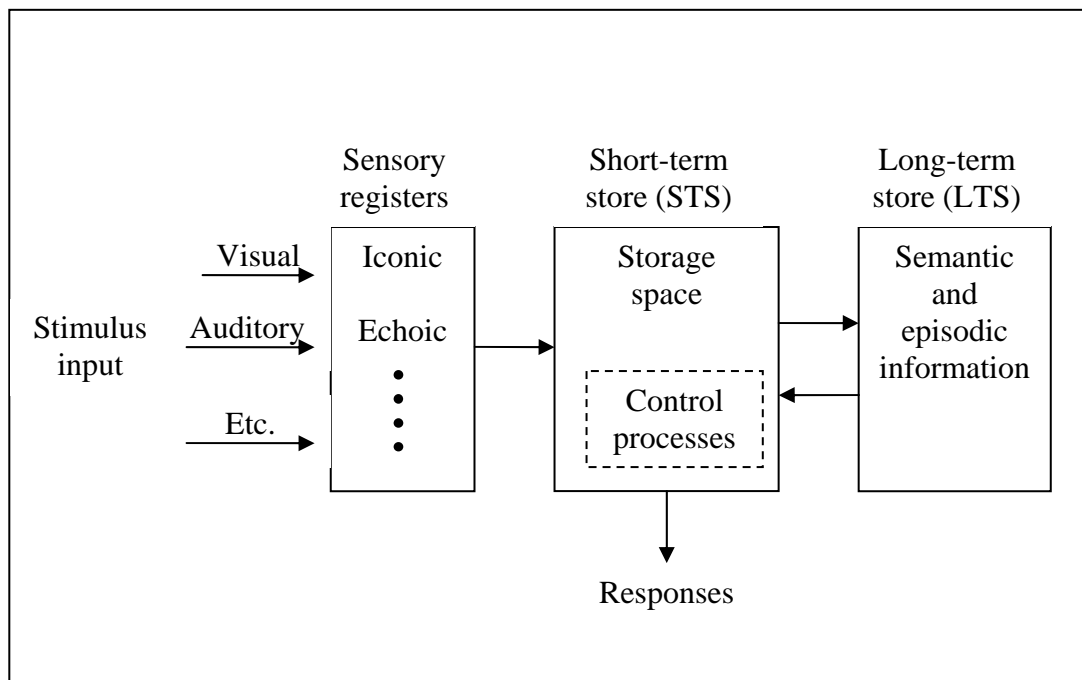
Levelt's Blueprint for the Speaker (adapted from Levelt, 1989)





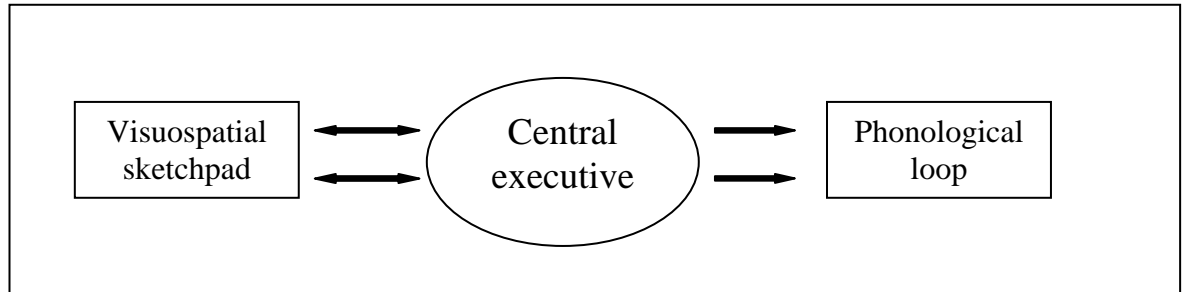
APPENDIX B

Atkinson and Shiffrin's (1971) "modal model" (in Gregg, 1986)

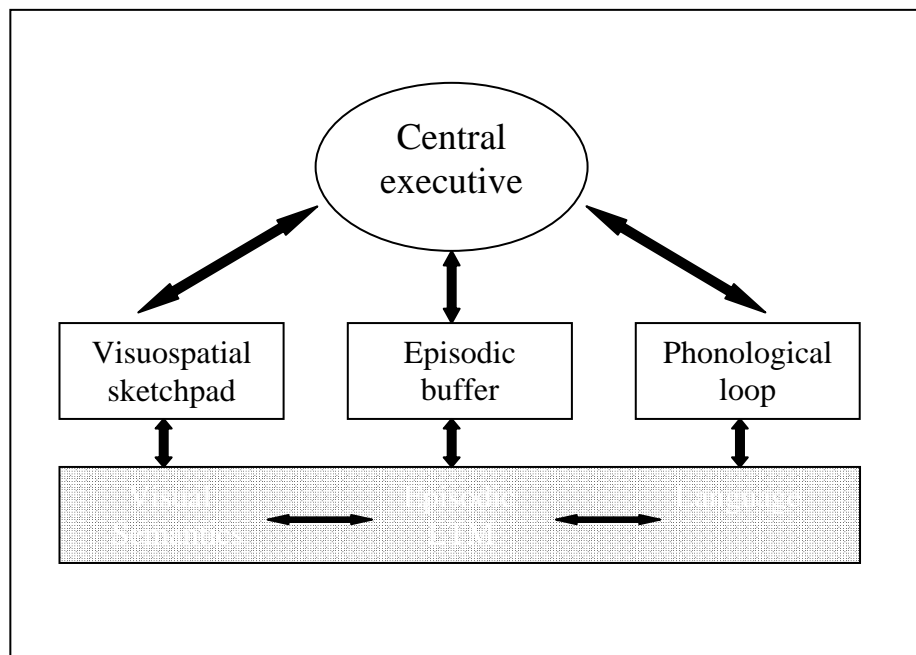


## APPENDIX C

### The working memory model



*Figure C1.* The three-component model of working memory proposed by Baddeley and Hitch (1974 in Baddeley, 2000).



*Figure C2.* The current version of the multi-component working memory model (Baddeley, 2000).

## APPENDIX D

### Profile Questionnaire – Brazilian Participants

**UNIVERSIDADE FEDERAL DE SANTA CATARINA  
CENTRO DE COMUNICAÇÃO E EXPRESSÃO**

**DEPARTAMENTO DE LÍNGUA E LITERATURA ESTRANGEIRA**  
Programa de Pós-Graduação em Inglês e Literatura Correspondente

#### PROFILE QUESTIONNAIRE

Name: \_\_\_\_\_  
Male ( ) Female ( ) Age: \_\_\_\_\_ Mother tongue: \_\_\_\_\_  
Education: \_\_\_\_\_ Professional activity (if any): \_\_\_\_\_  
E-mail address: \_\_\_\_\_  
Phone number: \_\_\_\_\_ Extracurricular level: \_\_\_\_\_

Answer the following questions either in English or in Portuguese. Don't worry about the possible mistakes you might make concerning either grammar or vocabulary. The purpose here is not to evaluate your written performance.

1. How long have you been studying English? (please indicate if you stopped and started again throughout the years)  
\_\_\_\_\_
2. Have you ever been to an English-speaking country? If so, how long did you stay there?  
\_\_\_\_\_
3. When was the last time you were in an English-speaking country?  
\_\_\_\_\_
4. In which level did you start the Extracurricular English course? Did you study English before that?  
\_\_\_\_\_
5. Where have you studied English? (at school, in a private language course, etc.) If you studied in more than one place, please indicate the time spent studying in each one of these places.  
\_\_\_\_\_
6. Do you speak English regularly outside class? How many hours a week?  
\_\_\_\_\_
7. Do you consider yourself fluent? Why? Why not?  
\_\_\_\_\_
8. Do you focus in any aspects when you are performing orally in English? Which ones? For instance, are you concerned with grammar? Pronunciation? The content of the message? The interlocutor? Etc? Refer to any of these topics and/or insert any other aspects you generally focus on.  
\_\_\_\_\_

APPENDIX E

Profile Questionnaire – American Participants

**UNIVERSIDADE FEDERAL DE SANTA CATARINA  
CENTRO DE COMUNICAÇÃO E EXPRESSÃO**

**DEPARTAMENTO DE LÍNGUA E LITERATURA ESTRANGEIRA**  
Programa de Pós-Graduação em Inglês e Literatura Correspondente

**PROFILE QUESTIONNAIRE**

Name: \_\_\_\_\_ Phone number: \_\_\_\_\_

Male ( ) Female ( ) Age: \_\_\_\_\_ Mother tongue: \_\_\_\_\_

Education: \_\_\_\_\_ Extracurricular level: \_\_\_\_\_

Professional activity (if any): \_\_\_\_\_ E-mail address: \_\_\_\_\_

1. How long have you been away from the U.S.?

\_\_\_\_\_

2. How long have you been living in Brazil?

\_\_\_\_\_

3. Have you ever been to another Portuguese-speaking country? If so, how long did you stay there?

\_\_\_\_\_

4. Have you studied Portuguese before entering the Extracurricular course? (either formally or by yourself) For how long?

\_\_\_\_\_

\_\_\_\_\_

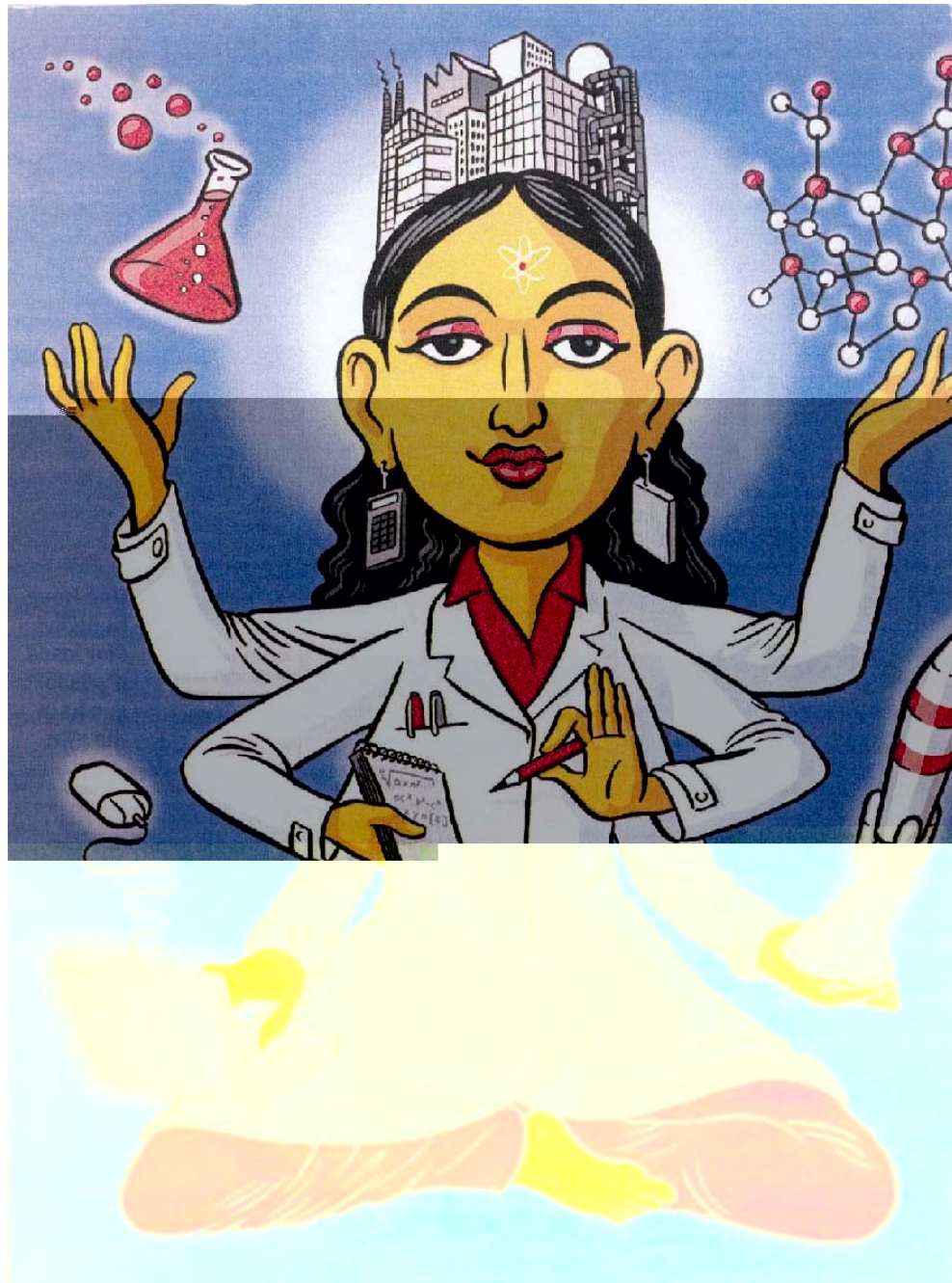
5. Currently, in your daily life, do you speak more Portuguese or English? Or you would say you speak about the same amount of each?

\_\_\_\_\_

\_\_\_\_\_

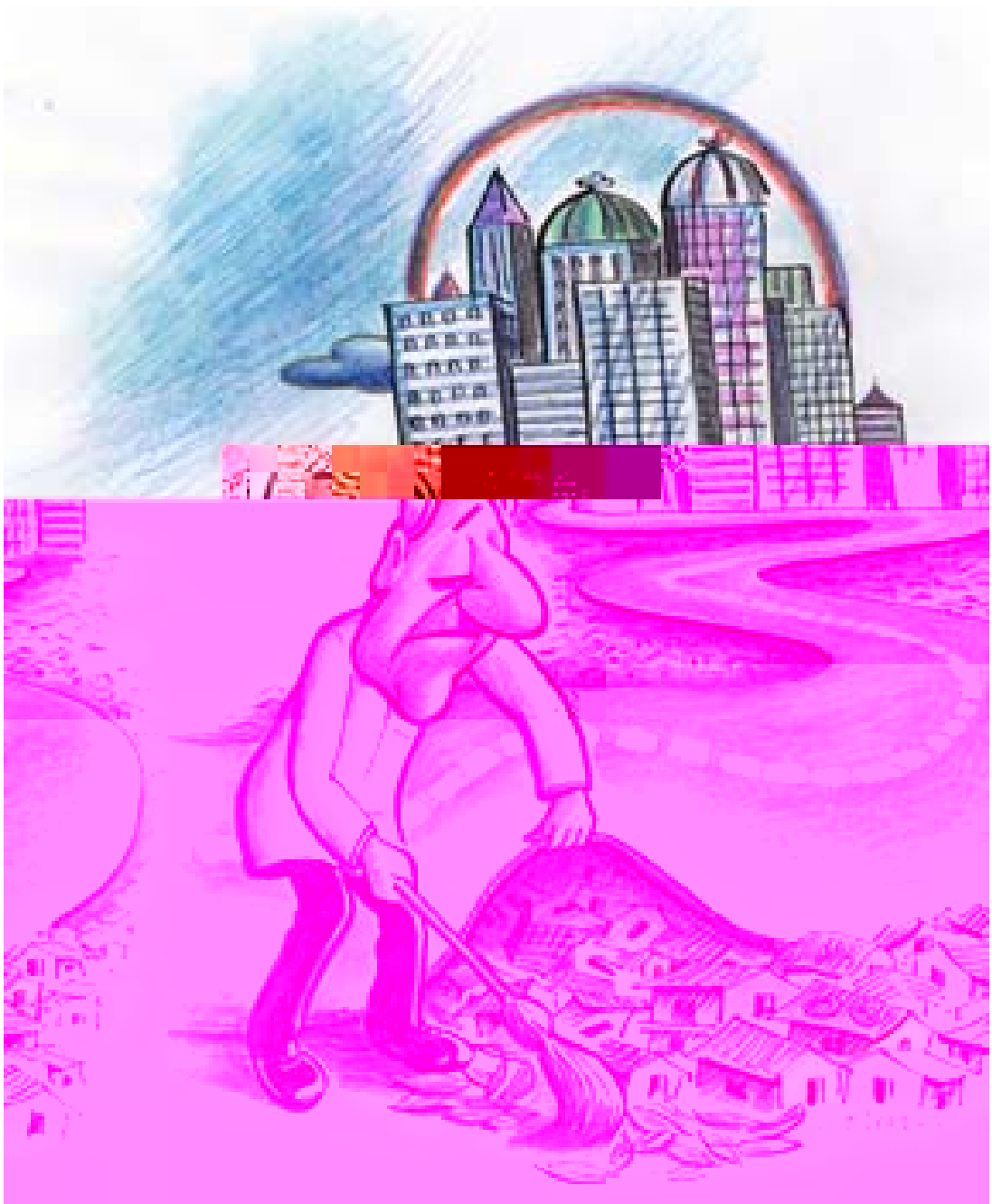
APPENDIX F

Picture used for the Picture Description task – woman



## APPENDIX G

Picture used for the Picture Description task – man



## APPENDIX H

### Instructions for the Oral Tasks<sup>1</sup>

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CENTRO DE COMUNICAÇÃO E EXPRESSÃO**

**DEPARTAMENTO DE LÍNGUA E LITERATURA ESTRANGEIRAS**

#### Picture Description

You will be shown a picture and will have to describe this picture and make comments about it. Try to describe the picture as if I had not seen it. Besides describing the picture, you also have to give your opinion about the message the picture carries, if any. Try to speak as much as possible about the picture, there is no time limit. Before speaking, you can plan what to say and check any vocabulary difficulties you have. You can also write down any words or sentences you might want to use. You can check your notes quickly while speaking but **you cannot** speak as if you were reading them. The task will only start when you feel ready.

#### Narrative

I want you to retell the story of a movie you have seen which you have liked or disliked. Besides retelling the story, you also have to state why you liked (or not) the movie. Try to give as much information as possible; once more there is no time limit. Again, before speaking, you can plan what to say and check any vocabulary difficulties you have. You can again write down any words or sentences you might want to use. You can check your notes quickly while speaking, but remember: **you cannot** speak as if you were reading them. The task will only start when you feel ready.

---

<sup>1</sup> As stated in the method, the order of the tasks was counterbalanced so as to avoid task effects. In this example the first task was the Picture Description and the second the Narrative.

## APPENDIX I

### Words used in the L2 Speaking Span Test

<u>Training</u>	<u>1st Trial</u>	<u>2nd Trial</u>	<u>3rd Trial</u>
People	Cake	Week	Bird
Earth	Hand	Rain	Cup
Soccer	Duck	Club	Snow
Wife	Pen	Spring	Paper
Power	Gas	Knife	Cheese
World	Desk	Table	Blouse
Summer	Road	Sky	Class
Ocean	Glass	Deer	Farm
Apple	Brain	Ball	Letter
Monkey	Sun	Bank	Day
Kiss	Mouth	Shirt	Arm
Clothes	Key	Egg	Water
Vase	Bag	Date	Box
Novel	File	Hair	Mail
Worker	Clock	Cow	Dog
Dress	Wave	Pair	Room
Head	Tool	Church	Night
City	Coat	Sea	Spoon
Plant	Map	Bus	Woman
Moon	Year	Dinner	Butter



## APPENDIX J

### Instructions for the L2 Speaking Span Test

**UNIVERSIDADE FEDERAL DE SANTA CATARINA  
CENTRO DE COMUNICAÇÃO E EXPRESSÃO**

**DEPARTAMENTO DE LÍNGUA E LITERATURA ESTRANGEIRAS**

Programa de Pós-Graduação em Inglês e Literatura Correspondente

#### **Instruções para o teste de capacidade de memória de trabalho**

Você fará uma tarefa que verificará sua capacidade de memória de trabalho durante a produção oral. Memória de trabalho refere-se a sua capacidade de, ao mesmo tempo, processar e armazenar informações.

Você deverá memorizar determinadas palavras e fazer frases gramaticalmente corretas com essas palavras em Inglês. Suas frases serão gravadas.

Você primeiro terá uma sessão de treino que poderá ser repetida caso você não se sinta confortável com a dinâmica da tarefa.

A dinâmica da tarefa é a seguinte:

Cada sessão (de um total de 3) terá 5 conjuntos de palavras.

As seqüências começam com um conjunto de 2 palavras e aumentam progressivamente até 6 palavras, cada palavra aparecerá na tela do monitor por 1 segundo.

No final de cada seqüência (de 2, 3, 4, 5, e 6 palavras) aparecerá uma tela vazia.

Você deverá então usar cada palavra da maneira que foi apresentada e na seqüência apresentada para formar, com cada uma delas, frases gramaticalmente corretas em Inglês. Evite fazer sempre o mesmo tipo de frase (ex., “I like fish”; “I like to play soccer”, “I don’t like to watch TV”) e lembre-se de que as frases devem fazer sentido.

Você deverá falar essas frases em voz alta e começar imediatamente após a tela vazia ter aparecido.

Uma vez que as frases foram formuladas, o pesquisador clicará “enter” e então um novo conjunto de palavras aparecerá.

Essa dinâmica se repetirá até que o número máximo de seis palavras for apresentado.

Uma tela branca aparecerá, sinalizando que a 1ª sessão está encerrada.

Atenção, concentração e empenho!!!!!!

## APPENDIX K

Consent form signed by the Brazilian participants

**UNIVERSIDADE FEDERAL DE SANTA CATARINA  
CENTRO DE COMUNICAÇÃO E EXPRESSÃO**

**DEPARTAMENTO DE LÍNGUA E LITERATURA ESTRANGEIRAS**  
Programa de Pós-Graduação em Inglês e Literatura Correspondente

### **Formulário do Consentimento Livre e Esclarecido**

Título do Projeto: “Pause distribution as an indicative of L2 fluency and its relationship with working memory capacity” (Distribuição de pausas como um indicativo de fluência em Segunda Língua e sua relação com a capacidade de memória de trabalho)

Gostaria de lhe convidar a participar de um projeto de pesquisa sobre o desenvolvimento da habilidade oral e a memória de trabalho em inglês. A memória de trabalho é um sistema cognitivo que tem um papel importante quando realizamos uma tarefa complexa como falar uma língua estrangeira. Você está sendo convidado(a) a participar deste estudo por estar em processo de desenvolvimento da habilidade oral em inglês. Se você aceitar participar, por favor leia este consentimento e, se concordar com a informação aqui apresentada, assine onde indicado. Uma cópia ficará comigo, pesquisadora responsável pelo projeto, e outra com você.

Objetivo do Estudo: O objetivo deste estudo é contribuir para a definição de fluência em segunda língua e investigar a relação entre a memória de trabalho e a produção oral em inglês. Os dados coletados neste estudo serão utilizados na minha dissertação de Mestrado que tem como orientadora a Prof. Dra. Mailce Borges Mota Fortkamp (UFSC/CCE/DLLE/PPGI – mailce@cce.ufsc.br).

Procedimentos: Se você aceitar participar deste estudo, você será solicitado a realizar as seguintes tarefas: descrever uma figura e narrar uma estória em inglês, descrever uma figura e narrar uma estória em português e uma tarefa de memória de trabalho em inglês (criar oralmente sentenças para palavras que lhe serão apresentadas na tela de um monitor). Em todas as tarefas, suas respostas serão gravadas em fita K-7, para posterior análise. A realização das primeiras tarefas será em horário de aula e será feita aqui mesmo, no laboratório do CCE. A tarefa de memória de trabalho será feita no CCE “B”, fora de horário de aula, em horário no qual você e a pesquisadora tenham disponibilidade.

Riscos e benefícios do estudo: Não há riscos em participar deste estudo. Antes de realizar as tarefas, você terá tempo de se familiarizar com elas e fazer todas as perguntas que quiser, até se sentir totalmente confortável com elas. Em contrapartida, você poderá aprender mais sobre o desenvolvimento da sua habilidade oral. Ao final da pesquisa, os resultados do estudo serão tornados públicos, mas sua identidade será totalmente preservada e não será incluída nenhuma informação que possa identificá-lo (a). Somente a pesquisadora deste projeto e sua orientadora terão acesso aos dados coletados.

Natureza voluntária do estudo: Sua decisão de participar ou não deste estudo não irá afetar você ou sua relação com a Universidade de nenhuma forma. Se você decidir participar e depois decidir desistir, não tem problema. Você poderá desistir a qualquer momento. Peço apenas que você me notifique, você não precisa se justificar.

Pesquisadora responsável: Donesca Puntel Xhafaj (donesca@hotmail.com; 3282.9519/9980.3126)

Declaração de consentimento:

Declaro que li a informação acima. Quando necessário, fiz perguntas e recebi esclarecimentos. Eu concordo em participar deste estudo.

Nome: \_\_\_\_\_ Data: \_\_\_\_\_

Assinatura do participante

Assinatura da Pesquisadora Responsável

## APPENDIX L

Consent form signed by the American participants

**UNIVERSIDADE FEDERAL DE SANTA CATARINA  
CENTRO DE COMUNICAÇÃO E EXPRESSÃO**

**DEPARTAMENTO DE LÍNGUA E LITERATURA ESTRANGEIRAS**  
Programa de Pós-Graduação em Inglês e Literatura Correspondente

### **CONSENT FORM**

Project title: “Pause distribution as an indicative of L2 fluency and its relationship with working memory capacity”

I'd like to invite you to take part in a research Project about second language speech development and working memory capacity. You are being invited to participate in this research for being a native speaker of American English; read this consent form and if you agree with the information contained here and you are willing to take part in the study please sign where appropriate. One copy of the form will stay with me, the researcher in charge of the project, and the other will be yours.

Objective of the study: The objective of this study is to contribute to the definition of second language fluency and investigate the relationship between working memory capacity and speech production in English as a second language. As a native speaker of American English you will contribute with speech which will be used in a comparison with the speech produced by Brazilian speakers of English as a second language. The data collected in this study will be used in my M.A. thesis which is being advised by Dr. Mailce Borges Mota Fortkamp (UFSC/CCE/DLLE/PPGI – mailce@cce.ufsc.br).

Procedures: If you accept to participate in this research you will be asked to perform two oral speech production tasks, in English, namely, a narrative and a picture description. These tasks will be audio taped for further analysis. In order to gather the data from these tasks you will have to meet the researcher at UFSC on a date and at a time that best suits you. The completion of the two tasks should not take longer than 30 minutes.

Risks and benefits of the study: There are no risks in taking part in this research. Before performing the tasks you will have time to get familiarized with them and ask questions until you feel comfortable with them. On the other hand you will be helping second language learners like yourself. At the end of the research the results of the study will be made public but your identity will be preserved and no information will be provided that might make your identification possible. Only the researcher and her advisor will have access to the data collected.

Volunteer nature of the study: Your decision in taking part or not in this study will not affect you or your relation with the University in any way. If you decide to participate and later on decide to give up, there's no problem, you can quit at any moment. I just ask you to notify me, no justifications are needed.

Researcher: Donesca Puntel Xhafaj (donesca@hotmail.com; 3282.9519/9980.3126)

I declare I have read the above information. When necessary I made questions and received clarifications. I agree in taking part of this study.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Participant's signature

Researcher's signature

## APPENDIX M

### Raw data for the Brazilian and American participants

Table M1

*Raw Scores – Brazilian participants – L2 SST and Description Task*

Part	L2 SST scores		Description Task							
	Strict	Lenient	MLR		AT		WITHIN		TIME	
			Eng	BP	Eng	BP	Eng	BP	Eng	BP
1	29	33	3,11	4,12	13,58	8,07	19,75	16,14	2min 23s	1min 51s
2	20	33	3,18	5,9	8,36	4,43	24,26	10,68	2min 2s	3min 9s
3	7	25	2,75	7,5	13,63	8,4	21,8	4,92	4min 10s	3min 1s
4	22	33	4,2	6	13,09	8,66	11,9	8	43s	1min 7s
5	24	32	3,35	-----	11,56	-----	21,33	-----	8min 27s	-----
6	24	37	3,95	6,78	6,47	3,15	18,23	12,63	1min 27s	1min 23s
7	29	33	4,82	5,81	11,24	8,88	9,46	8,88	1min 24s	2min 30s
8	9	32	2,45	6,15	8,67	4,84	35,2	11,39	5min 46s	2min 21s
9	24	37	3,94	6,73	7,04	4,85	19,01	10	2min 33s	2min 27s
10	40	44	2,94	3,72	7,73	11,87	25,59	15,7	2min 24s	3min 6s
11	19	37	2,73	3,15	17,07	16,16	21,34	16,16	2min 46s	2min 52s
12	21	41	4,17	3,57	10,27	14,4	13,01	15,2	1min 18s	1min 19s

*Note.* Part= participant; MLR= mean length of run; AT= frequency of pauses *at* boundaries, per 100 words; WITHIN = frequency of pauses *within* boundaries, per 100 words; TIME = total spoken time, in this task.

Table M2

*Raw Scores – Brazilian participants – Narrative Task*

Part	Narrative Task							
	MLR		AT		WITHIN		TIME	
	Eng	BP	Eng	BP	Eng	BP	Eng	BP
1	3,28	4,63	11,85	7,07	18,91	16,33	3min 5s	6min 16s
2	3,01	6,45	8,68	5,85	23,23	10,73	4min 12s	5min 27s
3	2,61	6,43	12,89	8,68	23,34	7,01	4min 49s	15min 29s
4	5,74	9,13	9,45	5,85	8,45	5,34	1min 20s	2min 21s
5	3,28	7,62	8,5	7,45	21,47	5,66	11min 4s	9min 23s
6	3,78	7,01	8,23	5,66	18,39	8,78	4min 3s	3min 10s
7	5,25	5,44	11,9	8,76	7,14	10,41	1min 7s	2min 26s
8	2,27	5,07	9,41	7,96	38,78	11,87	5min 27s	5min 24s
9	4,07	6,8	9,43	7,54	13,83	7,03	2min 29s	9min 1s
10	2,82	4,16	10,35	11,55	22,85	13,33	6min 52s	6min 39s
11	3,19	4,28	10,6	11	22,72	13,12	4min 31s	10min 09s
12	4,01	5,9	14,45	10,12	12,29	7,43	4min 54s	3min 40s

*Note.* Part= participant; MLR= mean length of run; AT= frequency of pauses *at* boundaries, per 100 words; WITHIN = frequency of pauses *within* boundaries, per 100 words; TIME = total spoken time, in this task.

Table M3

*Raw Scores – American participants*

Part	Description Task				Narrative Task			
	MLR	AT	WITHIN	TIME	MLR	AT	WITHIN	TIME
13	4,6	11,11	10,6	1min 45s	5,73	7,87	9,24	4min 47s
14	3,89	8,74	14,75	1min 38s	4,24	9,1	11,34	4min 39s
15	3,9	10,63	17,6	2min 41s	3,94	11,67	15,48	3min 16s
16	6,92	9,79	3,6	1min 7s	7,11	5,38	8,19	2min 20s
17	4,37	13,8	10,47	2min 27s	5,58	6,5	11,03	3min 53s
18	5,3	8,11	12,28	3min 50s	6,93	5,92	9,94	11min 22s
19	4,32	5,97	17,16	57s	5,2	7,35	12,77	4min 36s
20	4,84	6,99	14,68	2min 10s	6,5	4,7	12,39	4min 6s
21	5,2	4,36	11,79	1min 48s	6,19	5,49	7,75	3min 59s

*Note.* Part= participant; MLR= mean length of run; AT= frequency of pauses *at* boundaries, per 100 words; WITHIN = frequency of pauses *within* boundaries, per 100 words; TIME = total spoken time, in this task.

## APPENDIX N

### Transcriptions Oral Tasks – for the first 5 minutes of speech in each task

#### 1. Description Task

##### 1.1 Brazilian participants ( in English)

###### PARTICIPANT 1

[In this picture] [I have here] (1.641) uh: [there is a (.261) Indian woman (1.517) with six arms] (1.414) [a:nd each wa- (.302) in (.220) each arm (.789) she's hanging (1.153) some different (.227) things] (.329) [like (.439) in one is a computer] [in another one a (.707) paper] (.673) [in the other (1.311) a chemical product] (1.428) [a rocket] [a pencil] (1.462) [and some (1.909) structure of (.418) atoms] (1.510) [in her head (.302) there is a: (1.009) city] (2.156) [and she's wearing (.899) earrings (.288) like calculators] (1.497) [or calculators like earrings] (1.744) uh: (.796) [she is (2.486) concentrated] [I think] (1.991) [she wears a white blouse (2.012) with (.542) pink (.402) pants] (.899) [she has no shoes on] (1.572) [and there is a: (1.703) nuclear mm- (7.719) uhm (6.235) eh there is something on her (.542) fronthed ] (2.273) [I think] [the message] [the picture is trying to pass (.528) is] [that (.892) to get a: good job nowadays] (1.394) [we need to: study a lot of things about different areas] (1.813) [we: have to know a little bit of many things] (.851) [or we: (.570) wou- wo: (.234) won't be (2.245) won't get a: good job] (10.576) [I think is a (.446) f- fine (.576) picture] (1.806) [a little bit confused] [but (1.222) yeah (1.483) lets you] (.228) [thinking].

###### PARTICIPANT 2

[The girl] [I see in the picture] [is seems like a (.781) a chemical eng- engineering] (.910) uh (.851) [why do I say that] (.274) [well I see in the (.571) one of the six hands of her] [that uh make me feel (.991) think] [that (.425) she's like a (.390) Indian totem] (.875) uh (.384) [I see one of (.402) two of her hands (.781) the a: (1.831) bottle (.525) of (.175) uh: (.187) a (.157) pink (.210) uh liquid] (.793) [and uh (.332) a lot of uh (1.400) a (.216) atomic mo- (.233) model] (1.248) [a:nd that (.338) uh we have a: (1.960) a (.163) atom in the (.665) in i- (.828) on the top of her (.898) her face] (1.201) [we- uh: (1.435) h- (.169) she feels very rela- (.513) relaxed too] (.851) [and what can I s- in (.711) well in (.285) the other hands the other two hands we have a (.219) a (.116) pencil] (.665) [and a: (.536) a piece of paper] (.251) [when she (.676) uh where she wr- writes all her (.711) her numbers] [and (.513) the (.384) things s- she has to wri- (.239) to write] (.793) [and in the other (.349) the other hand she ha- she is (.525) writing a on a laptop] (.781) [and in (.222) in the last one (.641) she uh she has like a (1.248) a: rocket (.525) in her hand] (1.666) uh: (.373) [her (.192) in her ears I can see (1.236) two calculators] (.502) [and and uh (.851) uh (1.096) on his hair (1.038) I can see a: (.334) a lot (.402) of b- buildings] [and a like a industries (1.096) like some industries] (.367) [and the make of the development] (1.248) [well (1.026) I don't think] [she should be very relaxed (.268) this (.501) relaxing (.116) face] (.525) [cause she's an engineer] [and (.571) and they they (.274) have a lot of t- a lot of work] (.851) [they (laugh) they are not usually (.676) with uh (.167) with this expression].

###### PARTICIPANT 3

[The picture has a (1.240) a man] (.569) [who seems a: butler] (.724) [and h- (.581) and he: (.323) he is (2.488) sweep uh the poor house under (.311) the street (1.330) like if under a (3.103) a rug] (4.265) uh [for the: rich people don't see them] [and promove the tourism (.425) for (.467) the city] (1.258) uh [the weather was (.162) great] (.954) [there is a rainbow] (.820) [and (.299) a lot of (.234) buildings] [and these buildings (.190) are very beautiful] (.608) [the windows (1.406) are like mirrors] (3.279) [the colors are (4.971) the colors are (9.817) the colors are beautiful] (3.502) uh [the city uh is like a (1.289) a modern (4.220) without pollution] (3.150) uh [the city seems very cle:an] (1.479) [but (1.011) I don't see (.234) birds (.469) animals or (1.040) flowers (.395) trees] (1.934) [maybe the people in the city are rich] (.249) [and (.542) don't want to see (.176) the poor people] (1.816) [maybe they uh want (.380) promove (1.582) the tourism] (3.018) [and (1.069) constructure a: (1.377) and (.366) to constructure (1.582) the (2.212) dream city] (6.794) [the colors of poor house (1.230) aren't (.498) beautiful] (5.245) [but they are there] (3.047) [I think] [the message (.147) is] (1.699) [the: some people want to: (1.611) forget (.234) the the other (.219) people] (1.479) [but they are there] (.219) [they want to see] (2.710) [the rich people (.645) uh don't like to see them] [but (.630) they (.351) still (.205) there] (1.090) [and they try to: (7.062)



they try to: (2.886) to forget] [that they (1.128) exist] (6.119) [the city is the value of (3.414) modernism] (8.469) [and it is a (4.776) dream city] (6.872) [we can't forget the poor people] (.996) uh (.440) [we need (2.286) we need help them] (.981) [we need look at them] (4.894) [it's it].

#### PARTICIPANT 4

Uh [this picture shows a man] [who's like (.418) sweepi:ng (.432) houses under the road] (.506) [and in the back there's uhm (.587) a city] (.654) [it seems really (.195) clean] (1.563) [I don't know] [maybe they are slums] (.955) [and is like a criticims (.486) criticism] [or like] (2.032) [I don't know] (.250) uh: (.257) [not looking at poverty] [and just trying to hide it] (1.850) [it could be that] (.499) [or: (2.687) make like (2.106) or maybe it's just about] [cleaning the: (1.087) the cities] [and making (.553) our life better] (1.377) [making look really nice] [cause (.236) that's what] [the country needs] (1.735) [that's it].

#### PARTICIPANT 5

[Well (1.182) my picture uhm (.602) show a man] (1.426) [who is: uh sweeping (1.677) the houses and uh (.673) the poor house the poor population (1.505) to under the road] (3.017) XXX (2.021) XXX (1.712) [and so he is uh (.602) t-the picture uh (.752) shows a: a man (.458) an old man (1.247) with uh: (.630) white hairs (1.562) uh (1.555) with a broom] (.888) [sweeping (.831) all these houses] (.494) [that are (1.096) around the city (1.562) around (1.419) the big city (2.293) around the country] (1.777) [and he is sweeping these house] [these population] (1.798) [this this dirt] (.666) [this dust] (1.562) [all these things] [that are (.580) bad very bad] (2.823) [and (.258) the picture (2.960) in addition the picture shows] uh (1.103) uh: (1.612) [when finish the road] (.121) [many: (.924) many build (.752) many buildings] (1.555) [and a rayroad (7.740) and and rainbow (1.763) on them] (.946) [the sky is blue and gray (.243) with some (4.486) blue and grey (.573) blue and grey] (.974) [and the: the buildings are beautiful] [are big] (2.150) [are: (.344) colors] (.788) [I don't know] [green and (.272) purple] (.143) [the XXX (1.419) rainbow] (1.075) [that is on (.430) these builds] (2.092) [it's re:d (.845) purple green] (.602) [the colors are beautiful] (1.691) [it's a beautiful city] (1.189) [a m- modern city] (2.121) [and this popula- (.186) this (.566) the great (.931) the most of population the great part of population] [that lives around the the builds the road] (2.128) [is being (2.293) is being sweeping (1.261) by the (.358) by that man] (2.723) [m- I (.473) I (.430) for me what means this picture is that: (4.601) is] [tha:t (1.318) the man it's tired (.824) the old man is tired] (.430) [he wants to change] (.759) [he's tired of these (.559) poor (.530) the poor people] (.974) [these poor people this poor is dust] (2.178) [he's tired of this] [he wants modern] [he wants (.559) to increase] (.974) [so (2.508) he's putting (1.390) the houses (.673) under the road] (2.379) [the city (.129) is increasing (.702) on (1.576) on this house (1.175) on this (1.161) on this *severals* house] [there are several several a lot (.716) really a lot of house (.172) there are s- (.229) a lot of house in the (.372) the road] (.960) [and the city is being (1.763) constructed (1.333) on (.372) on these house] (.974) [on these people] (1.863) [the man is tired for me] (2.452) [the road (.416) oh I forgot to say] [that the road is grey] (2.264) [and its center (.301) the middle (.931) is (.200) white (.702) with some points white] (3.167) [it's a f- (1.060) what's happening (.315) is] [the (.344) economy is increasing] (1.849) [they want finish the *poory*] (.430) [they want forget these people] (.358) [besides is more ambitions] (.201) [and want to increase (2.924) nowadays] (2.562) [so has more ambitions] [they want to increase] [they want to begin the economy] (2.336) [they want to: (2.365) begin] [no sorry] [they want to increase the economy they want to (2.307) to increase the economy] (.473) [without (.358) to to (.387) to increase the] [**5'00"**]

#### PARTICIPANT 6

[The picture is from a: woman probably an engineering] (.486) [is an (.167) has a (.385) blu:e (1.232) blu:e (.913) sky around (.167) or something] (.260) [she's probably a chemistry engineering] [because (.394) she has (.746) calculators for earrings] [she has a lot of (.830) she has some molecules in her hand] (.469) [and some notebooks] [and some notes of (.737) of uh some equations as as well] (.670) uh [pens on her: (1.349) her pockets] (.511) [she has a atom (.729) figure on her (1.098) face] (.385) [and in the end (.243) in uh beside of her there is a (.821) uh (.603) a picture of a plant of industry som-] [probably uh (.184) a place sh-] [where she wants to work] (.561) [she haves has a: lot of arms] (.452) [to: carry all those (.578) those things] [that (.277) engineering has (.575) to: has to have (.335) like uh computers and (.586) pencils (.310) and (.746) chemistry things (.469) and a r- a rocket as well] [on (.226) on (.260) h-her hand she has six hands] [to cal- (.352) to carry all those things] (.746) [she's s (2.188) has a long (2.389) black hair] [a:nd (1.022) she's probably a chemistry engineering] [because (.511) of the things] [that are in the picture] (.628) [but that's pretty much that].

#### PARTICIPANT 7

[This picture seems like a (.126) *charge*] (.564) [I don't know] [how to say that in English] (.580) [making fun of a politician] (.934) [at the top in the right (.295) in the right side (.586) there are many

buildings] uh (.773) [representing a happy and beautiful city] (1.450) [there is a n- rainbow] [passing over the city] (.440) [and half a cloud] [hiding uh behind the buildings] (2.046) uh: (.789) [there is a road] [going out of the town] (.428) [and at the bottom of the picture (.516) in the right you can see a: man] (.175) [sweeping all the houses uh along the way] (1.853) [l- like (.313) he's sweeping the garbage under (.507) the:] (2.245) [no no no (.886) let me go back] (9.216) [the man (.548) eh s- (.277) seems like] [someone hiding the garbage (.789) under (.313) uh (.193) a rug] (.446) [that's] [what's he's doing with the (.175) the the houses] (.645) [all the houses seem like (.120) seems like (.277) poor houses like (.259) *favelas*] [I would say] (1.643) uhm (.773) [the man seems very old with gray hair] (1.079) [he is in a in a white shirt] [and his pants and shoes are black] (.301) [and he is sweeping with the broom (.162) in his right hand].

### **PARTICIPANT 8**

[This (.148) picture (.546) eh: (.377) have a woman] (1.042) [n- (1.307) I think] [the: (.596) she is she was (.827) have meditation] (1.936) [b- but he: (1.009) she have (.513) six arms] (.272) [and (1.224) each arm have (.546) something] (.745) uh [one a- (.278) one arm have a (.396) rocket] [other a *portatil* computer] [other a (.513) pencil (.254) with (.513) notes (.291) mathema- mathematical notes] (.827) uh [other have a (.943) a:

(.675) are (1.644) are now] (.373) [I mean now these days] [working with (1.351) with so many things] [that before it was just (.231) for men] [or (.822) or maybe saying] [that (.456) uh (2.026) that uh (1.365) I don't know] [about (.231) like (.445) multi- (.280) m- I don't know (laugh) (.203) exactly the word in English] [like (.142) *multidisciplinary* (.910) uhm (.866) work you know] [that means] [that you have to be a (.631) a good (.324) professional these days] [you have to know a little bit (.704) of: (.269) of everything (.242) you know like math (.159) and (.395) physics and chemical and (.866) chemistry I mean] [and uh (.969) you have to: work with computers] (1.674) [and and that's it].

#### **PARTICIPANT 10**

[Well the picture (.636) shows a: (1.328) a road] (.388) [that lead (.913) leads to a: beautiful city] (2.131) [and (.512) there is a man (.276) with a broom in his hand] (1.439) [and he is sweeping (.443) all the: (1.910) the (.221) ugly parts] (1.176) [that could be in the city] (1.854) [sweeping (.678) a:n- and he's (.431) sweeping it (2.366) into (5.287) it's putting all the: the trash under the: (.207) the road] (1.868) [like trying to: (1.688) to hide all the: (.849) the ugly (.359) parts of the city] (3.294) [and (5.080) this picture represents a: (.941) common scenery (2.103) in the: cities (1.702) of Brazil] (.332) [because (1.674) all (.318) big cities (1.342) have (.207) its (.872) beautiful and (.705) ugly parts] (2.228) [a:nd (4.11) many times (1.854) the govern tries to: (1.439) hide the (.221) poor parts] (.235) [and (3.446) try to: (.429) convince us] [that everything is good] (2.768) [but there is (1.647) deficient parts] [there is every parts] [that h- have to: (1.051) to be helped] [and (.581) and have to: (.692) to be developed (.388) to into better things] (1.370) [the ugly parts must be (.359) turned to: (.858) good things] [and (2.800) and the:y (.276) they must (1.522) they must heal the (2.297) the ugly parts] [not to (.262) not try to hide them] (3.418) [and that's it].

#### **PARTICIPANT 11**

[I see an interesting picture] (1.258) [I see (.637) a man] (1.179) [that is: (.542) sweeping: (.526) houses (.764) on the r- road (2.980) uhm (.876) and leaves] (.417) (laugh) (.733) [he has a big nose] (1.211) [he is sad] (2.613) [he's not young] (1.497) [he wears (.924) black pants (.197) and a white (2.358) shirt] (2.151) [in: (.908) the end of the road I see (1.466) a good (2.486) town (2.135) downtown] (.988) [there are (1.673) many: (2.167) big (.622) buildings] (1.115) [and (.131) there's a rainbow] (1.784) [there (.542) there are clouds] (1.529) [it seems to be (.161) clean] (3.059) uh: (.892) [in the first plane] (.844) [as I have said] (.574) [there are (1.737) the houses] [that are being swept (1.472) by the: old man] (2.310) [I think] [is (.381) the outskirts] (3.601) [to me this means] [that (2.023) the man (.892) is poor] (.828) [and has to hide him (.526) and (.327) the others (2.709) in the town] (.780) [to hide I mean] (3.537) uhm (.653) [not bother (.510) rich people] (2.900) [and: (5.354) the road is very long also] (.764) [it seems] [that (laugh) (.860) it takes a long time for (1.737) these poor people] [that lives (.908) that live in outskirts] (4.637) [they have to: take (2.183) two or three buses (laugh) (.381) to clean (1.227) for the rich (.375) in the town] (2.326) [a:nd (8.892) that's it].

#### **PARTICIPANT 12**

Uh (.165) [this pictures I'm s- this picture I'm seeing right now] (.900) [I really like it this picture] [cause (.615) look like the woman of the future (.420) with calculator: (.442) chemistry things notes (.300) and (.225) special: special (.547) something (.345) a building] (1.065) uh [besides that I really like it this picture] [because I'm taking (.127) en- chemical engineering major here in the: at a (.405) at UFSC (.420) at the university] (.547) [and this girl seems to be as (.105) seems to me as a chemical engineering (.758) cau- engineerer] (.638) [cause she has the chemistry thing] (.420) [the: molecular:] (.653) [the atomon] (.502) [the: (.105) computer] (.675) [the pen] (.240) [the notes with some (.112) calculus] (.915) [and a: (.157) a (.180) h- huge industry (.540) behind her f- behind her head] (.795) [she looks to me a chemistry engineering (.968) a chemical engineer] (.840) uh [that's why] [I like this] [I really like this picture] (.698) [I hope uh: to be like her (.120) in the future maybe] (.233) [with many things to do] (.255) [and she seems to be happy with that].

### **1.2 Brazilian participants (in BP)**

#### **PARTICIPANT 1**

[A figura] [que eu tenho aqui] [é uma figura be:m (2.357) bem colorida] (1.322) [ela: (.586) nela tem (1.418) u:m (.778) uma estrada] (.416) [que leva a uma cidade] (1.898) [que eles querem dizer] [que é perfeita] [uma cidade limpa (.127) com um arco-íris e (.266) nuvens (.479) azuis e céu azul] (1.365) [e: (.863) na frente da (.842) da figura tem u:m (.234) um homem] [que varre (1.013) a: (.554) uma favela pra baixo da: (.639) da estrada] (2.133) [acho] [que a: f: figura (.405) representa:] (.778) [o que muitos

políticos tentam fazer] [que é esconder a pobreza] (2.858) [botar pra debaixo do tapete] (2.357) [e: falar] [que: (1.866) que: a cidade é boa não (.757) coisa] [mas eles tentam jogar a: (.703) a pobreza pra: (.842) pras periferias] [pra que a: (1.951) cidade não (1.599) não fique (4.511) feia] (2.527) [nessa figura o ele tá com uma cara bem esnobe] (.836) [varrendo (1.685) a: favela pra baixo do (2.143) baixo da estrada] (10.089) [é] [eu acho] [uma (1.621) uma boa p- uma boa (1.066) pintura] (2.069) [que realmente te:m (.704) a maioria dos políticos tenta fazer isso né] (1.855) [esconder] [o que é ruim] [e mostrar] [o que é bom].

## PARTICIPANT 2

[Bom na imagem] [o que que a gente pode ver] (.390) [é u:m senhor] (.127) eh [varrendo a sujeira pra baixo do asfalto] (1.016) [bom eh esse velho p- eh: esse senhor] [que aparece na foto] (.381) [ele está com uma roupa bem limpa] [então aqui parece] [que ele ele (.217) t- tá (.889) seria (.327) tá trabalhando para o pessoal] [que mora acima do asfalto] [que é o (.354) é o: seria o mundo ideal] [e é o mundo desenvolvido] (.771) [no qual há até um (.372) um arco-íris acima dos prédios] (.707) [e no qual parece correr tudo bem] (.762) [bom eh como ele tá com a roupa (.226) roupa branca] [parece que] [ele é é uma pessoa bem limpa e ele seria o o olhar dele de indiferença ou até de de (.217) tristeza (.707) se- ah eu acreditar mais de indiferença seria (.163) de (.861) bom ele ele é o ele se- faz uma tarefa] [que ele sempre faz] [e (.580) que n- parece] [que não há nada] [que vá mudar isso] [e não não ele não parece se preocupar muito com isso] (1.270) [bom (.417) eh: abaixo do asfalto] [que que seria seria a a (.607) seria toda a a parte des- subdesenvolvida do mundo] (.517) [e que: s- eh: na verdade eh com (.254) seria como a vassoura está levando tá levando toda sujeira pra eles] [e: na verdade talvez a (.172) a sujeira se (.127) se se: (.226) juntaria com eles] [e eh a sujeira] (.562) [a física e e a humana] (.318) eh: [seria considerad- as considerad- considerada a mesma por eles] (.553) [pelo mundo desenvolvido] (1.506) [bom (.318) o que que a gente pode notar aqui no papel também é] [que não tem não aparece nenhuma pessoa no pap- na nas cidades (.417) senão o: (.145) o senhor] (.517) [então (.172) o o que que é o que que eles tariam (.108) eh: enf- enfatizando seria o (.698) o: q- as c- a: (.299) a situação (.172) além do do eh a situação] eh: [seria a casa] [o (.807) onde eles moram] [a (.606) a vida] [que eles levam] [e: (.217) na qual eles não não participam] (.743) [e (.226) talvez eles estejam n- os pobres estejam nas casas ou não] [mas não não isso não: (.345) parece não importar muito no papel (.771) na imagem] (1.524) [bom eh essa situação aqui (.671) é: de de (.644) uma forma de] [eles levarem toda a sujeira] [e o (.553) o mundo dos eh des- desenvolvido (.190) eh ficar a m- a mil maravilha] [não não é tão real (.771) eh já que n- no Brasil pelo menos] [já que essa (.734) as as (1.061) os pobres convivem juntamente com os ricos e: numa: (.390) num espaço (.136) muito (.426) eh muito pequeno (.354) uma (.117) variação muito pequena não tem muita variação] (1.506) [bom eh: (5.773) na verdade ess- talvez essa situação não seja culpa só dos dos subdesenvolvidos] [já que tem muita gente] [que (.453) tem a oportunidade] [e é pobre] [e não não não chega não (.607) não consegue aproveitar (.318) talvez por ignorância] [isso s- isso seria (.553) culpa dos ricos] [seria culpa deles] [não sei de quem] [que é a culpa] (.988) eh: (.743) [porém lógico] [que se (.172) se houvessem iguais condições] [o que é: (.462) é impossível] (.607) eh [num num (.671) a situação não ocorreria] (3.139) [ bom eu creio] [que essa foto aqui (.789) eh: foi tirada dum dum site d- charg- de charges na Internet] (.979) [e: um um charge (.662) é estrangeira] [não é brasileira não].

## PARTICIPANT 3

[A imagem é (.424) ti- (.147) é uma imagem indiana assim] [é uma mulher (.450) sentada com as pernas cruzadas se- sentada em cima das pernas (.996) co:m (.164) três (.121) pares de braços] (1.005) [e em cada (.719) mão ela carrega uma coisa] (.450) [numa mão ela carrega moléculas] (.502) [na outra ela carrega algum elemento químico] (.927) [numa um bloquinho de notas] [na outra um lápis] [na outra mão um foguete] (.650) [na outra mão um computador] (.866) [aí na orelha dela numa das orelhas tem um: (2.826) um:a calculadora] [na outra orelha tem uma (.164) placa (.866) de circuito talvez de um computador de um elemento assim] (1.118) [no meio da testa dela tem o símbolo de um átomo] [e na cabeça dela uma cidade assim uma indústria] (2.227) [no bolso do: jaleco dela ela está vestida com um jaleco um jaleco] (.329) [usado por cientistas] (.546) [onde há duas canetas] [uma cinza e uma cor-de-rosa] (.641) ah [e por baixo desse jaleco ela veste uma roupa cor-de-rosa] (1.109) [usa sombra nos olhos rosa e um batom cor-de-rosa também] (1.300) [o cabelo dela é extremamente (.338) preto] (1.222) [e: levemente ondulado] (3.051) [bom esses aqui são símbolos da modernidade da indústria] (.771) [do momento] [que a gente vive hoje] (1.733) [que: assim está cada vez evoluindo cada vez mais] (1.725) [e: as pessoas estão fazendo cada vez mais coisas] (1.690) [a tecnologia vai avançando] [nós vamos tendo que avançar junto com essa tecnologia] (.797) ah [não basta fazer apenas uma coisa] [nós temos que fazer várias coisas] (3.155) [e isso é representado pela (.710) m- multiplicidade de coisas] [que ela tá segurando] [esses vários braços] (1.629) [mas a principal mensagem] [que quer passar] [é a indústria científica de atualmente] [que está evoluindo cada vez (.424) mais] (2.392) [a modernidade cada vez

maior] (6.276) [e: (.112) com tanta coisa com tantos afazeres (1.066) ah é necessário] (.702) [nós mantermos nossa calma nossa paz de espírito] (.528) [que o que ser- é o q- é] [o que seria simbolizado pela figura indiana] [que eles transmitem muito isso muito a espiritualidade] (.546) [e que que então não basta só a parte material a parte científica] (1.014) [tem também o lado emocional] (3.519) o lado emocional o lado dos sentimentos] (.892) [que não devemos pensar apenas com a razão] [mas que devemos carregar o sentimentalismo (.563) junto].

#### **PARTICIPANT 4**

[Então na figura aparece uma mulher:] (.457) [e ela tem: (.674) seis braços] [e cada braço tem uma coisa] [tem um: foguete] [uma estrutura química] (1.021) [um erlemeyer] (.101) [um computador] [um bloco de notas] [tem uma calculadora] [com-] (.298) como se fosse o brinco dela:] (1.224) [tem uma cidade atrás dela assim] (.508) [na verdade eu acho] [que eh (.988) fala meio da mulher ser multi-] (.145) fa-] (.255) multi facetas assim] (.376) [de ela ter várias] (2.424) tem que ter assim um:] (.708) como é] [que eu posso falar] [tá (1.860) se desdreb-] (.337) desdobrando (.573) em várias] [pra tá atuando em todas as áreas da vida dela] (.376) [e também pra tá: conquistando o mercado de trabalho dela] (.795) [porque por mais que falem] [que: (.241) que já tá conquistado e tudo mais] (.520) [acaba sendo uma coisa meio desprezada] (.120) mulher e homem assim] (.867) [então tem uma cidade atrás dela] [que pode ser (1.537) a questão da conquista dela] (.462) [e o resto é conhecimento] (2.154) [acho] [que é isso].

#### **PARTICIPANT 5 – there was an unknown technical problem with Participant’s 5 recording Description task in BP.**

#### **PARTICIPANT 6**

[Bom a a figura traduz ah (.495) claramente a figura de uma cidade com a] (.216) parte privilegiada] (.631) a pequena parte privilegiada no fundo] [onde (.567) tudo é (.599) bonito e tudo] (.727) [e: a grande parte sendo varrida pra debaixo (.511) da estrada digamos] [a parte mais] (.679) favoreci-] (.151) mais desfavorecida mais pobre da cidade] (.743) [que é a maior] [sendo varrida pra debaixo da: grande estrada] [que leva at- até a parte mais bonita (.479) e provavelmente a mais rica da cidade] (1.854) [acho] [que as (.391) mensagens (1.327) eh escondidas nessa] (.767) nessa figura] [é de (.559) cobrir os defeitos] [meio que: (.823) ignorando (.711) a: as partes necessitadas em nome de uma minoria mais favorecida] [e desprezan- e mes- ao mesmo tempo desprezando (.583) toda aquela parte] [que realmente sustenta] (1.087) que sustenta a pa-] (.183) que sustentaria a parte rica] [que tá toda bonita] (1.207) [no final (.167) da: pintura (2.014) na figura] [quem tá varrendo (.199) as favelas e as outras coisas pra baixo da estrada] [é um homem com a cara (.951) bem fria até de desprezo assim] [e as outras as casas (.719) mais feias e tudo ficam (.256) bem escondidas (.151) pela estrada] [que leva até a parte bonita da cidade] (.543) [como se tudo fosse perfeito] [e não houvesse defeitos].

#### **PARTICIPANT 7**

[A figura mostra uma mulher com traços indianos] [eu diria] (.157) [numa posição de yoga] (1.061) [ela: (.415) na posição dela tá de pernas cruzadas] (.103) [e o pé direito tá sobre o pé esquerdo] (1.527) [a mulher tem seis braç- braços como uma deusa hindu] [e está colocada sobre um fundo azul (.114) com um halo branco em volta da cabeça] (.630) [atrás da cabeça dela tem uma:] (.136) uma outra figura de:] (.523) [que tem construções (.315) fábricas] (1.398) eh [na testa dela ela usa um símbolo do átomo como terceiro olho] (.752) eh [ela tem cabelos negros crespos] (.774) [e veste uma roupa rosa com um jaleco branco] (1.039) eh [no jaleco] (.458) cad- cada manga do jaleco tem um botão] (.759) [e: o jaleco tem um bolso no peito no lado direito] (.932) [onde tem duas canetas] [uma rosa (.229) do lado direito e uma cinza do lado esquerdo] (1.312) ah (2.731) [ela usa batom e sombra rosa] (2.380) [o brinco nessa orelha direita (.136) é uma calculadora] (.129) [e o brinco da orelha esquerda (.176) eh parece um chip] (5.133) [tá (.645) eh (.179) nos braços eh superiores dela no braço direito (.237) ela: (.150) carrega (.172) na mão dela um erlemeyer] (1.089) [que tem um líquido borbulhante rosa] (.989) [e na: na ou- na mão oposta tem um] (.294) uma representação geométrica дума (.201) molécula] (1.735) [tá (.537) n-] (.143) nos braços do meio (.394) ela tem (.365) eh na mão direita (.287) uma:] (.408) um bloco de notas com algumas contas (.774) m- m- matemáticas] (.788) [que tão sendo feitas com a mão oposta] (.365) [que segura um lápis rosa] (1.412) [na: nos braços inferiores ela] (.143) na mão direita ela tá digitando num notebook] [que tá conectado ao mouse] (.659) [e na mão esquerda] (.215) da mão esq- da palma da mão esquerda sai um foguete] (.422) um foguete] [que tá levantando vôo] (2.480) [t-] (3.599) bom (1.147) ah: a mensagem da figura] (.215) [bom pra mim a figura mostra uma representação da: da Índia atual] (.323) [do seu lado altamente tecnológico assim] (.229) [a Índia é hoje um dos maiores pólos de tecnologia do mundo] (.967) [e a figura mostra também] [acho] [que a] (.136) o lado tradicional da cultura indiana na representação da

(.781) da: (.932) da deusa hindu] (.953) [mas:] [eu acho] [que: (.194) apesar de mostrar a urbanização e tal] (.294) eh [ela não mostra a pobreza] [que ainda existe bastante no país].

### **PARTICIPANT 8**

[A figura me (1.618) me parece uma: uma cidade] [o que eu analisei] [uma cidade bonita né (.593) e (.296) com uma estrada] [e: em volta (1.078) varrendo a sujeira pra embaixo do tapete] [como é] [que se fala] (.660) [que é escondendo (.134) as mazelas né] [e: (.994) e (.161) só mostrando o lado bom das coisa] (.161) [isso acontece m- (.202) m- (.876) acontece bastante no Brasil mas também em muitos países] (.593) [por exemplo nos Estados Unidos a gente só não vê as favelas os o os bairros pobres (.513) na tevê nos filmes] [mas eles existem também] [tem pessoas que visitam lá] [que: (.526) que dizem que] [também tem né] [mas não (.405) em tamanha proporção claro que aqui] (.606) [e que lá também ele escondem melhor] [aqui a gente não esconde tão bem assim] (1.335) [e: isso é um (.445) eu na minha opinião é um contraste de (.660) do próprio sistema] [que (.323) que a gente vive né] [o sistema capitalista] [e esse contraste sempre vai existir (1.335) principalmente nos países subdesenvolvidos e em desenvolvimento] (.175) [porque ele são os mais os explorados da história né] (.782) [então como eles são os países explorados] [eles (.323) tendem a ter (.188) mais pessoas exploradas (.553) né] (.620) [e no caso do do Brasil (.378) a gente tem (.337) esse lado bonito é menor né] (1.092) [logo no caso dos países] [que exploram] [esse lado bonito é maior] [mas (.337) essa proporção sempre vai existir (.121) em todos os países] (.795) [e nesse sistema (.998) vai se perpetuar sempre] [é: complicado (1.065) imaginar um (.229) um sistema capitalista sem a pobreza sem os os explorados sem (1.618) as pessoas] [que são varridas pra baixo do tapete digamos assim] [que não querem (.620) a opinião delas (.350) não prevalece] (.930) [os problemas delas não nã- não não são interessante de ser resolvido (1.011) né] [porque (.256) economicamente (.256) não é v- não é interessante né] (.337) [que o sistema capitalista se baseia na (.782) no que no que dá lucro] (2.117) [que: quem (.283) tem mais dinheiro] [que tem mais poder] [então (.930) quem não tem dinheiro] [não tem poder] [e é varrido pra baixo do tapete] (1.200) [no que (1.362) não (.486) não vai fazer diferença né no caso] (.607) ah [se você ajudar os (.121) desfavorecidos] [não vai te trazer (.229) mais dinheiro] (.432) [não vai te dar mais poder] (.121) [então (.337) isso e- eles não fazem].

### **PARTICIPANT 9**

[A figura mostra um: (.296) um senhor de idade assim ao longe uma cidade bem bonita prédios (.579) um arco-íris] (.705) [e: cá ao longe tipo numa estrada (.621) eh um senhor] (.635) [tipo puxando assim a estrada] [e botando (.480) meio que limpando em baixo umas casinhas assim bem (.522) bem feinhas assim bem pobres] (.790) [que: ele varrendo com uma vassoura] [tipo assim botando a- (.438) a sujeira debaixo do do (.438) do tapete] (1.510) [e: (1.595) tá isso:] [eu acho] [que: reflete assim] [o que acontece (.352) geralmente nos grandes centros assim urbanos nas grandes cidades] (.776) [o que acontece é isso] [que: (.762) muitas vezes cê tem os (.705) os (.621) a cidade é bem bonita] (.409) [quando cê olha assim (.607) por fora] [geralmente como turista você só vê a parte bonita] (.438) [que daí geralmente eles fazem questão de (1.115) de: (.691) de] [deixar a parte] [que o turista o- (.197) que o turista vê] (1.242) [bem bonita bem (1.115) bem arrumada e tal] [mostrando] [que a cidade é bonita] [mas se você entrar] (.579) [se você for conhecer a cidade inteira mesmo] [sempre te:m (1.087) tem a parte né a parte] (1.524) [digamos que eles botam escondem das cidades] [que é] [onde tem as favelas] [onde tem a pobreza] (.551) [onde tem a: (.352) geralmente (.395) fica em bairros bem mais af- mei- bem mais afastados (.424) longe] [que é justamente] [pra (1.270) pra quem pra quem olha a- pra quem olhar assim] [não ver (.254) logo de cara (.508) as coisas ruins] [que tem né na cidade] (.607) [e daí eles só mostram a parte bonita a parte rica] (.649) eh: [geralmente nos bairros mais (.607) mais (2.046) nos bairros mais assim mais ricos né de classe média classe média alta (.409) geralmente é] [onde eles fazem mais obras] [onde tem mais (.452) mais policiamento] [mais (1.058) aquele] [as 64(0)4(7)74(8)4(0)]-[e da((

(.186) do meio] (.720) [e escrevendo numa caderneta uma equação (.409) bem estranha (.231) de matemática] (1.147) [os brincos dela (.231) do da orelha direita (.444) é uma calculadora (.462) na orelha direita] (.569) [e um chip na orelha esquerda] (1.263) [ela tá: usando um batom rosa] (1.254) [uma sombra rosa no olho] (1.316) [na testa (1.022) tem um: (.711) desenho de um átomo sua eletrosfera] (1.850) [nas suas mãos de cima (.551) ela parece levitar (1.645) um: (1.067) erlemeyer com (2.784) uma substância estranha dentro rosa também] (.836) [e na out- na na mão esquerda (1.458) tá: (1.272) podemos ver uma molécula (.907) grande] (1.467) [nas mãos de baixo ela (.365) tem o computador] [como eu falei] (1.280) [e na outra mão (.524) está saindo um foguete] (.115) [soltando fumaça] (3.495) [parece] [que ela está voando] (1.690) [e: (.151) atrás dela podemos ver uma f\_ grande fábrica] (.791) [e ao fundo o brilho da lua] (4.954) [bem (2.618) a mensagem] [que essa foto (.115) traz] (3.664) [é alguma coisa be:m (1.347) científica assim] (2.837) eh: (2.588) [transmite um (.646) um ar de ciência assim] (3.682) [talvez transmite a (.347) a importância da ciência para a humanidade] (.862) [todo o significado e: (2.508) todas as transformações] [que ela trouxe pro mundo] (6.173) [além do mais (6.422) também transmite a: (.907) impressão] [que qualquer pessoa (1.734) de qualquer raça (.186) cor (1.432) religião (.845) pode ter acesso à ciência] [e pode: (2.161) ser uma pessoa bem sucedida nesse campo] (3.771) [é isso].

### **PARTICIPANT 11**

[Eu vejo (.272) uma mulher (.872) sentada (3.993) com traços orientais] (2.363) [porque: (1.457) ela parece um Buda] (.305) [tá sentada na posição do Buda] (1.391) [ela te:m (.428) seis braços] (.208) [e está segurando (1.062) vários objetos] (2.939) [um tubo de ensaio (.535) ou erlemeyer] (2.025) [um bloco] (1.638) [um lápis] (1.770) [um computador (.247) um notebook] (1.605) ah [um foguete] (1.029) [e: uma estrutura química] (1.177) [ela está vestindo um jaleco (1.786) branco (2.634) e: (2.166) calças: cor-de-rosa] (2.906) [o fundo da figura é azul] (.966) [e: em segundo plano atrás dela (1.819) eu vejo (.131) um pré- (.329) alguns prédios] (5.533) [ainda ela está usando bato:m] (.321) [os brincos dela (.996) parecem calculadoras] (2.124) [usa brilho também nos olhos] (2.017) [e te:m (.419) uma espécie de terceiro olho] [só que (1.268) um desenho de (.823) um átomo] (4.314) [tem o cabelo (.650) preto (2.096) comprido] (2.865) [tem duas canetas no jaleco também] (8.777) ahm (.214) [pra mim ela representa (4.314) a modernidade] (.699) [o que o homem conquista (2.980) através dos estudos] (4.984) [porque ela está segurando (2.231) vários objetos (.280) tecnológicos] (5.556) [a ci- (.156) os prédios no fundo (.485) parecem (1.309) uma cida:de (2.527) moderna] (2.247) [construída com essa tecnologia] (4.545) [que a mulher está mostrando].

### **PARTICIPANT 12**

Eh: [nessa sa- figura (.469) eu vejo: (.650) lá no fundo uma cidade] (1.171) [que parece ser: (.463) limpa] (.429) ah (.333) [colorida] [grande] (.809) [bonita] (.695) eh [de trás tem um arco-íris] (.888) [e: (.803) ela parece ser uma cidade alegre] (.735) [e até: essa cidade tem um caminho] (1.691) eh [por baixo desse caminho tem um: (.684) e no começo da figura (.152) tem (.888) muitas casas pequenas] (.124) [que não tem muita cor] (.933) [que tão: (.384) empilhadas] (.729) [e ne- e junto dessas casas tem um: (.486) parece ser um mordomo um faxineiro] (1.154) [que tá varrendo pra debaixo da: (.152) as casas pra debaixo da estrada] (1.363) eh: (1.103) [pra (.328) pra mim parece] [que: (1.012) o fundo da figura (.425) tem (.141) eh representa a riqueza] (1.040) [e o mordomo tá varrendo pra debaixo da estrada (.984) a pobreza] (1.040) [pra: (.294) pra tudo fica mais (.453) b- bon- (.170) limpo] (.563) [vamos dizer assim] (1.114) [mais bonito] (1.012) [é isso] [que eu vejo].

## **1.3 American participants**

### **PARTICIPANT 13**

Hu:m (.729) [there's a picture with a butler (.458) ok] (.722) [and he seems to be:] [sweeping something under a highway] (.940) [that leads to a big city (.489) ok] [the big city is very nice] [it's got (.293) a rainbow over it] [the buildings all seem very nice and clean] (.504) [and what he's sweeping under the highway] (.519) uhm [appear to be slum (.534) slums (.443) uh: lots of (.218) different houses (.218) ok] (.594) uhm: (.917) [the butler seems to be:] (1.248) [just doing his job] (.978) [neither sad nor happy] (.970) [a:nd (1.060) the: big city seems to be a very nice (.233) place (.293) to be (.443) ok] (.376) [what] [I think] [it's showing is] (.707) uhm [how sometimes uh: we forget] (.880) [or we try to forget] [the government tries to (.669) hide (.394) the poverty (.586) from the rest of the world or from the people] [that live in (.504) the big cities] (.707) [a:nd hu:m (.759) it seems to be working] [because the big city (.692) seems to be very nice] (1.369) [a:nd it shows the inequality in Brazil] (.594) [I think] (.339) uhm

(1.609) [at the same time there is some (.895) strange clouds (.406) in the background] [that seem to be rain clouds] (.489) [coming (.413) uh close to the city] (.932) [and so maybe that's a sign of some future problems] (.917) uh: [because of (.895) all this] [that they're trying to hide] (.646) [but] (.263) [I think] [that's it].

#### **PARTICIPANT 14**

[The picture] [I'm looking at] [is a man] [that is sweeping (.674) uh houses underneath (.576) a pavement (.140) underneath a road] (.597) [and in the distance of the road (.400) looks to be a: (.632) beautiful (.154) city (.674) uh with (.225) uh blue skies and (.140) rainbow] (1.032) [and uh the houses] [that are being swept under the (.147) the: road] [are are small] (1.046) uh: (.836) [the guy looks (.274) the guy the- there's a man] [that's sweeping the houses] (.569) [and uh he looks sad] (.632) [a:nd (1.124) to me it looks like] [he is uhm: (1.053) uh: (.562) he is sweeping away (.597) an uhm existing city] [that (.182) maybe it's not so beautiful] (.505) [and he has uh uhm a picture of a uhm (.744) of] [what he considers a a beautiful city] [that he would (.133) prefer instead] (1.566) uhm [the picture's (.751) pretty (.400) simple] [it's not (.225) too elaborate drawing-wise] (.597) [a:nd outs- the road has a white-dotted line] [and it's curvy] (.597) [and (.119) uh on the right and left hand side of (.204) the: road (.449) uhm just looks like uh dirt] (.730) uh (.168) [besides for the area] [that has the: houses] (.688) [a:nd maybe some small leaves or something] (1.011) [that are being swept under the: road] (.702) [and uh there are some light (.112) blue skies (.758) uh near right above the city] (.983) [a:nd (.211) that's about it].

#### **PARTICIPANT 15**

[So this picture (.103) is of (1.071) an Indian woman] [who is (.310) who has six arms like (.460) some famous Indian goddess] [whose name] [I can't remember] (.207) [might be (.357) Krishna] [but I (.166) just don't remember] (.610) uhm (.788) [the goddess of war] (.217) [who knows] (.316) [anyway (.173) she's seated (.881) in (.248) the lotus position] (.621) [wearing (1.220) pink (.483) tights] (.293) [a pink shirt] [a white lab coat] (1.370) uhm (1.554) [on h- her right side (.173) one hand is touching (.869) a computer] (.581) [another hand on another arm (.143) has (.368) a notepad with calculations on it] (1.042) [the third arm (.225) eh (.426) has (4.174) a flask with (.333) some kind of chemical in it] (.978) uhm (2.412) [also on the right in the lab coat there are two pens] (1.934) [and she has a calculator hanging from her right ear] (.547) [on the left she there's a microchip] (1.099) [she's got a chemical (.161) structure (.219) uhm (.310) model (.552) in the uppermost left hand] (1.324) [a pencil in the middle left hand] [and a rocket taking off (.846) from her lowermost (.132) left hand] uhm (2.142) [on her face she's got (.190) the (.207) red (.270) dot (.558) in between her e- (.541) on her forehead] [but it has an atomic symbol] (3.009) [and coming out of her head] [there's a whole bunch of (1.128) uhm (1.629) buildings (.650) factory-looking (.691) modern (.253) buildings] (.794) [there's a white (.149) globe behind her head] (.385) [that fades into a blue background] (.564) uhm (.179) [she's barefoot] (3.046) [and (2.413) she's s- got (.420) pink lipstick and pink eye shadow on] (1.779) [I would say] [that the picture is about (.184) current (.489) developments in India (.179) with (.570) a lot of scientific growth mainly factoring growth] [just about (.230) e- (.161) economic and (.259) uhm (.932) scientific growth in India in general] (3.817) [and (2.539) as an illustration it's kind of interesting] [because it's (.858) only got a very few tones] (.351) [the (.403) chemical in the flask (.581) is pink] [the bands on the rocket are pink] (.886) [the (1.094) the model (.518) the structure model of (.886) of the chemical is pink and white] (1.762) [it's pretty much pink white blue black (.196) and grey] (2.234) [and] (4.137) [I have to say] [that's all] [I got].

#### **PARTICIPANT 16**

[There's a picture of a: of a young woman (.628) uhm probably of Hindu origin or: (.651) from India] [I'm not sure] (.327) [or Buddhist] [because the picture (.508) uh: portrays her as sort of as a: (.537) as one of the gods] [she has a lot of arms (.499) like one of the Hindu gods] [and uh (.384) but] [I think] [it's trying to portray] [that women in this society (.326) can be scientists] (.211) [or ca:n study: (.806) types of things] [that norm- (.182) aren't normally thought of for women] (.235) [for example she's doing math] [and she's got (.244) in one hand she has a rocket] (.307) [launching] [in another hand she has a (.384) it's like a: a model of a molecule] (.336) [in the other hand she has a computer] [and she has chemistry] (.451) [and another place (.288) and (.158) above her she has a (.513) picture] [that looks like a factory or something like that] [so] [I think] [the picture is just trying to (.374) portray] [that in this society that normally women don't do these sorts of things] [but (.249) now it's fine for them] [to do it] [and it's (.412) it's looked uh well upon] [it's a good thing] (.134) [cause she's (.326) being portrayed as a god or (.840) as a goddess] (1.704) [and other than that I can't think of anything else] [to say].



**PARTICIPANT 17**

[I'm looking (1.011) at] (.105) [what appears to be an Indian girl] (.421) [sitting (.990) Indian style] (laugh) (.542) uh: (.163) [sh- she may be: (.474) part octopus] [because she has six arms] (1.348) [and uh: she's dressed in a:] [what appears to be a chemist's or a doctor's outfit (1.148) white long sleeved] (1.385) [and hu:m (3.214) she's working on a computer: (.964) in the one hand] (.437) [launching a rocket in the other] (1.722) [and uh: (.937) writing (1.741) mathematical (1.317) formulas on a notepad] (2.060) [a:nd she appears to be: into chemistry] (1.570) [and (.795) in another hand she has a vial with some chemicals] (1.027) [in another hand she ha:s (1.201) uh (.795) an atomic (2.592) breakdown or something] (laugh) (.521) [something that lo- looks like a an atomic molecule (.511) kind of a molecule of some sort] (.621) [something out of atoms] (.131) (cough) (2.028) uh [behind her is: some (.990) industrial building] (1.601) [and (1.364) she has a: an atom (.259) tattooed on her forehead (.969) with calculators (.139) for earrings] (1.632) uhm: (4.004) [that's about all] [I can think of] (1.659) [she seems to be very intelligent] (2.613) [based on all the things] [she's doing (1.180) in this photo] (2.110) uhm (4.689) [I (.305) can't think of] [anything else to say about her] (.227) [she got red pants on] (4.763) [and uh (2.044) I have no idea] (.653) [what the purpose of this (laugh) was] (2.202) [I don't know I don't know] [what else to say about it] (2.012) [her hair is parted down the middle] (1.601) [she has long black hair] (3.382) [and uh (3.719) that's all] [I think].

**PARTICIPANT 18**

[So this is a picture of a woman with (.921) six arms] [it's kind of a: Indian Hindu thing] uh: [she has just a bunch of things in her hands about (.253) math and science and (.168) chemistry and (.445) a computer] (1.089) uh [and a rocket coming out of one hand] (.199) uhm (.261) [and then there's a bunch of buildings and industry-looking stuff] (.199) [coming out from behind her head] (.921) hu:m (.977) [and yeah: the woman looks] [as if she's from India] [a:nd (.713) where the traditional] (.101) [I don't know] [I guess] [Hindu (.744) Hindus have that (.859) the: (.468) painted dot between their eyes] [she has a: atomic energy symbol] (1.130) hu:m (1.228) [and I don't know] [if this is trying to: allude to: (.191) the high number of doctors] (.575) [that are coming out of India these days] [or the high number of (.498) trained professionals in the sciences] [that (.882) uhm (1.074) that are (1.028) have (.122) been developed] [but there's a lot of people in India] [I think] [that are studying (.759) uh Medicine now] [and coming to the U.S.] [and coming to other countries to work (.629) uhm (.568) in that industry] (.951) uhm [and I don't (1.128) or maybe this could just be about (1.435) the (.168) c- (laugh) (.568) complications of (1.066) uh: (1.642) uh: no s- yeah she looks like a d- (.292) yeah she looks dressed like a doctor] [so maybe it's just all the things that a doctor has to (.859) a doctoral researcher] [I'm not sure] [that (.246) a doctoral researcher has to juggle] (.744) uh [in order to: (.115) perform all the tasks] [that they have to do] (.928) uhm (.990) [more description of the picture] [she's got long hair] (1.143) uhm: (1.435) [uh yeah she's it's definitely one of those Bud- (.130) uh like a (.360) has a religious thing uh: (.184) connotations of religion] [because (.223) her hand is doing the: (.882) symbol] (.284) [that I've seen in other statues of uh (1.097) other Hindu statues] uh uhm [I'm not sure what] [I (.391) can't recall the name right know] [but (.944) the way] [she's holding the pencil] (.905) uh: (.437) [it's very similar to the way] [that I've seen in some statues of Buddha or Vishnu or: (.253) or other (.176) deities] [I guess] (1.036) uhm: (1.780) [what else] (3.492) uhm: (2.824) [it's also interesting] [that the woman is wearing make up] [I guess] (.276) uhm (.740) [beyond just the atomic energy symbol she has (.280) eye make up and lipstick on] (.953) uhm (.896) [maybe something (.354) this is (.197) having some sort of connotation about the: (.764) modernization of India now] [as it's a developing county still] (1.134) uh (2.393) uhm [beyond this the math (.625) on the: (.666) notepad (1.726) is a little] [I (1.373) no I don't know] [if that has any meaning or anything] (1.192) hu:m (1.825) [I guess this for an overall] (1.940) [yeah so it's a woman with six arms] [sitting cross-legged] (.912) [mimicking a statue (.230) uhm (1.101) that (.567) uh (1.011) genera- a statue (.641) of a Hindu deity] (.781) [but all the hands are juggling (.131) modern things like math and science chemistry] [and there's industry behind her] [and she has earrings] [that are calculators and (.238) some sort of electronic (.115) circuit board] (.805) uhm (1.143) [so maybe (1.027) yeah (.386) this is it] (.148) (laugh) (.970) [a:nd] [I guess] [that's all].

**PARTICIPANT 19**

[In this illustration we see (.741) a: (.321) a modern city (.205) in the background] (.346) [and (.197) it looks like (.625) definitely modern and and wealthy] (.288) [and from the city there's this road] (.946) [leading (.321) out (.205) towards us] (.757) [and at the end of this road there's this man] [sweeping] (.683) [what seems to be (.782) a number of very humble homes (.231) like a (.494) whole community (.131) neighborhood (.955) a: (.139) impoverished neighborhood] (.773) [and] [I think] [that this illustration (.681) is very clearly (1.638) uh a comment (.551) on on this modern society] (.650) [you have (.386) you know a deep concentration of wealth (.428) in certain areas] [and (.568) outside of there

intense poverty] (.724) [and society has a way] [of trying (.609) to ignore (1.407) ignore the the darker side] [the poverty] [and the social problems] [and kinda] [like (.551) we say in English] [to sweep under the rug] [but he's sweeping under the (.272) under the street].

### **PARTICIPANT 20**

[I'm looking at a picture: (.256) of a woman] (.532) [this is a very interesting picture] (1.409) [because it has a lot of different (.770) things involved in it] (.704) uhm: (.704) [it looks] [like if she's a doctor (.382) with (1.433) yeah definitely a doctor with (.569) six different arms a:nd (.238) six different hands] (.840) [but she's sitting in kind of a mediation type (.135) position] (.737) [she looks like] [she might be: Indian (1.251) or something of some sort] [I'm not quite sure] (.597) uhm [she has a: (.131) big (.359) city on the top of her head] [and (.350) scientist's (.102) stuff around her] [so maybe she's a (.438) scientist or a (.126) doctor] [I'm not sure] (.928) uh: [she has (.205) cell phone earring in one hand (.102) in one ear] (.522) [and a (.140) computer chip in the other ear] (1.064) [she: (.145) uhm (.874) in two sets of her hand she has a piece of paper] [and looks like] [she's writing down some sort of chemistry (1.237) figures (.350) with (.359) those two hands] [the other two hands one is holding a spaceship] [and the other one is (.466) holding a computer] (.695) uhm [and then the other two are holding (.433) kinda chemistry like (.191) type things] (.504) [I'm not really sure] [what this image is trying to: (.131) portray] (.653) uhm [but it looks like a woman with many different thoughts a:nd (.476) different mind] [is a very colorful picture] (.765) [a:nd (2.936) and] [I don't know] (2.987) [I think] [the picture is just saying] [that (.868) maybe (.858) women (.872) can be (.336) chemistry: (.168) chemstress] (.653) [and can (.966) are smart (.989) as well as men you know] [and (.392) I'm not really sure] [what this message is portraying] [but (1.082) it's very interesting] [and it has a lot of different (.256) characteristics about it] (.462) [and also her ethnicity is another thing] [to think about] [as she is (1.050) not (.196) uhm not Caucasian not Brazilian] [she is definitely of (.672) Indian (.942) ethnicity] (.182) uhm (1.274) [liked the picture] (.149) [that's about it].

### **PARTICIPANT 21**

[I'm looking at a picture of (1.142) a twisty road] (.644) [where (.629) at one end (.668) there's a a beautiful modern city (.792) uh with uh: (.272) beautiful (.504) high rise (.163) buildings] [it would look like a a downtown or business area in some (.209) uh nice uh nice clean new city] (.870) [and then the road (.225) twists and turns a little bit to: a scene] [where there's a a man] (.691) uh: [lifting the road up] (.836) [as if it were a carpet] [and sweeping (.108) under the road (.334) uh a number of uh: (.582) slummy-looking little (.178) houses] (1.041) [the uh symbolism] [I think] [here] [is that uh: (.582) at least as far as this this (.419) picture goes is] [that the: the the nice shiny city wants to keep the fact] [that there's this slummy-looking section] [a a secret] [so that (.108) uh than rather than uh addressing some social (.272) economic problem] (.590) uh: [they're just (.107) uh trying to hide the problem] [by uh (.177) sweeping it under the rug] [which is uh an expression (.650) uh commonly used] [and uh the as far as the details of the picture] [the: man looks like] [he's uh: elderly maybe approaching sixties] [he's got a (.150) Hitler-like moustache and a big nose] (.677) [he's wearing a white jacket black pants and jack sh- and black shoes] (.887) uh: [the: city has] uh [what] [I guess] [it's supposed to be sort of a rainbow (.614) uh (1.119) uh above it (.254) uh orange and blue] [and some (.168) some some nice (.127) pretty (.418) pretty (.173) blue sky behind it] (1.233) [and that's about all] [that I can tell you] (.118) bye.

## **2. Narrative Task**

### **2.1 Brazilian participants (in English)**

#### **PARTICIPANT 1**

[The movie] [I'll talk about is: (.652) uh the "Home Alone" (.204) movie] (1.297) [and is about a: (.788) young boy] [I think] [he's: (1.032) ten years-old] [and (.245) I don't know] (1.481) [a:nd (.991) one night on: the the day before he the:y (1.875) the (.604) the day before he the:y (.747) travel for Christmas] (.706) [he: has a fight with his brother] (.869) [and his mother: (.672) puts him in (.217) eh (.360) on (2.765) on on a room (.815) for sleeping] (1.358) [a hiding room (.285) in the house] (.658) [and when the:y (1.725) when the:y (2.846) when they go travel] [they forgot him (1.351) they forget him (.204) at home] (.272) [and (.964) and then] (.135) [when he wakes up] (.197) [and he see there's nobody there] (.910) [he (.258) eh starts doing like (.224) a lot of things] [he couldn't do with the family there] (.550) [like shaving] (.910) [and (.468) he went to the supermarket] [and bought a lot of (1.086) things] (.197) [ch- (.312) children like (.380) like chocolates and (.400) stuffs like this] (2.296) [a:nd (.611) but then some t- some day he was (.448) at the house] [and (.211) came two (.353) thieves] (1.182) [for stealing his house] (.516) [and he heard (.645) that] (.176) [they would come back uh (.299) at eight o'clock on

the next day] (.468) [for steal his house] (.747) [so he: (1.141) he prepares himself] [and start (1.182) putting a lot of: (.713) traps on the house] (1.059) [like (.747) marbles on the floor] (.625) [and (2.622) an:d (.360) uh he heats the: (2.303) the (.156) the door] [so the man] (1.086) [when the man put the his hand on the door] (.468) [it is really (.815) hot] (.387) [and burn his hand] (2.187) [a:nd (1.107) he dos uh he does a lot of things like (.917) funny things] (1.447) [it is a really: (.747) cool movie] (.149) [old but co- but cool] (2.418) [I like] [because is funny] (2.065) [and in the end he: (.129) can (.353) he's (.258) he (1.120) he: (1.440) he (.754) he hurts so much the thieves that] (1.610) [the (.101) thieves (1.093) uh s- eh (.706) are (.543) he call the: (.332) he call the s- the police] (.156) [and the police (.536) caught the: thieves] (2.201) [a:nd (.387) then he the his mother (.183) comes (.306) home] [and (.258) they spend the Christmas together] (1.494) [it's really (.366) funny movie] (3.829) eh (1.209) [I think] [everybody has seen this movie] (.489) (laugh) (2.717) ok.

## PARTICIPANT 2

[ "The Straight Story" (.389) is a movie] uh (.831) [that (.795) tell the story of uh uh (.117) Alvin Straight] (.650) eh uh (.298) [a man who] (1.093) [when he was uh seventy-seven (.189) years old] (.750) [he: (.460) travel (.307) from (.759) the: the east (.361) to do east (.623) to west (.894) from of the United States] [just to visit his brother] (.380) [but (.325) uh (.813) the fact is] (.280) uh [he travel (1.274) all this distance] (.722) uh: (.361) uh [driving a (1.156) uh: (1.482) a cart to uh cut grass] [I don't know the name of] (.903) uh (1.138) [well (.686) uh in the beginning of the movie (.551) uh he (.189) he's (.831) he is uh (.688) he f- (.153) he fall down (.741) on the floor] (.415) [and (.343) then (.244) that's when] (.280) [he: (1.301) he see he go to the doctor] [and (.198) eh (.605) that's told to him] (1.120) [t- that (.876) he's not uh so his health (.162) his (1.283) well he's not so good] (1.093) [so (.569) he's he thinks wi- with himself] (.198) [well (.171) let's go t- (.298) to visit my brother] (.488) uh [before (.289) uh he and (.135) and I (.407) di- (.198) die] (1.355) [so t- uh he say] [well I don't have money] [so how can I travel (.741) all this distance] (.488) [all he just had (.171) this uh: (.786) uh this cart to cut grass] (.840) uh (.515) [so (.280) she said] [oh let's go] (.641) [and then (.976) he started all his travel] (.488) eh [but uh in the: (.704) l- uh: in the begi- uh (.280) that's uh (.732) one day (.433) in (1.048) uh in the first day of the travel (.759) eh his his (.262) his car (.524) brokes (.262) so h- he his car broke] (.316) [so he has to (1.247) to go back home] (.641) [a:nd stays few days there] [and say] [oh (.398) ho- how can I go (.253) there] (.867) uh [he has a (1.012) a wonderful idea] (laugh) eh [let's (.144) buy another (.460) cart to cut grass] (.876) [so h- uh: he (.234) tak- (.433) he go to a (.307) a store] [and buy another one] (.596) [an old one (.795) very old one] [is like a sixty-six (.352) car] (.894) [and then he start again his travel] (.641) [and t- and (.415) there h- (.198) there he goes] (.262) [and he went all the (.930) he traveled like uh: (1.261) five weeks (1.057) five (.162) uh ten weeks uh in his (.614) his car] (.641) [a:nd (.424) well there's so so (1.310) so slow his car was so slow] (.488) uh [all the uh just a bicycle could (.741) uh: c- could could pass him] (1.319) uh [so and he used he used to sleep on the (1.744) on the fields] (1.933) [and uh: (1.780) and (.180) eat uh: (.253) sausages] (1.111) [and all all the all the way (.569) an0024 T765(.147655.(.71)-6( sl)4ls

*istory* (.165) is about a d- (1.513) a policeman (1.813) a det- (.497) detective] (1.990) [a:nd (1.430) he: go to solve a case] (12.085) uh [he need help a (.259) little girl] (4.495) uh: (1.845) [who wa:s (1.461) XXX (.176) by the (3.016) by a famous (3.036) man] (.311) [the man eh uh was son of (.922) a political man] (7.939) [they (5.141) they helped the gi- they watch girl] (1.948) [and they help he she] (1.782) [they (1.803) shot (1.730) the bad man] (2.301) [and go to the hospital] (5.327) [and there is a lot of *istories*] (3.472) [there is the: (.269) old (.849) city] (2.798) [and the (4.032) the *womens* of life] (1.224) [I don't remember (2.342) the English name] (1.388) uh (.124) [take care (.425) this part of this city] (4.384) [and there is many (2.363) killings] (10.676) [it's (.196) uh the film (.901) it was in (1.440) white and black] (2.275) [generally the colors] [who (.124) appear] (.114) [are red] [but (.507) sometimes (.134) appear (.538) the color of the eye (2.124) or (3.493) the color of the (6.592) the body] (9.722) [and there is many XXX in this (.715) movie] [that I don't remember now].

#### **PARTICIPANT 4**

Ok (.156) uh [the story of the movie] [that I'm gonna tell] [is like (.797) uh (.419) the name of the movie actually is "A walk to remember"] (.506) [and it was (.132) there's a book with this name] (.277) [it was from Nicholas Sparks] [I guess] (.772) [he wrote it] (.443) [and it's uhm (.204) it's quite a lovely (.194) film actually] [because (.585) it's girlish (.426) you know] [it's a girlish love story] (.487) [and there is a boy] [who's like (.407) the most popular boy in school] [and the girl] [who's not so popular] (.610) [and they fall in love] (1.691) [and is about (.139) uh (.339) pursuing your dreams and fate] [and I know] [it seems stupid] [but it's like (.835) it's really lovely] [because (.606) it's (.422) pure you know] [is there's no sex or violence or: (.994) things like that] [as most current movies have actually] (.734) [a:nd (.204) well they fall in love] (.412) [and at the end they fi

**PARTICIPANT 6**

[Well (.200) my movie is “Flight Plan”] [that is still on (.113) the theaters these days] (.933) [a:nd (.282) the: (.872) the main actress (.113) is (.558) Jodie Foster] [and the movie starts in Berlin] (.436) [where she used to live] (.622) [and (.156) she’s moving out] (.244) [t- she’s moving from Berlin] [because her (.636) his (.104) uh her husband is (.262) is dead] (.697) [and now she’s taking the biggest plane] [that was (.156) ever made] (.183) [that s- and she was one ones of the (.148) developers of (.270) the plane] (.828) [with her daughter] [to go back to her parents’ house in the U.S.] (1.386) uh [in the movie] (.715) [when (1.212) the: flight be- flight begins] (.531) [she: start to sleep] (.706) [and when she wakes up] [her daughter is not (.183) by her side anymore] (.749) [and (.305) then she starts looking for her daughter (.470) as a crazy for all of (.191) the (1.438) all over the (.139) plane] [is a big plane] (1.604) [a:nd (.401) when (1.290) and then she: the: (1.051) plane crew (.540) and the police] [that was in the: (.191) airplane] (.253) [try to make out] [as her (.165) as if her daughter was never on board] (.924) [saying that] [she was (.209) she lost her husband (.767) very early] [and she was (.575) going through a: (.148) painful moment] (.200) [and she was taking some medicines (1.325) as well] (.323) [so is t- (.349) they say that] uh (.802) [her daughter is also dead] (1.421) [that was dead (.758) in Berli- (.148) uh (.156) uh that was also (.122) dead in Berlin] (1.107) [a:nd (2.982) eh (1.665) and then (1.796) sh- (.156) then she start (.104) looking all over the: (.340) as she knew the: (.749) the plane] [because she was one of the who helped to devel- (.156) to develop it] (.523) [she: (.340) s- start to looking all over the (.323) the places] uh (.654) [going (.358) to the: (2.031) to the hi- to hidden places inside the structure of the airplane] [to try to find her daughter] (1.360) [and (.793) then the (.122) police] (.165) [that was (.624) that was actually the bad guy of the movie] (.837) eh (3.566) [he: (2.255) was (.384) who eh was the one] [who take (.427) took her daughter] (.994) [sa- say to the captain that] (.441) [she wants she was a kidnapper] [and she wants money] (.811) [that uh (.156) this sto- uh this (.174) this story of missing daughter was all invention of her (.924) her head] (1.421) [and (1.665) but the (.148) true kidnapper was him] (.627) [and (.384) uh she: (1.133) then the (.174) he the: plane (.645) goes to a city] (.340) [to (.401) to make an emergency stop] (.418) [when she the police (.462) to- tells her (.401) tells (.226) to the captain that] [she was a kidnapper] [and h- h- she had a bomb in the plane] (.886) [but (1.151) the true kidnapper was (.279) was him] [and then when the: (.880) the plane go (.122) to the (.183) airport] (.427) [she finds her daughter (.244) with some bombs around] (.385) [and she found (.297) that] (.902) [they ki- they also killed her (.288) the kidnappers] [that was the police (1.116) the police guy and one of the: (.549) uh girls from the crew (.209) of the (.122) of the airplane] (.959) uh [they (.305) also killed (.384) hus- he- her husband in Berlin] (.558) [to put the bombs in t- in the coffin] (.854) [and try to make out] [as she was the kidnapper] (.837) [and in the end she finds her daughter] [and h- she blows the kidnapper] (.614) [when (.588) they (.257) when he (.767) where he (1.007) was keeping (.345) her daughter] (1.024) [I really lik- (.649) and I als- (.174) I also I didn’t (.357) really like the movie] [but (.322) because is not something spectacular] [but is eh (.427) pure entertainment] (.505) [and is like (.449) good to (.667) to watch] [is not (.283) a bad movie] (.946) [that’s it].

**PARTICIPANT 7**

[Well my movie is “Harry Potter and the *Globlet of Fire*”] (.518) uh [that’s the fourth movie in (.192) Harry Potter series] (.144) [and (.826) Harry is at his fourth year at Hogwarts] (.720) [the school of (.384) witchcraft and wizardry] (.941) [in the beginning Harry is (.240) chosen against his will to compete in the Triwizard Tournament] (.826) [after passing through (.163) three tasks] [Harry became ag- (.144) again face to face with his enemy] [Lord Voldemort] (.249) [the man who killed his fathers (1.066) his parents] (laugh) (.622) [he managed to escape] (.307) [and return to the school] (.346) [and then (.211) he is took to a room by one of his teachers] (.778) [who was in fact in the dark side] (1.008) [but then the headmaster] (.634) [Albus Dumbledore] (.288) gets in time to save (.307) to save him] (.624) [a:nd the fake teacher goes to prison] (1.210) [as a fan of Harry Potter books I dislike this movie] [because] [I think] [it lacks emotion] (.327) [but] (.336) [I think] [it’s also the best (.691) well w- (.182) adapted (.816) movie] (.470) [all the the cuts they have to make] (.622) [it all make very sense] (.931) [well that’s it].

**PARTICIPANT 8**

[I (.970) will tell the history green “Green Mile”] (1.485) [this (.175) this a ma- a (.654) uh (.146) a man (1.023) tell the: (.339) the (2.777) the hist- history about his li- his life] (.701) [and (.806) started] (.304) [he talk (.175) about your (.274) life] [and talk about the (.532) a murder (.824) of a little child (1.181) little (.625) little (.508) girl] (.929) [and (1.128) eh: (.931) he: (1.122) thi- this girl is (.128) was murder] uh (.871) [he eh (.479) he (.602) no one (.385) knows about this] (.502) [but (.742) eh: (.140) a black man a strong (.181) black man is: (1.204) is: (.707) is found (.853) with this (.754) girl] (1.122) [crying] (.280) [and a g- a little girl with a (.526) lot of bloody (1.081) blood] (.988) [and (.988) h- he is sentenced (.295) to die] (1.047) [and (.876) the guy] [that (.467) tell the history] [is: (.637) work (.508) at this prison

(1.239) that (.158) this guy is: (1.859) is: (1.933) eh (.210) this (2.233) eh: (.356) prison] (.730) [that (.116) this guy is: (2.625) l-l-l (.240) live until the your die] (.695) [stays (1.549) waiting for your die] (.385) [and (1.607) and (.187) in eh (.356) have many other (1.373) prisoners (.695) and (.830) eh: (1.852) bad prisoners] [have a (.210) lot of (3.712) almost (1.467) evil (laugh) the the other (.689) prison] (.684) [and (.385) this black guy help (.993) the (1.338) the officers (.292) and the (.122) pol- (.193) police] (.982) [and (.859) eh (1.011) the guy] [that (.380) tell the history] [have a (.625) have (.240) pain] [when (.240) pee] (1.023) [and (.841) sometime eh (.304) eh: (1.876) this black guy strong black guy help (.596) with (.461) help (1.297) Tom Hanks] [I don't know the n- name of (.286) character] [but (.228) Tom Hanks is the actor] (.742) [helps] [and (.309) eh: (1.023) cure (.199) the Tom Hanks] [and Tom Hanks don't have more (.128) pain] (.122) [when pee] (.765) [and this (.923) eh: (1.315) after this eh: (.496) the sentence to di- (.128) to die is: (1.333) is coming] [a:nd (1.333) and when (.952) this is that guy when eh eh will die] (1.017) eh (.164) [the

he: (2.221) sings to her] (3.424) [and they f- (.590) they both fall in love] (5.238) [but (31.857) but what (.118) one term] [that the duke (1.695) wanted] (.311) [to expo- to sponsor that (1.564) that (3.102) tha: (.128) that project] [was] (.214) [that the woman (1.116) is giving to is giving to him] (1.288) [and (.487) the (.697) but the woman (.311) is dating (1.352) the bohemian poor guy] (.107) [so (1.395) the Duke (.268) got (.128) very (.493) angry] (4.894) [a:nd (4.443) put many obs- (.183) obstacles during (2.157) during the: (.622) the making of (1.910) of the: (2.973) the (.128) project] (5.066) [so at the end] (.536) [when the Duke discover] (1.245) [he was being (2.844) she was being a (.783) traitor] (2.726) [he: (2.200) tries to (.107) kill everybody] [**5'00"**]

### **PARTICIPANT 11**

[Today I went to the movies] (.174) [and watched a very interesting movies (.563) movie] (1.136) [it was: (.369) "Chicken Little"] (1.136) [it was a: (.340) very interesting story] [because (.602) it was (.379) related to many others (1.116) movies (.961) like (.951) uh: (.388) World War] (1.340) [War of the Worlds I mean] (1.009) [and (.708) others I don't remember now] (1.94) [but (.582) the story was about a: very small (.475) chicken] (1.349) [and his father was: didn't listen to him] (2.816) [he: wanted to do: things] [that (.233) his father (.155) like] (1.524) [but (1.272) he was frustrated] [because he couldn't] (1.272) [then (1.738) one day (1.359) uh: a slice of the sky felt (.135) on his (.679) head] (1.336) [and he told (1.194) he: (1.359) called (.864) the police] (.854) [and everybody got scared about that] [but no one believed him] (1.806) [and he was very famous about that] (.388) [and this was very frustat- (.184) frustrating for him (1.777) and (1.379) for his fath379t1() m)0 fb()5(1)-2(.)6(5)4(7)69()- o(n)-2(day)11 (.11he7(di

him] (.632) [to train her] (1.001) uhm (.948) [and (.126) he wa:s (.590) he started to: (.432) like her] (.811) [and train] (.379) [and she s- and he saw (.621) he noticed] (.147) [that she was very good] [she was a very good boxer] (.748) [after the training everyday and so hard] (.548) [she started to ga- to win (.635) all the fights] [she had] (1.148) [and got very very (.411) recognized (.527) on the whole world] (.348) [she start to: uhm she starts to (.263) to win all the (.123) fights] [she had] (.938) [a:nd (.432) started to be: happy] (.252) [cause her:] (.348) [when she was a kid] (.453) [her dad] (.231) [which she (.115) uh who (.263) she likes a lot] [died] (.558) [and he had a: (.327) very: (.231) strange family] [that (.168) never curr to her never care to her] (1.517) [a:nd ok (.115) she got recognizing in all the world] (.632) [and finally she had this fight with a girl named (.676) Bea- (.274) Blue Bear (.284) from German] (.621) [who punch him] (.231) [she was (.327) she was going to win the (.316) the fight] (.422) [but this girl] (1.391) this German girl (.168) uh punch him on (.252) punching her on the face] (.411) [she fall] (.474) [and hit hers he- eh hit her head on the chair] (1.581) uh [she would got v- (.168) really injured] (.295) [a:nd (.231) became to have a: (.331) vegetable life] (1.401) [by this time (.200) the: (.537) the Clint Wost- Eastwood] [who was uh her trainer] (.851)d- eh (.411) [started to train her (.274) to (.115) treat as a d- a daughter] (1.271) [like daughter and (.126) father] (.242) [and start (.137) to: take care of her (.748) in the hospital (.390) for years] (.927) [every time she has a (.168) vegetable life] [so (.569) she ask him ad- every time] [to kill her] (.274) [cause she didn't want to have that life] (1.222) [and (.137) he didn't want to do that] [it was too: (.569) it's too hard for him] (.189) [of course she did- he didn't want to kill her] (1.328) [but after (.579) this (.348) it was a new challen- the second really (.674) big challenge for the for both of them] (1.064) [and the film ends] (.126) [when he really decided to: kill her] (.558) [he: enter in the middle of the night] (.348) [and stick a needle (.306) with something (.147) on her veins (.337) to kill her] (.470) [she became very thankful for him] [and the film ends (.643) uh: and the film ends] [when he kill her] (.885) [a:nd uh (.285) just (.179) disappear].

## 2.2 Brazilian participants (in BP)

### PARTICIPANT 1

[Eu vou falar sobre o: (.357) filme “Cidade de Deus”] (2.121) [bom ah “Cidade de Deus” é um filme] [que conta (.687) a história numa das: (.383) favelas do Rio de Janeiro] (2.337) [é contada pelo Buscapé] [que é um guri d-] (.881) [que: (1.401) que não gosta de violência assim] [mas (3.883) não é (1.276) mas convive com ela né] (.988) [e: (1.384) o legal desse filme (.719) é que] [conta a história do também do (1.798) do: (.917) Zé Pequeno] (.899) [antes conhecido como Dadinho quando pequeno] (1.582) [que: (.889) só pensava em ser bandido] (.593) [e ele e o s- e ele e o amigo dele o Bené (1.600) e: (2.449) então ap- (.208) aparece eles caído no crime] (.701) [o Bené e o: (.271) Dadinho começando a roubar (.314) pessoas no centro] (2.355) [e: só que sempre tiveram os: (.611) os ladrões mais velhos] (1.384) [que: roubavam as coisas deles] (2.139) [então eles acabaram ficando com raiva desses caras] (.557) [e: (1.060) até que um dia (.629) eles começaram a: (.970) a matar gente] [e: (.773) o primeiro] [que eles mataram] [foi (.809) um desses: (2.427) um desses: (2.841) um um desses bandidos mais velhos] (.348) [que era o (1.114) irmão do (.373) Buscapé] (1.564) [o Alicate] (2.589) [e (.593) legal também no filme (.539) é que] [então o: (.683) o Bené e o Zé Peq- (.208) e o: (.165) e o Dadinho se tornam (1.150) bandidos mais (1.188) mais velhos] (1.294) [e: (.325) muito respeitados na: (1.636) na favela] (1.366) [e ele:s (.863) mas um dia o Zé Pequeno (1.762) que (.218) o Zé Pequeno viu que: (2.499) viu que] [só: (.719) roubar e matar gente não dava tanto dinheiro] [ele viu que] [os traficantes da faz- (.111) da favela que faziam dinheiro] (1.060) [então ele teve a idéia com o amigo dele Bené (.899) de começar a vender drogas] (.346) [mas daí o: (.557) o Bené falou] [pô mas como (1.384) como que a gente vai vender (.284) drogas] [a gente tem que começar tudo ainda antes] (1.042) [então o: Zé Pequeno (.611) fez (2.319) teve uma idéia de:] (.683) [em vez de começar tudo desde o começo] [eles tinham que matar todos os (1.024) os donos de bocas de fumo (.532) da favela] (1.006) [e: (2.805) e pegar o negócio deles pra eles] (.611) [então eles (.111) começaram (.293) logo no dia seguinte] (.683) [foram lá] [e saíram matando todo mundo] (2.085) [e: mataram (.970) todos os (.420) chefes de boca de (.106) fumo (.863) menos um] [o Cenoura] [que era amigo do Bené] (1.438) [então eles ficaram dominando (.701) oitenta por cento do tráfico no (.388) no (.213) na favela] (1.906) [e: (.503) muita gente] [que morava na favela] [achou bom isso] [porque: (riso) (.521) (riso) (.234) ah (1.042) porque: (3.128) porque não e- (.399) a partir daí não existia mais roubo dentro da favela] [o: Zé Pequeno cuidava de tudo] (1.294) [e: (4.962) mas o problema do Buscapé é que] [ele tinha medo do: (.378) Zé Pequeno né] [então ele contando a história] (.266) [ele f- (1.636) ele fuge do: Zé Pequeno e: (.988) e (.122) tudo mais] (1.654) [aí (.988) o problema é que] [o Zé Pequeno era um cara muito ganancioso] [e queria de qualquer jeito roubar a boca do Cenoura] (1.546) [aí então (.935) começa os atritos entre os dois] (2.463) [e: começa atrito entre o Zé Pequeno e o Bené também] (1.348) [até que um dia (1.528) alguém tenta matar o Zé Pequeno] [e acaba matando o Bené] (.530) [que era o



cara (.181) q- o único cara] [que segurava (.575) o Zé Pequeno] [pra não matar o: Cenoura] (1.420) [aí então logo depois disso começa a: guerra entre o:s (.629) entre o Zé Pequeno e o Cenoura] (1.042) [então aparece toda a: (1.402) todo um (2.247) toda a face da guerra entre: (.665) entre as facções ali né] [entre os: (.187) os bandos] (.845) [e aparece também a corrupção da polícia] [que soltava os ladrão (1.114) e tudo mais] (3.002) [e: (2.697) então no fin-] [**4'58"**]

## **PARTICIPANT 2**

[Bom a história que eu vou contar é é o3

### PARTICIPANT 3

[Bom o filme] [que eu vou falar hoje] (.150) [é um desenho] [porque eu gosto muito] (.765) [e é o último desenho] [que eu assisti] (.128) [“Noiva Cadáver” do Tim Burton] (1.598) [bom o filme começa (.915) com duas famílias] [que querem casar seus filhos] [mas os filhos não se conhecem] [é uma família da alta sociedade] (.583) [que está falida] (.188) [e quer casar a filha (.616) co:m (.177) o filho (.699) de um casal] [que tem uma peixaria] (.424) [e: começaram a ganhar muito (.257) dinheiro] (.204) [e q- querem entrar pra alta sociedade] (.566) [é um casamento arranjado] (2.097) [aí o rapaz ele r- é muito nervoso] (.732) [a família d- ele e a família dele vão para a casa da (.150) noiva (.616) para o ensaio pro: do casamento] (3.812) [bom (.257) eh: chegando lá (.118) no ensaio] (1.215) [um pouco antes ele conhece a Vitória] (2.496) [e: (1.431) e simpatiza com ela assim] [apesar de estar nervoso] (1.265) [então vão toda a família pra (.437) para o ensaio (.915) de casamento (1.131) na casa da família da Vitória] (1.864) [bom no ensaio (1.348) o Victor está muito nervoso] (.583) [que é o noivo né] (.848) [e acaba errando os dizeres do casamento] (1.414) [e: sem querer acaba botando fogo no vestido da futura sogra] (2.144) [s- e: o (.123) padre (.375) fica irritado com ele] [e manda ele voltar] [só quando (2.147) só quando ele tivesse pronto realmente pro casamento] (.799) [só que antes ah de ele botar fogo no vestido da futura sogra dele] (.549) [chega um (.241) cara misterioso] [se dizendo (.144) se fazendo passar por Lorde Ba- Backers ou (.166) Packers] (2.946) [só que eles não sabem] (.533) [se é parente ou não é] [mas é um Lorde] [e deixam ele assistir lá a cerimônia lá o ensaio] (1.797) [bom (.445) ah: (.915) então o Victor acabou botando sem querer fogo no vestido da sogra] [eles apagaram o fogo] (.516) [o padre ficou muito irritado] [mandou ele voltar] [só quando ele soubesse as preces do casamento] (1.348) [e: e o Victor acabou saindo correndo assim de casa] (.472) [e foi correndo pra floresta] [nervoso] [pra ver se acalmava] (1.897) [aí lá na floresta ele (.241) começa (.124) ah (.247) ficar mais calmo] (.599) [e começa (1.148) ah a pensar né] [ah é tão fácil] [porque que eu estou nervoso (.144) e tal] (1.914) [e começa a dizer (.408) as (.161) preces lá (.215) do casamento (1.714) m- (.583) certinho bonitinho] [ele tava até com o anel] [que era da família dele] [que o anel que ele daria pra (.549) pra noiva dele] (.516) [e ele começa a ensaiar (.549) na floresta] [e começa a dizer muito bem tudo certinho tudo correto] (.882) [e f- (.298) faz de conta que] [um galho lá é a mão da noiva] [e acaba botando (1.198) a aliança lá] (1.764) [aí de repente (.257) os corvos começam a voar] (.252) [o céu fica (.456) escuro] [um vento estranho] (.507) [a terra começa a se mexer] (1.498) [e: de repente (.616) ele viu que] [aquilo não era um galho] [era um esqueleto] (.782) [e sai de dentro da terra (.832) uma noiva cadáver] (1.464) [e ela responde que] [aceita (.172) né o casamento com ele] (.549) [ele todo apavorado não pensa em nada] [começa a sair correndo] [e volta lá pra cidade] (1.315) [e ela indo atrás dele] (1.181) [quando ele acha que] [ele fugiu dela] [ela (.327) acha ele] (1.964) [e ele simplesmente desmaia de susto] (2.879) ah [quando ele acorda] (.583) [ele vê que] [ele não tá mais no mundo dele] [que ele tá no mundo dos mortos] (.533) [ele fica extremamente apavorado] [e quer saber] [o que que aconteceu] [o que que ele tá fazendo lá] (.549) [e ela lembra] [ah você não lembra] [você casou comigo tal] (.765) [e aí os outros mortos (.521) resolvem] [contar a história da noiva cadáver] (1.115) [a história dela é que] [ela se apaixon- ela era muito linda de uma família rica] [e se apaixonou por um (.865) cara] [que era pobre] (.616) [só que a família dela não aceitava (1.431) o namoro dela] [e: e ela (.215) e o cara resolveram então casar escondido]s (.998) [então marcaram de se encontrar na noite no meio da floresta lá] (.716) [ela pegou as jóias da mãe dela] [algum dinheiro] [e se vestiu de noiva] (.998) [pra casar] [e fugir com ele] (1.215) [e ela foi lá] [e ficou esperando esperando] (1.048) [e de repente ele apareceu] [e matou ela] (.898) [porque ele queria era só o dinheiro dela] (.998) [então ela] [5’00’]

### PARTICIPANT 4

[Na verdade é de novo um filme e um livro] (.1044) [é “A última grande lição”] [que tem um: eu li o o livro] (.333) [que eu comprei até:] (.676) [ano passado] (.863) [que é do Mitch Albom] [e daí inspirado nele] [teve o filme] [que é também “A última grande lição”] (1.166) [é bem interessante assim] [porque conta a história de um cara] [que na faculdade tinha u:m professor] [que era assim o mestre dele] (.646) [que ensinava um monte de coisa não só sobre a matéria mas sobre a vida] (1.014) [e: (1.554) ah o cara era assim (1.115) muito inteligente] [ele tinha umas idéias bem: bem legais assim] (.893) [e quando ele: (.177) quando (.247) o cara se formou] (.676) [ele acabou perdendo contato com esse professor] (1.489) [e ele começou viver uma vida] (.242) [que ele não queria] (.464) [que era: de tá trabalhando o tempo inteiro] [e de não ter tempo pra ele] [não ter tempo pra: (.348) pra família dele] [nem pra criar uma família pra ele] [porque (.242) até (.312) tem uma namorada] [que tava terminando (.464) meio que terminando e não terminando] [tava naquela (.192) assim com ele] [porque: (.989) ele não tem tempo pra nada] (.964) [e aí um dia ele tá vendo televisão] [e ele: (.378) vê que o: passa uma: uma entrevista sobre esse professor] [que ele tava sofrendo de uma doença degenerativa] (1.256) [então assim é certo que] [não tem cura] [é certo que] [o professor vai morrer] [então ele resolve (.333) ir procurar esse professor] [pra: (.2.342) pra ter essa última grande lição com ele] (.297) [e aí é nessa última grande lição] (.560) eh: [pra ele passar] [a nota dele no caso pro trabalho de conclusão seria escrever um livro] (.742) [que é o livro]

[que eu li] (1.191) [e: daí ele começa a falar bastante coisas assim] [cada cada capítulo é um: uma coisa sobre família] [ou sobre: (1.469) eh (.716) sobre trabalho] [sobre (.167) como tu vê as pessoas] [e: (.580) e em tudo isso tem a luta do professor contra a doença] (.525) [é bem interessante] (.197) [porque tem tem várias refeições] [que eles comem juntos] [e no final já não podem nem fazer mais refeições] [porque o professor não pode nem mais comer] (.969) [e daí ele resolve fazer um funeral antes da: (1.317) antes da morte dele] [porque ele queria um funeral em vida] [porque ele queria ver] [o que as pessoas iriam falar dele] (.615) [então assim ele tem umas idéias (.459) inova- (.424) inovadoras assim] (1.029) [até q- é bem interessante assim] [eu gostei bastante] (1.492) [acho que] [é isso].

#### **PARTICIPANT 5**

[Bom (.875) o filme] [que eu vi] [é “Antes que o dia termine”] (1.346) [então conta a história de um casal de namorados] (1.212) [que tão morando junto] (1.212) [e aparece no começo os dois juntos] [e saindo] [e (.942) um dia normal] [ela foi pro trabalho dela] [ele foi pro trabalho dele] (2.208) [e: (.512) várias coisas acontecem né (.686) durante esse dia] (1.239) [se molham] [pegam chuva e tal] (2.155) [e ele: é um namorado (.188) meio desligado assim] (3.959) [ele é um namorado bem desligado e tal] [e tá muito: (3.771) ele gosta (.220) dela] [mas ele não (.248) concorda em ir com ela pra casa dos pais dela] (2.397) [ela tá se formando na: (2.639) tem a formatura dela do:] (.512) [ela toca numa orquestra] (.740) [e ele esquece não vaiaraballo(1)-2(TJ32( Tc)1( ))-2(radosh)TJET0701.42 o o71(5)5(9)5(asta)542399ca numoralraas cn.

não revela pra ela num primeiro momento] (.854) [ele (1.090) o: o o contador até vai no escritório do psicólogo] [que era no mesmo prédio] (.800) [da: (.545) que ele tinha escritório] [que foi] [o que ocasionou a confusão] (.608) [e pega dicas com ele] [pra saber] [o que ele deveria fazer] [e ele fala pra ele (.520) que] [se ela: apenas queria uma pessoa (.204) pra ouvir] [que ele poderia ser a (.727) a pessoa ideal] (1.181) [quando: (.353) ela descobre] [que ele não é mais (.238) que ele não é um psicólogo na verdade] (.509) [os dois já tão muito envolvidos nas confidências] [que tinham feito um (.176) um pro outro que eles um pro outro] [que eles tinham ficado amigos] [e tinham (.800) conversado muito a respeito de coisas íntimas das vidas d- (.252) das vidas dos dois] (.655) [mas] [quando ela descobre que] [ele é contador] [ela re- decide lar- (.442) parar de ir (.582) no escritório dele] (.517) [l- (.469) e: (.163) depois de um: de um mês e pouco ela passa no escritório dele] (.428) [pra se despedir] [falando que:] (.333) [largou o marido] [que tá mudando (.655) pra uma cidade no sul da França] (.582) [pra dar aulas de balé] (1.345) [e depois de algum tempo ele também se muda pra ess- pra essa cidade] (1.836) [abre seu consultório lá] [e reencontra com ela] (2.181) [pra: (.455) e os dois começam (.149) uma relação] (.655) [que foi uma coisa completamente acidental assim] [que não era pra ter acontecido] [e o marido dela é envolvido também] [vai atrás dela (.600) do contador] [quando (1.327) quando ela quando ele descobre que] [ela tava indo no (.246) no escritório dele] (.655) [e a situação fica muito chata pros dois] [e ela resolve: largar o marido dela] [e mu- (.224) e mudar (.176) totalmente de vida] (.428) [ele nesse momento também (.115) se questiona muitas coisa- (.231) muito a respeito do seu passado (.469) do seu presente qu- também] [que ele era divorciado (1.254) e tudo] (.782) [e resolve e: (.197) é uma experiência] [que muda a vida dos dois (.238) completamente] (.183) [ele ela muda de cidade] [e larga o marido (.509) de um c- de um casamento problemático] (.727) [e ele: (1.399) muda também] [e sai da: (.564) da cid- da da mesma casa] [que ele tinha vivido (.564) toda vida dele] [do mesmo escritório] [que tinha sido do pré- do pai dele] [quebrando (.286) tradições] [e (1.199) tentando (.306) ser feliz] (.204) [quando eles mudam pra lá] [eles se reencontram] (.655) [eles descobrem que: começam uma relação] [e descob- (.136) e acabam descobrindo] [que não havia nada mais sedutor (.582) do que a verdade] [porque eles não (.618) tem muita coisa em comum] (.618) [mas eles ajudam um ao outro (.170) falar sobre (.999) as coisas] [que tavam acontecendo (.156) na vida (.272) na vida deles].

#### **PARTICIPANT 7**

[O filme] [que eu vou contar então] [vai ser “O Sorriso de Monalisa”] (.762) [que eu vi recentemente] (.908) [tá (.146) “O Sorriso de Monalisa” (.146) é uma hist- (.250) a história de passa no: na década de cinqüenta] (.752) [quando era as mulheres ainda (.689) era (.276) não era comum] [que elas estudassem] [elas ficavam em casa] [pra: (.511) trabalhar] [cuidar do marido et cetera] (1.306) [bom (.162) ah: (.214) pra esse personagem principal é a Julia Roberts] [que é uma professora de história da arte] (1.023) [e: um dia ela é chamada pra dar aula em uma escola tradicional (1.462) e: ela (.151) n- nos Estados Unidos] (2.371) [e: (1.912) e chegando lá] (.605) [ela (1.389) ela tá bem insegura assim] [ela começa dar a aula dela] [e as alunas sabem tudo] [porque tá tudo escrito no livro] (.851) [e aí ela resolve trazer coisas diferentes] [e elas não gostam disso] (.120) [a: direção da escola também não gosta] (.767) [que ela tenha um pensamento mais liberal] [ela (.240) já (.517) pensa como uma mulher (.323) d- de atualmente assim] [não acha que] (.586) [a (.276) mulher tem que ficar em casa] (.344) [pra cuidar do marido] (.823) [e: (1.047) e ela começa a (.261) passar essas idéias pras alunas dela em sala de aula] (.907) [e: por causa disso ela é repreendida pela direção (.209) do (.141) da escola] (.781) [e: até algumas das alunas dela também não gostam] [e uma aluna chega a escrever uma reportagem (.670) sobre isso no jornal da escola] (1.158) [até que um dia ela mesma não agüenta mais] [e resolve se demitir] (.531) [mas ah (.586) o colégio pede pra ela ficar] (.670) [desde que] [ela eh (.670) aja (.214) de maneira (.517) comportada digamos] (1.019) [mas n- ela resolve ir embora] (.712) [e: nisso ela cativou todas as estudantes] (.531) [porque elas todas (.230) eh (.628) simpatizaram com as idéias dela] (.698) [e: (.297) aprenderam (.282) arte] (.266) [e não só] [o que tava escrito nos livros] (1.521) [e (.837) ela: (.851) essa: estudante] [que também tinha escrito uma (.146) reportagem contra a professora no jornal da escola] (.545) [se casou] (.781) [e viu que] (.261) [o casamento não era bem aquilo] [que ela esperava] (.837) [e viu que: e depois se tornou uma grande amiga da da Julia Roberts] (.795) [e quando ela se (.121) separa no final do filme] (.935) [ela: (.141) [a Julia Roberts] [ajuda ela a conseguir morar (.907) eh (.350) eh longe da família] (1.089) [e aí no fim ela decide ir embora da escola] (.642) [e vai tentar a vida em outro lugar] (.548) [bom (.355) é isso].

#### **PARTICIPANT 8**

[O filme] [que eu vou falar] [é “Náufrago”] (1.459) [é a história (.636) eh um homem] (.729) [trabalha na (.900) na FEDEX] [que é uma empresa] [que faz entregas nos Estados Unidos] (.993) [e ele: (1.008) trabalha muito] [viaja pra longe da família] (.962) [e não (1.055) é muito ocupado assim (.188) com as

coisas] [inclusive ele viaja pra Rússia] (.392) [onde tem várias entregas e tal] (.993) [e numa dessas na viagem de volta da Rússia (.807) ele tinha planejado (.559) várias muitas coisas pr- (.528) pra (.605) pro fim de ano (.521) com a família com a esposa] (.528) [e o avião dele acaba caindo (.559) no mar] (.931) [e: (.547) daí n- no desastre lá acaba só restando ele] [e ele consegue chegar numa ilha] (1.412) [aparentemente deserta] (1.435) [e qua- quando ele tá na ilha] [ele: (.365) ainda depois cheg- chega ac- acontece de chegarem muitas bagagens (.829) do avião né de entregas] [que não eram não era bagagem dele] [era entrega que tinha que fazer] [e ele não abre nenhuma das entregas] (.978) [e ele procura se adaptar né] [tentando (.690) de alguma maneira avisar (.507) alguém que] [ele tá lá] [mas não consegue] (.771) [então ele começa a sobreviver com] [o que ele tem lá (.462) né] [comendo (1.082) né (.644) peixe] [tentando (.274) pescar] (1.139) [e (.215) depois de um tempo ele resolve abrir (.529) eh depois de muito tempo resolve abrir] [pra ver] [o que que realmente tinha na: (1.266) na: n- nessas entregas né] [e ele descobre que] [não tinha m- nada de útil] (1.047) [só (1.208) eh patins pra patinação no gelo] (.161) [fita de videocassete] (.150) [coisas bem inúteis] [que não poderiam ajudar] (.257) [vestido de noiva] (.518) [e ele ainda adapta essas coisas pra pod- e uma bola de vôlei (.252) né da Wilson] (.817) [e ele ainda adapta algumas coisas (.118) pra pr- pra pescar] [como o vestido ele usa pra pescar] (1.013) eh [a fita ele us- usa pra fazer barco tentar fazer um barco] (1.888) [e: e ah e antes de (.177) viajar] [ele tava com um problema no do do dente] (.226) [que] [quando ele chegou na ilha] [se agravou né] (.440) [e inclusive ele usa o (.656) patins] [pra tentar arrancar o dente] (1.749) [dep- (.161) ele passa muito tempo na ilha] [e: ele acaba criando um amigo imaginário] [que é o: o Wilson] (.518) [que é a bola] (1.208) [que e: (1.772) e ele f- (.500) começa conviver lá] [daí: inclusive (.541) m- (.172) perde os quilinhos] [que ele tinha a mais] (.552) [fica forte] [porque ele (.107) só trabalha (.587) trabalho braçal] [pra fazer cabana] [pra (.220) carregar comida] (1.013) [pra tentar fazer o barco] (1.139) [aí depois de ele (.413) viver muito tempo na ilha] (.529) [ele consegue fazer um barco] (1.151) [e resolve remar né] [pra ver se consegue (.725) achar um navio alguma coisa] [que (1.439) que: que possa levar ele de volta pra casa] (.252) [e: (1.047) depois de muito sacrifício que ele consegue (.702) barco] [até ele não consegue salvar a bola] [que ele queria salvar a bola junto] (.920) [o Wilson] [que era o amigo dele] [ele (.667) tá (.252) no (.215) no meio do oceano] (.621) [perde o remo (.188) tal] (.338) [adormece] (.507) [e finalmente um navio passa (.311) por perto] [e: (.805) e resgata ele] (1.105) [e quando ele retorna (.874) pra casa] (1.554) ah (.349) (tosse) [tá (.295) já se passou muito (.150) tempo] [e: ele era dado como morto né] (.552) [e a esposa dele (.518) tá com: (.204) uma outra (.193) outra pessoa] (1.243) eh (.644) [e (.128) pô muita muita coisa (.529) aconteceu de diferente (2.462) né] ah: [mas daí ele consegue no fim (.478) né] (.736) [primeiro ele vai num (.183) cortar o cabelo] (.360) [fazer a barba] [que (.667) ficou (.257) todo esse tempo sem fazer nada né] [o dentista dele ele encontra também] [pra poder tratar o dente] [que ele tava com problema] (1.220) [e mas no fim (1.128) ele: (1.462) ele com- volta pra mulher dele] (.932) [e (.109) termina (.435) bem] (.702) [mas ele passa a valorizar muito mais] [o (.322) que ele tem (.748) né (.134) depois] (.587) [porque] [quando ele (.227) tinha muitos compromissos] [ele não valorizava tanto] (1.082) [ou pelo menos pr- eh: a família] (1.335) [a convivência né (.828) com as pessoas] [que ele gosta] [ou fazer as coisas] [que ele gosta] (2.762) [e eu gostei ess- (.247) gostei desse filme (.408) bastante] (.242) [porque (.507) justamente f- (.541) mostra (.451) pra gente] [como (1.128) nem só o trabalho é importante] [tem que valorizar as coisas pequenas né] (1.030) [e: não deixar pra depois (.944) as (.161) as coisas] [que a gente podia fazer hoje] [no caso ele valorizar a mulher dele (.451) mais] (.623) [ou não fa- não fazer tantos planos pro futuro] [e fazer as coisas (.529) eh no no momento] (.759) [também gostei] [porque é um filme] [que (.204) passa (.161) praticamente (.118) todo né (1.105) todo ele (.215) só com o Tom Hanks né] [que é o (.167) o o ator] (.529) [passa quase sozinho o tempo inteiro] [e não é um filme chato] [é um filme] [que (.365) você sente] [5'00']

## PARTICIPANT 9

[Eu vou falar sobre um filme: alemão] [que eu assisti] (.540) [que chama “Educators”] (.700) [é: (.408) é um filme que fala sobre: (.532) são jovens (.745) eh: (.199) eles são jovens alemães assim de classe (.668) de classe média] [acho (.118) que] [pode se (.101) pode se dizer] (.774) [e: (.774) eh eles (.375) eles (.177) eh (.551) digamos assim eles dão eles dão (.551) uma de educadores assim] (.658) [porque: (.735) eles eles tem a mania de ir em casas assim de gente muito rica gente] [que tem muito dinheiro] (.456) [moram em mansões] [então então eles estudam (1.152) essas (.204) essas casas] [antes de irem] [essas mansões] (.503) [e daí: ficam observando durante semanas assim antes] (.467) [e depois eles entram na casa] [quando as pessoas estão viajando] (.505) [e: (.333) eles (.526) tipo fazem uma bagunça na casa] [tipo empilham (.118) os móveis assim] (.750) eh [em uma casa mesmo eles empilharam assim as cadeiras e tudo na sala assim] [um monte de móveis assim até o teto] (.608) [parecendo tipo uma árvore assim] (.556) [e: (.983) e daí eles deixam um bilhete dizendo assim] [seus dias de fartura (.365) acabaram] [assinado os educadores] [e: (.601) daí são são dois meninos e uma menina] (.582) [a menina (.188) é a namorada de um deles] (.918) [e: essa menina (.226) ela tá (.841) ela trabalha pra caramba]

[trabalha[ [faz um monte de serviço como garçõnete (.672) e um monte de coisa] [porque (.531) ela tem uma dívida de: ela tinha uma dívida de: c- quase cem mil Euros] (.543) [porque um dia ela bateu (.828) bateu num num BMW de um cara bem rico] [ela tava com um Golf] [e bateu no (.543) no BMW de um cara bem rico] (.518) [e: (.556) e daí ela teve que pagar] [e a culpa foi dela assim do acidente] [então ela teve que pagar (.802) tipo: (.327) então ela tava com eh teve que pagar uns cem mil Euros] [então ela já tinha pagado já tinha conseguido pagar] [acho que] [uns dez mil] (.543) [e então ela tinha essa dívida de uns: noventa e cinco mil Euros] (.456) [e: (1.048) e ela teve aí daí por isso ela não não tava conseguindo pagar o aluguel de] [onde ela tava morando] (.413) [foi despejada] (.685) [e daí o namorado dela viajou] (.467) [e ela ficou só com: (.311) com esse amigo do namorado dela né] (.556) [que esses dois eram os chamados educadores] [que faziam isso nas casas] (.595) [e daí (.183) ele acaba contando isso pra ela] (.574) [o que eles faziam] (.879) [e daí um belo dia eles tão num bairro chique lá] (.531) [eles observand- ele observando uma mansão] (.634) [e daí: ela descobre que o cara] [de quem (.333) que ela bateu no carro] (.472) [mora também naquele bairro] [tem uma mansão naquele bairro] (1.138) [e: (.621) e daí ela pede] [pra ir lá] [e daí eles vão lá] (.193) [entram na casa] [ele desarma o alarme tudo] (.440) [e ela decide que] [quer fazer isso também (.621) com com ele] [dáí eles vão] [entram na casa] (.518) [dáí desarrumam a casa toda] [jogam tipo o sofá na piscina] (.882) [e: (.621) desarrumam tudo assim] [bebem um monte de coisa da geladeira:] (.505) [e: tomam banho na piscina] [e: (.737) desarrumam os móveis] (1.035) [e: daí tá daí eles vão embora] (1.280) [e: no outro dia ela descobre que] [ela (.983) ela esqueceu o celular (.646) na casa] (.429) [eles tiveram que sair assim (.311) correndo] (.543) [e ela esqueceu o celular na casa] (1.073) [e daí (.685) eh no outro dia o namorado dela] [o namorado dela tava viajando] [tava na Espanha] [volta] (.789) [e daí sem falar nada pro namorado dela] (.134) [ela e o outro amigo dele resolvem voltar lá na casa] [pra tentar (.531) pegar o rec- (.327) pegar o celular] [pra não deixar nenhuma pista né] [antes que as pessoas o dono da casa volte] (.815) [e daí: (.931) quando eles deci- quando eles vão na (.397) casa eles vão na casa] [pra tentar achar o celular] [não conseguem achar] (.365) [e quando eles tão lá] [procurando dentro da casa] (.445) [o dono da casa chega] (1.229) [e: (.128) daí o dono da casa chega] (.162) [e acaba vendo] [e ela tá sem tá sem máscara] (.556) [digamos eles sempre andam com gorro e tudo] [e ela tá sem máscara] (.518) [e ele olha pra ela] [e reconhece ela (1.177) e: (.107) do acidente e tal] (.685) [e: (.505) e daí vem o outro (1.332) o outro o outro menino vem] (.167) [e acaba (.357) batendo nele] [ele fica desacordado] (.815) [e: eles amarram ele] [e ficam sem saber] [o que fazer] (.416) [porque ele viu os dois e p- (.737) sem sem máscara nem nada] [e poderiam reconhecer eles] (.853) [e daí eles resolvem ligar pro outro amigo também] [dizer] [o que que aconteceu] (.161) [e daí vão os três] (.483) [e eles resolvem acabam resolvendo já que ele viu (.543) o rosto dos três e tudo mais] [e com certeza ia contar pra polícia] [eles resolvem seqüestrar ele] (.931) [dáí eles vão pra uma casa de campo (.983) dum tio da menina (.193) num lugar bem afastado] (.724) [e: (.569) seq- e daí ficam com ele lá] [sem saber o que fazer] (.505) [pra ver] [o que é que vão fazer com ele né] (.595) [5'00"]

#### **PARTICIPANT 10**

[Bem um filme] [que eu gostei] (1.565) [e assisti recentemente] [foi (.973) “Eu, robô”] (1.097) [conta a história de: (3.177) de uma civilização: (1.078) da civilização humana (.715) eh: muito mais avançada na história] (1.221) [em que: (1.841) robôs convivem com a sociedade] (1.641) [e a: (.111) principal (.218) história (.383) principal idéia do filme] (1.316) eh: (1.374) [principal (.629) coisa] [que o filme transmite] (1.402) [são os robôs (.839) ajudando as pessoas nas (.133) em todas as tarefas] (.782) [robôs substituindo os humanos em vá- em vários (.648) trabalhos] (2.042) [e a princ- e o principal e o drama principal do filme (.906) é: um tipo de robô] (1.498) [que evolui] (1.450) [e se rebela] (3.397) [e nisso um agente policial] (.277) [que não gosta de robôs] (1.736) eh: (.341) [começa a perseguir (2.853) um robô] (4.022) eh: (2.729) [esse robô se mostra muito inteligente (1.246) durante (.774) todo o filme] (1.545) [e a principal causa de: (.935) desse agente policial] [estar perseguindo esse robô] (1.622) [é porque o (.187) os criadores desse robô (.442) o criador desse robô (2.042) foi m- (.187) foi morto] [e não se sabe como] (1.469) [e analisando a: sala] [onde (1.851) a pessoa foi morta] (1.593) [que era num prédio] [ela se jogou da janela] (.706) [o: (.277) esse agente achou o robô lá dentro] (.821) [e pensou que] [o robô que tivesse matado esse agente] (2.901) [como essa empresa] (.954) [a qual o (1.641) criador do robô estava] (1.270) [tinha um grande cérebro] (.106) [que também era um robô] (4.046) [e no final da história (1.651) depois de passar muito tempo] (763) eh: (1.374) [do agente policial (.171) tentando (2.023) eh: encontrar o real significado da morte] (.394) [como o (.725) o criador do robô foi morto] [e: (1.336) depois de vários equívocos (.649) sobre: o assassino (2.061) eles ch- chegaram (2.633) chegaram ao ponto] [de: (3.874) perceber (1.469) que] [o: (.802) quem controlava toda a situação] (1.660) [era o (.335) cérebro da empresa] [que também era um robô] (.687) [e esse robô sim tinha evoluído] (2.175) [e: (.821) e tinha quase um comportamento humano] (1.316) [e tava controlando (.367) todos os robôs] [que tavam causando um grande caos (.725) na cidade] (4.217) [o: agente policial então (.668) juntamente (.479) com o robô] (1.145) [que ele pensava (.534) que] [tinha se rebelado] (.611) [mas na verdade o robô (.935)

era uma forma mais inteligente] (1.087) [e depois ele percebeu que] [esse robô tava do lado dele] (.611) [junto com a ajuda desse robô (.897) ele descobriu: (2.252) os problemas da q- da empresa] (.160) [descobriu que] (1.431) [o cérebro do mal (.431) era (1.183) justamente aquele grande robô] [que o (.858) criador tinha (.611) criado] [que controlava toda: (1.145) a empresa] (2.404) [e: (1.507) juntos (1.145) conseguiram destruir o o cérebro da empresa] (3.969) [e: (5.916) descobriram então a grande causa (1.488) da morte do: (.192) criador] (2.901) [e e assim puderam: (.611) organizar de novo a vida da cidade] (1.106) [e: e fazer (1.584) e deixar os robôs: (.698) com: a sua imagem: recuperada] (.859) [porque os robôs (.992) nunca fizeram mal às pessoas] (1.870) [com- eles começaram a fazer mal] [quando: (.725) esse cérebro da empresa] [que comandava todo processo de: (1.297) de construção dos robôs] (.677) [evoluiu] [e começou a fazer o mal] (2.652) [começou a controlar a mente dos robôs] [e (.935) f- fazer os robôs] [causarem caos na cidade] [**4'58''**]

### PARTICIPANT 11

[O filme (.237) se chama “A Missão”] (.844) [é um filme muito interessante] (1.207) [e: ele se passa (.873) na América do Sul] (1.513) [na época da descoberta da América] (.316) [século dezesse:is] (1.164) [quando os portugueses e espanhols (.107) espanhóis vieram para o Brasi:l] (.640) [quer dizer (.274) pra América do Sul] (1.920) [e aqui tinha todo tipo de gente] [aí (.451) tinham (.974) vários mercenários] [que caçavam os índios] [e tentavam (1.396) e vendiam eles como escravos] [e tinha também (1.949) jesuítas] (1.571) [e: (.530) um monte de (.683) outras profissões] [mas os mais importantes (.683) pra história são essas duas] (1.367) [e: tinha um (1.396) um caçador lá de índio] (1.178) [que ele (.151) caçava os índios] [aprisionava] (.785) [e vendia pra: (.756) como escravo né] (1.920) [ele era o: (3.012) ele: (1.658) aconteceu que] [ele (1.513) tinha (.683) uma mulher] (.597) [só que aí depois (.538) teve um dia que aconteceu que] [ele (1.222) descobriu que] [a mulher dele (2.735) gostava do irmão dele] (.349) [e já tava traindo ele há (.844) há um tempo há alguns meses] (1.092) [e ele ficou (1.833) raivoso] (.247) (riso) [e acabou matando o irmão dele] (1.484) [apesar de ele ser um homem] (1.207) [que fazia maldades] [ele não era (.177) tão mau assim] (1.367) [ele: acabou (1.193) ficando com muito remorso] [ele foi (.118) preso] [e ficava na cadeia (1.236) totalmente (1.513) ahm (3.026) desiludido] [ficou muito (.107) tempo (.945) sem: (.698) perspectiva pra vida] [queria morrer] (1.600) [e aí (1.586) lá (.123) na América do Sul tinha os jesuítas] (.669) [e um dia um jesuíta chegou lá no] (2.619) [onde que o: (.161) esse (1.236) mercenário (.274) tava] (.756) [e (.451) tentou descob- tentou ajudar ele] (.873) [porque que ele tava daquele jeito] (1.629) [aí ele descobriu que] [ele tava assim] [porque ele não (1.120) conseguia perdoar a si mesmo] (.524) [porque ele tinha matado o próprio irmão] (2.037) [aí o jesuíta conseguiu convencer ele a (1.018) ele ajudar os jes- (.188) o mercenário] [ajudar os jesuítas] (2.401) [fazer o trabalho] [que os jesuítas faziam] [que não era fácil] (2.037) [aí (.467) ele mesmo se impôs uma (1.091) o mercenário se impôs uma (1.105) penitência] (2.110) [que era de] [ficar carregando um monte de (riso) (1.731) de armadura] (1.629) [junto com (.800) para onde que os jesuítas fossem] [ele carregava aquele negócio] [e o jesuíta tava subindo (.771) escalando montanha] [porque: (.626) eles iam (.263) catequizar os índios (1.193) lá em cima (1.135) depois de um ri:o] (1.222) [e tinha que escalar: um monte de montanha] (.669) [e o mercenário (1.120) ficava carregando (1.033) aquele negócio pra lá e pra cá] (.785) [e depois de um tempão ele continuava a carregar aquilo] (1.498) [ele tava querendo se tornar um (1.367) um jesuíta né] (3.128) [e essa foi a (.424) penitência] [que ele se: (.887) impôs] (1.193) [mas aí ele não tava agüentand-] (.771) [quer dizer] (.129) [era muito duro] [e ele agüentav- (.183) ele ia agüentar] (.683) [só que os jesuítas] (.916) [eles tavam com dó dele] (.626) [e falavam pra ele] [largar mão daquilo] [que já tinha (.290) passado já] (1.000) [já tinha dado já a penitência] (.509) [mas ele (.669) era insistente] (.414) [não se conformava] (2.415) [até que u:m (.725) ele lá junto com os índios (2.386) chegou lá (.478) e um (.210) um índio] [que ajudou ele] [a (.484) a se libertar] (.902) [olha que] (1.062) [ele] [que escravizava os índios] [agora tava sendo (.626) liberto por um] (2.895) ah (.742) [e aí (1.469) foi passando o tempo] [e ele foi ajudando] (.457) [ele se converteu totalmente] (1.571) [e: se tornou um jesuíta] (.800) [esse mercenário (1.251) esse ex-mercenário] (1.047) [e agora ele já ajudava os índios] [a catequizar:] [e ensinava os índios] [a cantar:] [ensinava os índios] [a (.698) fazer um monte de coisa] (1.353) ah: (1.411) ah (.177) [ensinava a crença] [**5'00''**]

### PARTICIPANT 12

[O filme] [que eu vou contar] (.746) [é: (.557) é sobre o filme “Expresso Polar”] (.977) [quem atua no filme é o Tom Hanks] (.746) [e: esse filme concorreu ao Oscar em algumas categorias como] [melhor (.298) som] (.683) [e: melhor desenho] (.988) eh: (.213) [é a história de um menino] (.893) [que: (.458) começava a duvidar] (.133) [que o Papai Noel existisse] (1.030) [e: (.641) ele tinha um irmãozinho menor] [que acreditava (.149) muito] [mas ele já tinha crescido] [e começou a achar que] [o Papai Noel realmente não existia] (.865) eh [mas na véspera de Natal (.546) no meio da noite ele acordou com um barulho (.399) de um trem] (.757) [e:] (.165) [quando ele foi ver] (.639) [era um expresso] (.609) [que

veio pegá-lo] (1.050) [e ele nesse trem ele foi recebido (.778) por um: homem] (.510) [que se dizia o (.202) comandante do trem] (.287) [que era o Tom Hanks] (.737) [e: ele prometia] [levar (.101) o menino (.117) pro Pólo Norte] (.245) [e conhecer a terra do Papai Noel e o Papai Noel] (1.389) [esse menino então entra no trem] (.688) [dentro do trem ele encontra muitas outras crianças] (.382) [que: (.761) que também (.250) no caso (.234) não acre- não acreditavam no Papai Noel] (1.353) eh: /durante a viagem até o Pólo Norte] (.495) [que durou menos] [que durou apenas algumas horas] (.858) /aconteceu muitas coisas] (1.063) [que fizeram ele pensar na vida] (1.099) [e (.372) em em ter fé e coisas do tipo] (.930) eh (.208) [quando ele finalmente chega no Pólo Norte] (.764) eh [ele encontra os duendes] [ele encontra: (.335) todo mundo do Papai Noel] (.160) [que ele sempre sonhou] (1.027) [e só que quando ele só que ele ainda não acredita muito] [porque ele ainda não viu] (1.027) [quando o Papai Noel chega] (1.099) [ele: (.700) vê] [fica admirado] [mas ele não consegue esc- escutar os sininhos (.568) os guizos dos sinos (.394) do Papai Noel] (1.075) [só quando (.846) eh (1.229) a (.628) a: ele descobriu] (.404) [que todas as pessoas] (.508) [que não escutavam o sino] [é porque ainda não acreditavam] (1.148) [até que meia-noite em ponto ele foi escolhido pelo Papai Noel] [entre todas as crianças] [que tavam lá no Pólo Norte] [pra receber o primeiro presente de Natal] (.676) [o presente] [que ele resolveu escolher] [foi o guizo o primeiro sino (.277) o sininho] (.930) [que ele escutou] (.749) [o barulho (.580) significava que] [ele: (.846) começava a acreditar realmente que] [o Papai Noel existia] (1.208) [então (1.244) ah o Expresso Pola- o Papai Noel seguiu pra: (1.136) seguiu viagem com as renas e tal] (.127) [pra entregar os presentes pro mundo inteiro] (.797) [e ele: entrou (.287) de volta no Expresso Polar] [pra voltar pra casa] (1.172) [e é assim] [que mais ou menos termina a história] (.266) [ele chega em casa] [no outro dia ele acorda] [tão lá todos os presentes (1.256) e: (.616) entre eles o sin- o sino de Natal] [que ele ganhou] (1.184) [e ele realmente confirmou que] [o só quem escutava o sa- o sino o guizo do Papai Noel eram aqueles] [que acreditavam nele] (.797) [o irmãozinho dele escutou] [mas os pais dele não] [a- acharam que] [o sino tava quebrado] (1.015) [porque o sino não tocava] (.991) [e é assim] [que termina essa história] (.978) [cheia (.431) que é feita em: (.162) computador] (.592) [tem imagens lindas] [e: (.127) uma trilha sonora (.362) linda também].

## 2.3 American participants

### PARTICIPANT 13

[Ok the story] [I'm going to talk about] (.107) [i:s (.221) uh: (.149) "The lion the witch and the wardrobe"] (.843) [which is the first (.915) book of the series of Narnia] (1.095) [and it's just been made into a movie] (1.085) [an:d (.401) this first book tells (.272) the story of (.267) three (.380) uh brothers and (.154) sisters] (1.064) [four actually (.719) Edmund Lucy:] (.308) [and I forget the names of the other ones] (.483) [and they find themselves] (.750) eh: [having to go to a: an uncle's house (.401) because of the war] (1.290) [and while they're playing in the: it's a huge house] [so while they're playing in the house] [they discover this wardrobe] [that's hidden in a (.262) you know (.195) one of the rooms] (1.079) [and they decide Lucy decides to go in] [she's the smallest (.138) uh (.241) the youngest] (.689) [and she decides to go in] [and she stumbles on to this magical world] (.982) [which is called Narnia] (1.085) [and from then on it starts telling the story of (.144) Narnia] [and at the same time telling the story of the kids] (.313) [and eh what they discover] [and (.833) the main story of "The lion the witch and the wardrobe" is that] (.201) [the: white witch (.822) has taken over Narnia for hundreds of years] (.807) [a:nd she's transformed it all into a all into a eh all into snow] [so it's always cold] [it's always winter] (.318) [but never Christmas] (.807) [a:nd (.658) Lucy and her brothers and sisters (.637) ar:e (.313) chosen (.498) to fight (.201) against the witch] (1.234) [and try to bring Narnia back to Aslam] (.545) [which is the lion eh (.251) king (.128) of (.251) the country] [and it's a fascinating story] (.848) uh: [because (.385) it's written for children] [but at the same time it's (.581) even more interesting] [for adults to read] (.216) [because you can get a lot more of the details] (1.223) [a:nd he tells it eh C.S. Louis tells it in a very (.545) very clear (.488) way] [giving lots of details] (.442) uhm (1.352) [the details of the animals] [they're all talking animals] [so it's a very magical country] (.817) [and there are talking animals] [there are dwarfs] [there are giants] (.498) [and all of them ar:e citizens of Narnia] [that have been (.105) trying to get away from the witch] (1.131) [and (.488) with the help of these four kids (.226) they are able to (1.239) not kill the witch] [but] (.637) [I can't remember] (.714) [I think they're able to send her off to another country] [because in the end she comes back] (.622) uhm (.246) [and then they become (.107) kings and queens of Narnia] (.524) [and (.287) gosh they live there for a long time] [they grow up in Narnia] [because they're (.426) really young] [when they get there] (.725) [and they learn] [how you know to do stuff] (.467) [that kings and queens do] [they (.303) learn] [how to fight] [and they travel (.977) by ship] [they try to conquer other la:nds] (.632) [and they have a great (.524) time (.144) during all this] (1.229) [and then uh Aslam appears at the end] [which is] [what they've all been trying to



do] (.658) uh [which is to get him back] [or to get Narnia back to him] (.442) [and he comes] [and goes] [all through the (.128) the stories he comes] [and goes] [and he basically helps] [people (.462) or: and (.277) creatures (.642) to (.303) live (.170) uh at peace in Narnia] (1.157) [and so he comes back] [and he sends (.293) the kids (.982) back to the real world (.426) ok] (.735) [a:nd they notice] [that absolutely no time has passed (.298) in (.231) their world] (.406) [so they come back to the same place the same wardrobe] (.334) [and (.144) from then on (.246) in the other books (.170) there ar:e (.303) many other adventures (.807) with (.201) some of the kids] [some of them don't go back] (1.187) [and it is one of the most fascinating series] (.190) [I've read] (.426) [because it just lets your imagination go wild] (.426) [and you really feel] [that you're into the story] [you really root for the kids] [you really (.216) hope] [the witch will (.401) die or whatever] (.524) [a:nd] (.211) [I think] [they did a good job (.421) uh portraying all this in the movie] [it's obviously not the same thing] [it never is] (.596) uh: [but it's (.313) a book a series] [that I would very highly recommend (.586) especially for adults] [because it brings (.586) back the child in you] (.241) [and you let your imagination go wild].

#### PARTICIPANT 14

[The story] [I wanna tell] (.420) [is a a movie] [that I saw recently] (.496) [and the English title] (.378) [I believe] [is "The Insider"] (.820) [and uh what the movie was about was an elaborate uh bank robbery] (.982) [and uh (.216) the movie st- (.206) uh started out with] (.889) uh [this (.117) couple of guys entering a bank (.496) dressed as painters (.619) uh (.260) with (.270) glasses on and hats on] (.501) [a:nd (.108) they had a special type of light] [that would block out the cameras] (.668) [soon after that (.108) they pull out (.275) guns] [and uh (.501) lock the front doors] [and told everybody] [this was a robbery] [had them get down] (.855) uh [then they (.122) brought everybody downs- uh to a downstairs area] [this was a a (.132) bank an old bank somewhere in New York] (.835) [a:nd uh they made] [everybody uh strip down to their underwear (.599) and put on these suits] (.599) [that were uhm: (.381) like a one piece kind of a jumpsuit] (.643) [and everybody wore the the same thing] [they wore the the same suit (.633) uh the same hat (.152) glasses (.501) and a scarf] [and this was the exact same thing] [that (.108) the: uh (.486) bank robbers were (1.086) were wearing] (.914) [and uh they (.255) they separated the people into a couple (.481) of separate rooms] (.422) uh [while they (.304) proceeded with (.138) uh robbing the vault] (.506) [and there was just (.182) one uh (.457) one particular (.452) safety deposit box] [that they were robbing] (.761) [they uhm: (.776) uh it it (.182) it had a (.304) had some some documents (.599) and a a lot of uh uh jewels] (1.130) [and while all this was going on] uhm [they were in contact with the police] (.466) [and making certain demands as far as uh airplanes and (.643) uh certain things] [that (.143) uh that they wanted] (.678) [and uh they (.226) basic- (.732) basically they were trying to uh stall the police] (.894) [and as the movie went on] [and the day went the day (.614) transpired within the movie] (.697) uhm (.614) [the police (.461) finally pick- (.776) picked on] [that they were stalling] (.550) [and they decided to raid the bank] (.560) [and the robbers knew] [they were about to raid it] (.511) [and so they had] [everybody run out (1.513) uh of the bank (.383) including themselves] (.398) [so when they ran (.294) out of the bank] (.550) [there was uhm (.157) nobody (1.267) uh: (1.027) uh the the the cops didn't know] [who were the bad guys] [and who were the hostages] (.835) [and uhm (.304) from there (.594) the: (.138) police interviewed everybody] (.491) [and uh they were not they were unable to: (.570) positively identify (.525) uh (.211) anybody as far as] uh [who the robbers were] (.712) uh (.260) [because everybody was wearing the same thing] [and nobody (.589) uhm no- nobody could uhm (1.017) uh n- nobody was able to: to tell] (.922) [a:nd uh so basically uhm (.304) the the bank reported nothing stolen] (.584) [and uh nobody nobody was hurt in the robbery] (.501) [so the police (.511) department just basically told the: investigators] [just to drop it] [forget about it] [move on] (.781) uhm (.329) [but (.143) uhm (.471) eh what really happened was] [that the main robber (.648) uh built a separate room within the bank] (.673) [and uh was hiding there for a week] (.452) [until (.587) until all the police left] (.114) [and it was safe to go in (.958) again] uh [and then he (.138) he broke out during the daytime] (.702) [and just uh walked (.689) uh just walked out of the bank (.928) uh with uh with all the jewels] (.904) [and (.815) n- (.968) that was (.344) pretty much the end of the story] [the uh: (.982) the cop] [that was investigating the case] [happened to be in the bank (.215) uh with a search warrant uh to to look inside the safety deposit boxes] [at the same time] (.594) [that (.127) the main character was leaving] (.589) [the main character (.452) uh (.358) uh purposely bumped into him] (.548) [and uh slipped a small diamond into his pocket (.604) uh just as a a joke] (.579) uhm (.461) [and that was it] [it was it was a good movie] [it was a: I liked it] [because it was a well-thought (.574) uh bank robbery] (.388) [and uh they had uh some good humor] (.574) [that was in it too] (1.194) uh [that's it] (.658) bye bye.

#### PARTICIPANT 15

[So last year (.365) maybe this year] [I don't remember that part] (.323) [I saw for the first time "Midnight Cowboy"] (.182) [which] (.119) [I think] (.752) [was the first (.1273) non (.211) adult (.281)

oriented (.121) film to receive an x-rating in the U.S.] (.351) [that's kind of trivial (.246) really] (.464) [but (.745) it's about a c- (.225) a: (.267) pretty dumb (.429) character named Joe Buck] (.154) [who (.830) l- lived in Texas] [and decided] [he was gonna go (.239) to New York and be a hustler] (.218) [and (.316) basically try to s- (.605) be a male prostitute] (1.252) [he goes up there] (1.414) uhm (.787) [has] (2.258) [I think] [his first encounter with a woman (.2.272) works out sexually] [but] (.415) [when he expects her to pay] [she (.534) freaks out] (1.160) [and uhm (.310) then later he runs into Ratso Rizzo = this kind of sleazy (.689) character] [who uhm (1.589) claims] [he's gonna hook him up with] (1.709) [I guess] [a (.105) pimp] (.317) [someone to (.323) to hook him up with a bunch of (.450) women] (.717) [and it turns out this guy is actually kind of a religious freak] (.365) [who tries to (.175) to cure (.133) or heal Joe Buck] (.267) [and uhm (1.273) Ratso Rizzo (.190) has (.182) just disappeared] (.745) [not so long later (1.582) Joe reencounters Ratso] (.398) [threatens him] (.760) uhm (.434) [but because Joe is (.956) pretty (.586) down on his luck no money nowhere to stay] (1.021) [he ends up going (.169) making friends with Ratso] [and they move in] (.297) [or he moves in to Ratso's (1.079) apartment] (.232) [which is really just kind of a place] [he's squatting in] (1.709) [a (.391) a pretty (.434) decrepit (1.173) place with (.398) like (1.050) well (.253) just nasty filthy] (1.962) [a:nd (1.59) eventually (.203) eh (.290) ends up turning to homosexual (.941) prostitution] (2.520) [Ratso has] (.137) [I think] [tuberculosis] [and is continuing to get worse (.956) from this point on] (3.092) [a:nd the only other significant development] [I remember] [is] [that they go to a (.405) a party] (.144) [the (.100) film takes place in the late sixties] [and they go to this (.824) party] [that's (.229) basically the (.558) Andy Warhol (.211) scene (.229) the factory (.446) uhm (1.104) crowd with a bunch of (.428) extremely (.521) extremely odd people] (1.649) [films being projected on (.117) on the walls] (1.865) [Joe smokes pot] [Ratso steals food] (.676) uhm (2.722) [Joe hooks up with a woman] (1.798) [there's really really interesting music from a band called The Elephant's Memory] (3.542) [and (.270) anyway (.180) eventually (2.307) life just continues] [Ratso continues to get worse] (.500) [Joe (1.442) decides] [well (.153) screw this] [I'm going to Florida] (.626) uhm (.238) [and convinces Ratso to go with him] (.365) [because he thinks] [the weather will help him] (.653) [and (.824) Ratso dies on the bus] (2.667) [Joe throws away all his cowboy outfits] (.194) [buys some stuff] [that looks like Florida] (.185) [and that's the end of the movie].

#### **PARTICIPANT 16**

[I'm gonna talk about the movie uh (.410) "The da Vinci (.110) Code"] (.285) [I watched it this last week] [and I chose to talk about this] [because is the one I most recent] [that I watched] (.410) [a:nd I liked the movie quite a bit] [I: (.125) had read the book] (.531) [before watching the movie] [so I I knew (.345) sort of] [what was gonna happen] [but it'd been a long time] [since I'd read the book] (.548) [and when I read the book] [I read it really fast] (.255) [so I wanted to watch the movie] [just to sort of (.591) see] [what was going on with the (.105) the story again] [and (315) and to watch it] (.654) [and cause also had a lot of uhm (1.092) had a lot of uh exposure in the news] [a lot of people were talking about it] [because there was (.310) it (.210) portrayed some controversy (.485) controversial points (.255) about the catholic religion and the origin of the religion] (.676) [but anyway the movie is about uh (1.758) is called "The da Vinci Code"] [and it's about a scientist] [that he studies (.445) uh ancient letters and ancient symbols] [and what these symbols and (.340) letters mean] (.521) [and uh during the film at the beginning of the film (.335) somebody was killed] (.295) [and (.851) right af- he was (.225) he was wounded] [and then the (.235) this guy left a message] (.390) [basically an encrypted message] (.536) [for this (.280) particular scientist] (.500) [and uhm (.861) they called this scientist] [to interpret this message] [and see] [what was going on] (.405) [but with uh (.475) with this uh he was he met the other principal actor] [which was a (.220) lady] (.440) [she turned out to be the granddaughter (.380) of this (.175) this person] [who got killed] [and left this message] (.541) [but anyway as that starts the film] [and it goes on:] (.596) [basically these two characters are following these (.105) codes and these encryptions] [and they have to (.395) decipher the codes] [and figure out] [what to do next] (.365) [and there's other people] [that are trying to kill them] [because (.300) this code is uh (1.170) basically this code is there to protect a secret] (.420) [that] [if revealed] [would (.440) hurt the image of the catholic church] (.760) [and so: throughout this you know the people from the catholic church are trying to protect this image (.305) and for various reasons] [and they describe] [why they're trying (.170) to protect the image] [and (.591) you know why they're doing this whether good or bad] (.761) [and so the film goes on with all these codes and very:] (.736) [it's a very good film] [lots of action but (.245) intermixed with (.103) hisr-0.02s(as)

**PARTICIPANT 17**

Ok [the movie] [I'm: gonna tell you about] [is King Kong] (.877) [and uh it starts out with a: (.368) a guy] [that finds (.167) a map to a secret island] (.735) [that supposedly does not exist] (1.002) [and so (.426) he's a filmmaker and he wants (.334) he's a a wildlife filmmaker] [and he wants to (1.161) to film] [what kind of creatures might live on this island] [so he gathers a crew] [and (1.169) they sail off (.534) into the deep Atlantic to (.952) uh find the secret island] (1.152) [and uh: (.601) they do find it] [and it's inhabited by (.351) wild native people] (.935) [who try to kill them] [but (1.912) they don't kill them] [they just (1.587) capture one of their women] [and uh (1.161) they're going to use her as a (.208) an offering (.994) a sacrifice offering to uh (.751) the great ape on the island = King Kong] (1.027) [and so uh (1.603) the the guys on the boat (.376) form a rescue mission to capture this girl back] (.960) [and uh (1.027) but it's too late] [King Kong already got her] (.317) [but (.668) K- King Kong was supposed to eat her] [but (.118) he falls in love with her instead] [it appears] [and (.893) and so (.551) he takes her as (.267) his (1.369) personal *boneca* = (laugh) (.626) his doll] (.376) [and uh (.158) anyways they form this mission to rescue her from the jungle and (.643) from the hands of King Kong] (.977) [and in the process they (.359) they come in contact with all kinds of (.284) primitive dinosaurs] [that are living on the island and (.735) gigantic insets] (.309) [and uh (1.035) so there's a good hour or so in the film] [that's uh (1.085) it's just these guys escaping these dinosaurs] [and fighting off (.651) the (.239) humongous insects] (.927) [that are trying to eat them] (1.211) [and uh: (1.102) the filmmaker is filming this the whole time] (.860) [and they get in a fight with King Kong] [and King Kong breaks (.150) his film reel] (.960) [and so he has no more film and no movie to take back] [and (.368) so he decides to capture King Kong instead] (1.511) [and so they just happened to have a bunch of chloroform on the boat] [and (1.278) so they throw it on King Kong] [and he falls asleep] [and (1.303) they put him on the boat] [and take him back to New York] (.593) [and have a big (1.461) show displaying the giant beast (.843) from the: (.476) lost world] (1.177) [and when they do so] (.351) [hundreds of people (.183) appear to uh see the great beast] (1.211) [and uhm (1.035) King Kong (.225) sees his girlfriend] [or someone he thinks] (.768) [is the girl he likes] [and (1.645) he becomes (.150) violent] (.192) [and breaks his chains loose] [and (1.545) starts attacking everybody] [and destroying the town] [and (.810) he's on a search for this girl] [who he fell in love with on the island] (1.336) [and the: in the process (.118) the military and the police (.217) come out] [and they start shooting at him] [and chasing him] [and (1.094) he finally finds his girl] (.818) [and takes her to the top of the: (.735) Empire State building] (1.486) [and (.133) the military brings in (.593) their (.116) fighter planes] [and (1.194) they shoot poor King Kong] [till he finally dies] [and falls off the building] (1.219) eh: [but the girl was safe] (.417) [cause King Kong saved her life] (1.311) [and uh: (1.052) he falls to his death in the middle of New York city] (1.745) [and uh (1.720) that's the whole story] (.634) [and the (.234) closing line in the story is] (.142) [beauty killed the beast] (.668) [he went crazy over the beautiful girl] (1.420) [and that is] [what led everybody to (.242) shoot him] [and kill him] (.551) [cause he was a threat to everyone else] (.918) the end.

**PARTICIPANT 18**

[I guess it's (.376) just easier for me to talk about "Star Wars"] (.543) uhm: (.172) [I watched this movie a whole lot] [when I was a little kid] (.252) uhm (.979) [it's pretty popular] [I'm sure] [everyone's (.188) almost everyone's seen this movie] (.107) [but (.392) in case you have not] [I will describe it now] (.570) uhm (.295) [you have (1.501) eh (.312) the story takes place (.903) eh (.123) within the Universe more or less a galaxy a long time ago] (.586) [like the movie says] (.457) uhm (.312) [and you have this battle going on between the evil imperialists] [who: (.462) pretty much run the entire (.403) run the entire galaxy] [as we know] uhm (1.092) [but there's a rebellion going on] (.107) [and (1.226) so the movie (.1266) let's see (.731) yeah the rebellion is going against the empire] (.607) [and you have (.242) this one (.333) super super evil guy in the Empire] [his name is Darth Vader] (.570) [and he's kinda the main bad guy] (.194) uhm [he's running the whole show] [and he's got these (1.242) powers] (.134) [that is (.129) part of the] (.210) [oh yeah within this universe exists this (.731) this force] [that certain people are channeling] [you ha- you have guys] [that are in the armies for the rebels and the imperialists] [who are using guns and stuff] [but you also have these other guys] [that are called Jedis] [who have (.640) the power of the force] [and there's (.139) they can lift things with their hands] [and they fight with these (.489) light sabers] [which are like laser sword-type things] (.656) uhm (.909) [and there's like a good and bad side to this force too] [and Darth Vader he's a bad guy] [he's he's gone to the dark side] [and so he's (.392) using (.112) the dark side of this force also to control people's minds] [and to (.409) just (.295) i- it's like taking over his whole life] [he's going he's going nuts and (.338) greedy for power and all these things] (.710) uhm [but there's these other guys] [the Jedis] [who were (1.189) who were channeling the good force] [and they're fighting the good fight] [and hu:m (1.043) so: (1.038) it's kinda of this good and evil battle] [that's going on] [and you have (1.183) uhm (.570) on this one planet there's this uh there is this farm boy] [his name is Luke Skywalker] [and (.279) they (1.032) they (.398) he wants to go join the

rebellion] [and he's he is trained as a Jedi too] [because he encounters this guy] (.672) uhm (.269) [Ben] [who's on (.365) his home planet] (.242) uhm (.204) [before he goes to fight in the rebellion] (.672) [and so he's training with the same that he's training with (.387) with (.312) the force] [cha- learning to channel the force] [and fight] (.151) [become a Jedi] [he is (.640) he is (.123) going to join the uh (.398) join the rebellion] (.575) uhm (.726) [a:nd (.694) he encounters these (.113) these (.172) robot droids] [that are carrying a message from the princess] [who is part of the rebellion] (.570) [and she's been captured by the Empire] [and (.285) the droids (.554) crash land on this planet] [encounter Luke] [and (.570) tell him about the princess] [that has been captured] [and (1.172) that (.371) she needs help] [she needs to be saved] [and he (.274) feels very heroic] [like he needs to do this] [and so (.790) he goes with (.199) Ben] (.107) [who's training him (.194) uhm (.371) in (.381) in the Jedi arts (.430) with these two droids] [the four of them go to a city (.178) on (.167) Luke's home planet] (.688) [a:nd (.763) try to encounter try to find someone] [who'll take them (.172) to:] (1.102) uh [where were they going there] [it was taking them (.936) they were trying to find someone] [who would take them to another (1.065) another planet] [I think](.898) uhm [or for an XXX] [the: (1.092) ow why am I forgetting this] [but anyways they they meet (.231) Han Solo and Chewbacca] [who were this bounty hunters] [they're they're (.957) they're doing illegal stuff] [and (.629) carrying cargo and things] (laugh) (.753) uh [and so: (.355) they go with them] [and they're going] (.535) [I c- (.564) I don't know] [why I can't remember this] [but (.102) so they're all there in route to] [wherever (.105) Luke wanted to go] [to try to help the princess] (.683) [and they get captured by the imperial army] (.231) [and they're s- (.194) they get sucked into the (.199) the (.139) Death Star] [which is this like (.677) like (.151) thing the size of the moon] [that can blow up planets] [and it's like the super weapon of the Empire] (.817) uhm (.963) [a:nd so they get sucked in there] [and it's it's (.500) they hide inside the ship] (.129) [that they're traveling in] (.876) uhm (.559) [and (.505) by doing this] [when the army when the imperial army goes on to the ship to check (.107) to see] [who they are] [what was going on] (.634) uh (.667) [they (.828) and they don't find anyone] [they are like] [oh it's just an abandoned ship or something -] uh (.418) [yeah I don't I don't know] [how that made sense] (.123) [but uh (.893) anyways (.538) and so then they get off] [and they're in the Death Star] [and they're looking around] [and (.392) the princess is there in the Death Star] [they find out] (.505) [and so they go] (1.301) [they're they've (1.180) they (.123) the- they (.145) killed some (.112) some imperial soldiers] [and took their uniforms] (.468) [and so they're dressed up like the bad guys] [but it's really (.371) Luke and (.554) and Han Solo and Chewbacca] [and and the droids are going with them] [and oh (.134) Ben has gone off in this other mission to: to help (.279) shut down the: the shield] [that's holding them in] (.634) uh [it's this protector shield] [that is around the: uh (.106) Death Star] [and you can't escape] [because oh it's a tractor beam] (laugh) (.747) [which will pull your ship in] [if you're trying to get away] [so Ben goes to shut down the tractor beam] (1.124) [Han and Luke (.124) go to and Chewbacca go to save the princess] [and the droids go to:] [**5'01"**].

### PARTICIPANT 19

[A movie] [I saw recently] (.463) [that I liked a lot] [was (.636) "Mary Full of Grace"] (.424) [I'm not sure] [if it was an American film or a Colombian film or some kind of (.901) c- uh (.493) cooperation between the two countries or (.178) or another country] (.651) [but it's an interesting movie] [cause we k- (.183) gave a different point of view] [that's usually shown in the movies] (.178) [it was about a a (.226) a young girl] (.621) [who uh: (.814) who's (.251) from a humble family in Colombia] (.138) [living outs- (.197) uhm outside of Bogotá in a small (.169) town] (.552) [and she worked at a: (.720) like a type of flower (1.184) uhm (.121) cutting (.315) plant] (.212) [where they have the (.128) large (1.198) uhm (.158) rose fields] (.173) [and they cut the flowers] [and send them (.522) for export (.143) mostly to the United States or Europe] (.833) [and the conditions of work are really bad] (.183) [inhumane (.952) you know] [for example she she was pregnant] (.700) [and she was feeling bad] [and needed to go to the bathroom] [but her (.577) her uh (.429) manager (.493) wouldn't let her] (.542) [she end up throwing up on the flowers] [she was working on] [and (.192) he made] [her clean it up] [and (.360) he humiliated (.118) her] [and (.473) so she quit the job] (.986) [and (.186) in the difficulty of finding (.577) you know eh other work or any opportunities really] (.146) [she decides (.784) uhm (.542) to wor- be a mule] (.207) [carrying drugs (.448) from uhm (.246) Colombia to the United States] (.794) uhm [the idea (.498) emerged] [because a f- friend of her] [that she met] (.444) [had connections] [and (.601) talked to her about it] [and she decided to do it (.360) you know almost out of desperation] (.873) [and not really having anything else to do] [she had (.133) pressure from her family] [her mother and sister (.892) you know] [when she quit the job] [they wanted her to go back] [and (.735) so she decided (.365) you know] [she would (.296) go after the easier money] (.868) [but in reality it wasn't so easy] (.266) [she had to c- (.720) carry the (.394) the drugs] [and I I'm not sure] [if it's cocaine or heroin] (.888) [but she would (.296) ins- (.483) swallow it] (.300) [and carry it inside her body] (.592) [and (.705) they really graphically show] (.163) [what these people go through (.661) you know] [the quantity (.226) of drugs]

(.305) [that they carry in their stomach] (.794) [and the danger] (.335) [that there is] (.222) [that one of the capsules opens] (.379) [and the person overdoses] (.888) [so uh (.937) so she goes to the States] [and i- (.128) it shows the whole (.754) the whole (.153) preparation and the trip] (.187) [and the fear of being caught] [and (.892) you know the fear (.828) of one of the capsules opening] [and dying (.276) you know] [but she gets to the United States (.818) you know] [and the whole process] [of (.434) getting those drugs out] [takes a while] [had (.202) to take laxatives and stuff] (.774) [and she was with a (.133) group of women] (.646) [that were doing the same thing] (.153) [a couple of them she had met before] (.843) [and (.345) one of them (.360) did actually (.365) die] (.143) [cause of (.276) the capsule opening up (.666) uh: (1.218) you know] [i- it happened while (.231) her (.212) this (.222) eh she was sleeping] (.158) [and another friend was sleeping] (.804) [and when they woke up] [they saw them] [taking the body out] [cause obviously (.238) those] [who were receiving the drugs] [cut up (.374) open the body to get the rest out] (.927) uhm (.197) [at that point her and another friend they ran] [cause they were scared (1.031) you know] [and eventually they did call up (.173) the the (.173) drug dealers (.158) again (.651) you know] [cause they knew (.370) that] [if they didn't] (.158) [their families would be (.809) either (.192) killed] [or (.641) or something horrible would happen in Colombia] (.828) [so (.143) they end up looking for the drug dealers] [and giving the drugs] (.266) [and they got their money (.582) for doing for carrying the drugs to the States] (.187) uhm (1.850) [and at that point (1.248) uhm she was ready to go back to Colombia] [she felt like very strange in the States] [her (.168) her real purpose was] [just to (.231) make money] [and take it back there] (1.085) [but uh (.128) thinking about her son] [and (.740) and she decided] [that (.725) at the last moment (.192) it might be better] [staying in the United States] [and (.360) and and trying you know to work] [and (.764) give a better future to her son] [give him more opportunities (.828) uhm (.912) you know] [that's basically the movie] (.374) eh (.103) [I thought] [it was a really good movie] [cause it (.168) it really shows] [I think] [the reality the situation and the people] (.518) [who do these things you know] [the human side] [and (1.863) and really (.143) the motives] [and (.1129) you know and the danger] (.384) [that they undertake] (.888) [and also it was nice] [cause they filmed some of the scenes in Bogotá (.518) in Colombia] (.764) [which is uncommon] (.158) [sometimes you see in movies] [they often say] [they're in (.118) Colombia (.187) or (.261) other countries] [and they're just like in Mexico or other southern part of the United States] (.868) uh [it's a movie] [I'd recommend to (.261) to anyone to see really] (.966) [I guess] [that's it].

## PARTICIPANT 20

[The movie] [I'm going to talk about] [is "Serendipity"] (.462) [it is a movie: (.294) definitely one of my favorites] (.115) [that I: (.126) watch over and over] [and I own this movie] (.441) [it's about uh a guy and a girl] [who are living their separate lives in New York] (.441) [and they happen to: run into each other] [while Christmas shopping] (.362) [they both wanted the same pair of gloves] [one for his girlfriend and (.100) the girl for her (.641) her friend uhm to give as (.115) presents] [and (.373) they ran into each other] [and (.962) ended up talking] [and one thing led to n- (.136) the next] (.126) [they ended up going on a date that night] [and (.294) laughing] [and really enjoyed each other's company] [and (.652) uh the girl really believed in] (.105) [things happen for a reason] [this was the way] [she lived her life] [and so (.599) that night (.184) as they were leaving (.131) uhm to go home] [they (.447) she said] [ok (.158) I want you to: (1.620) uhm (.920) I want yo- here's uh my number on this piece of paper] [and you can call me] (.694) [and she was getting on the taxi] [and right as she got on the taxi] [the (.100) piece of paper flew in the wind] (.636) [it was so windy in New York] [and (1.172) she said] [oh I guess] [that's the way] [it's gonna be] (.568) [you didn't get my piece of paper or my uh (.115) my number] [so (.899) then uh (.483) they ended up (.179) running into each other later on in the hotel (.489) a couple days later (.131) just randomly] [and (.331)5 (r hi)4(s) ]TJ0.0017i

[I just remembered] (.704) uhm (.100) [can't remember his name] (.389) [but (.131) the guy] [that was in love with her] (.878) [he could not get over her] [even though he was married] [and he: (.326) finally he looked everywhere for this (.115) book] [that had her number in it] (.720) [everywhere] [he went to every single bookstore in New York every single place] [and (.389) meanwhile she was looking for this five-dollar bill] [every (.200) bill] [that she got] [that was a five-dollar bill] [she would look for his number] (.909) [and (.216) unfortunately they never found each other's number] (1.004) [a:nd (.189) one thing led to another] [they: (.259) uh (.831) finally were around (.778) town] [and they met friends of friends] [who knew each other] [and (.783) uhm (.136) they ended up (.195) meeting again later on (.289) on the ice rink] [which is where: (.652) right next to the store] [where they had originally met] (.515) [a:nd (.142) they just (.226) confessed their love for one another] (.147) [a:nd uh (.153) the (.352) the guy ended up getting a divorce with his wife] [cause it wasn't working out (.168) for not because of this reason but for one reason or another] (.846) [and the gir:l (.405) broke off her engagement] [and they ended up together] [and that was a really cute story] [and I like this story a lot] [cause just because I live my life (.441) serendipity as well] [and things are meant to be] [and (.447) when things go bad in life] [or things go good in life] [it's because] [that's the way] [they were meant to be].

## PARTICIPANT 21

[This is a narrative (.351) about (.150) the movie (.201) called "Jarheads"] [I believe] [it's a: a very new movie] [I saw it yesterday on DVD] (.782) uh [I liked the movie] (.660) uh: [the movie tells the story (.186) uh largely through the: (.452) uh the eyes of a: of one American guy twenty years old] (.150) [who: uh: leaves] uh [and joins the marines] (.502) [and is then sent to Iraq] [to fight (.107) the: uh (.136) the first uh Iraqi war] (.918) [an:d uh I liked the movie] [the reason] [why I liked it] [was] uh [well (.122) it was entertaining] [there was good action] [but it also (.416) uh (.361) gave me (.358) a a real good insight into] [what it would have been like to have (.112) been (.401) a mari:ne] (.488) uh [forced uh (.480) to: in a situation] (.638) uh [which is extremely uncomfortable] (.280) [to be in the desert] (.559) uh [living with a: (.136) a number of other young guys and a lot of uh other (.294) marines] [where you don't have any privacy] [and (.150) also where uh (.538) you're living with people] [that have the mentality of marines] [so they're uh they're a little bit crazy] (.610) [an:d uh: (2.167) uh (.165) the: (.309) movie also helped me to understand a: a lot of (.115) details of their life] uh (.531) [you know some of the equipment] [that they u:se] [the: how (.143) how boring it was essentially] [because uh (.531) they were there (.266) in the desert (.459) uh (.488) for] (.150) [it seemed uh maybe six months or more] [before they even had to go to war] [so what they (.373) had to do was] uh (.380) [constantly drink water] [and then pee] [and then drink water] [and pee to get used to the heat] [so that they could continue to hydrate their bodies] (.423) uh [and then uh they they had to go through lots and lots of training to prepare for the war] (.480) [and this specific group of marines (.452) were uh: (1.098) uh snipers] (.473) [so their their job was to uh: (.129) to use uh sniper rifles] [and and and (.523) you know shoot officers from from far distances] (.358) [and what turned it as it turned out in this story] [is that after all of the training] [that they went through] (.538) uh [and all of the discomfort] (.401) uh (.667) [they w- they were all anxious to go and fight] (.366) [however by the time they actually (.100) got uh into into the war] (.459) uh [they never even got a chance to fire their rifles] [so for them uh it seems uh: you know] [that they were very disappointed for all of the suffering] [they had to endure] (.394) [even though uh the marines were victorious] (.409) [that they they never really got an opportunity to contribute] (.954) uh [another (.167) uh interesting aspect of the movie was] (.473) [how (.366) uh all of this young guys were away from their wives or their girlfriends] (.416) [a:nd uh a large part of the time they were worried about] [whether their wives and girlfriends were being (.437) uh faithful or not] [and in one case uh one marine's wife sent him a videocassette] (.452) [which was (.222) titled "The deer hunter"] [which is a movie with Robert de Niro] (.380) [and uh maybe thirty or forty marines gathered in front of the TV] (.444) [and when he put the videocassette (.143) in] [and everybody began to watch] (.337) [what they wound up seeing was a photo of his wife] [having sex with the neighbor] (.344) [apparently his wife uh was (.100) angry with him] (.380) [because she felt] [that he was unfaithful] [or maybe he was unfaithful] (.337) [but (.114) uh: (.230) as they he he he's watching along with (.222) the thirty or forty other marines] (.394) [and (.172) uh the other marines didn't know] [that they were watching his wife] [they just thought] [they s- they were watching a: a pornographic film (.373) of two people] [having sex] [and then shortly into this (.452) uh (.301) this poor guy starts crying] [because he realizes] [this is his wife] (.409) [and uh and and then uh (.416) his his wife in the film (.251) comes up to the camera] [and says something uh about] [well hey you were unfaithful to me] [and now I've been unfaithful to you] (.552) uh: [so (.107) there you have it] (.280) bye bye.

APPENDIX O

Statistics Pause Ratio

**1. Independent-samples *t* tests – contrasting the L1 (BP) performance of the Brazilians with the L1 (AE) performance of the Americans.**

Table O1

*Pause Ratio - Group Statistics (BP x AE)*

Task	<i>N</i>	<i>M</i>	<i>SD</i>	<i>SEM</i>
Description				
BP	11	.586	.130	.003
AE	9	.603	.107	.003
Narrative				
BP	12	.536	.008	.002
AE	9	.607	.005	.001

Table O2

*Pause Ratio – Independent-samples Test (BP x AE)*

		Levene		t-test for EM		Sig. (2-tailed)	MD	SED	95% CID	
		F	Sig.	<i>t</i>	<i>df</i>				Lower	Upper
Description										
	EV assumed	1.072	.314	-.314	18	.757	-.001	.005	-.131	.009
	EV not assumed			-.321	17.996	.752	-.001	.005	-.128	.009
Narrative										
	EV assumed	2.395	.138	-2.089	19	.050	-.007	.003	-.141	.000
	EV not assumed			-2.231	18.539	.038	-.007	.003	-.136	-.000

*Note.* EV = equal variances, Levene = Levene's Test for Equality of Variances, EM = Equality of Means; MD = mean difference, SED = Standard Error difference, CID = Confidence Interval of the Difference.

## 2. Paired-samples *t* tests – Contrasting the L1 and the L2 performances of the Brazilian participants.

Table O3

### *Pause Ratio - Group Statistics (L1 x L2)*

Task	<i>M</i>	<i>N</i>	<i>SD</i>	<i>SEM</i>
Description				
L2	.643	11	.126	.003
L1	.586	11	.130	.003
Narrative				
L1	.622	12	.126	.003
L2	.535	12	.008	.002

Table O4

### *Pause Ratio – Paired-samples Test (L1 x L2)*

	Paired Differences		<i>t</i>	<i>df</i>	Sig. (2-tailed)			
	<i>M</i>	<i>SD</i>						
	<i>SEM</i>	95% CID						
		Lower	Upper					
Description (L1 x L2)	.005	.108	.003	-.001	.129	1.741	10	.112
Narrative (L1 x L2)	.008	.127	.003	.000	.166	2.348	11	.039

Note. CID = Confidence Interval of the Difference.

## 3. Independent-samples *t* tests – contrasting the L2 (English) performance of the Brazilians with the L1 (AE) performance of the Americans

Table O5

### *Pause Ratio - Group Statistics (Nonnatives x Natives)*

Task	<i>N</i>	<i>M</i>	<i>SD</i>	<i>SEM</i>
Description				
Nonnatives	12	.643	.120	.003
Natives	9	.603	.107	.003
Narrative				
Nonnatives	12	.622	.126	.003
Natives	9	.607	.005	.001



Table O6  
*Pause Ratio – Independent-samples Test (Nonnatives x Natives)*

		Levene		t-test for EM		Sig. (2- tailed)	MD	SED	95% CID	
		F	Sig.	<i>t</i>	<i>df</i>				Lower	Upper
Description	EV assumed	.438	.516	.790	19	.439	.004	.005	-.006	.146
	EV not assumed			.804	18.367	.431	.004	.004	-.006	.145
Narrative	EV assumed	4.88	.040	.328	19	.747	.001	.004	-.008	.109
	EV not assumed			.363	15.928	.721	.001	.004	-.007	.101

*Note.* EV = equal variances, Levene = Levene's Test for Equality of Variances, EM = Equality of Means; MD = mean difference, SED = Standard Error difference, CID = Confidence Interval of the Difference.

## APPENDIX P

### Transcriptions L2 Speaking Span Test

Coding: underlined = target word

**bold** = modifications in the target word

\* = sentence made with the word in the wrong order

XXX = inaudible

L = sentence valid for the lenient score

S = sentence only valid for the strict score

N = sentence not valid

(grammar) = sentence containing a grammar mistake

(word form) = sentence made with the wrong form of the word

(meaning) = sentence with semantic problems

(order) = sentence made with the word in the wrong order

<b>PARTICIPANT 1</b>			
<b>Set size</b>	<b>1<sup>st</sup> Trial</b>	<b>2<sup>nd</sup> Trial</b>	<b>3<sup>rd</sup> Trial</b>
<b>2</b>	I love chocolate <u>cake</u> . <b>S</b> I love to eat with my <u>hand</u> . <b>S</b>	This <u>week</u> I had a test. <b>S</b> The <u>rain</u> is wet. <b>S</b>	This <u>bird</u> is yellow. <b>S</b> I have a <u>cup</u> of tea. <b>S</b>
<b>3</b>	I have a <u>duck</u> . <b>S</b> I wrote with a <u>pen</u> a letter. <b>L</b> (grammar)	I went to the <u>club</u> with my friends. <b>S</b> I love the <b>springtime</b> . <b>L</b> (word form) I'm keeping a <u>knife</u> with me. <b>S</b>	<u>Snow</u> is cold. <b>S</b> I wrote at a <u>paper</u> today. <b>L</b> (grammar)
<b>4</b>	I broke a <u>glass</u> today. <b>S</b> I have a big <u>brain</u> . <b>S</b>	This <u>table</u> is ugly. <b>S</b> The <u>sky</u> is blue. <b>S</b> Give me the <u>ball</u> . <b>S</b>	Her <u>blouse</u> is red. <b>S</b> I wrote a <u>letter</u> today. <b>S</b>
<b>5</b>	The <u>sun</u> is hot. <b>S</b> I love to kiss a <u>mouth</u> . <b>S</b>	I went to the <u>bank</u> today. <b>S</b> My <u>shirt</u> was yellow. <b>S</b>	The <u>day</u> is shiny, is sunny. <b>S</b> I have a <u>box</u> full of papers. <b>S</b>
<b>6</b>	I have a gold <u>clock</u> . <b>S</b> Last <u>year</u> I was in United States. <b>L</b> (grammar)	This <u>cow</u> is funny. <b>S</b> I ate <u>dinner</u> . <b>S</b>	I have a big <u>dog</u> . <b>S</b> I ate soup with the <u>spoon</u> . <b>S</b> There is a <u>woman</u> with me. <b>S</b>
<b>Strict: 29</b>		<b>Lenient: 33</b>	

<b>PARTICIPANT 2</b>			
<b>Set size</b>	<b>1<sup>st</sup> Trial</b>	<b>2<sup>nd</sup> Trial</b>	<b>3<sup>rd</sup> Trial</b>
2	I love my mum's <u>cake</u> . <b>S</b> I like to play <u>handball</u> . <b>L</b> (word form)	I'm having a good <u>week</u> . <b>S</b> The <u>rain</u> bothers me. <b>S</b>	I have to make a sentence with <u>bird</u> . <b>S</b> Brazil won the last World <u>Cup</u> . <b>S</b>
3	I don't have a <u>duck</u> in my house. <b>S</b> I have to put <u>gas</u> in my car. <b>S</b>	I went to a <u>nightclub</u> last week. <b>L</b> (word form) I cut my finger with a <u>knife</u> . <b>S</b>	I never saw <u>snow</u> . <b>S</b> There's lot of things wrote in this <u>paper</u> . <b>L</b> (grammar)
4	Have a computer in this <u>desk</u> . <b>L</b> (grammar) * My <u>brain</u> is tired. <b>L</b> (order) I drank a <u>glass</u> of milk this morning. <b>S</b>	I put all my pens on the <u>table</u> . <b>S</b> I don't know the meaning of <u>deer</u> . <b>S</b>	I have to buy a <u>blouse</u> for my mum's birthday. <b>S</b> I'm having <u>class</u> after this activity. <b>L</b> (grammar)
5	We don't have <u>sun</u> in the sky today. <b>S</b> I brought my <u>bag</u> to the room. <b>S</b>	I have to go to the <u>bank</u> today. <b>S</b> I'm gonna sell my <u>hair</u> to hairdresser. <b>L</b> (grammar)	I'm having a good <u>day</u> . <b>S</b>
6	I'm always looking to my <u>clock</u> . <b>L</b> (grammar) There's a lot of <u>waves</u> in the sea. <b>L</b> (grammar and word form) I need a <u>map</u> to see the island. <b>S</b>	I had a <u>cow</u> on my farm. <b>S</b> I don't have to take the <u>bus</u> to go to the University. <b>S</b> I don't know what I'm going to have to <u>dinner</u> this night. <b>L</b> (grammar)	* I don't like <u>butter</u> . <b>L</b> (order) * I need a <u>spoon</u> to eat yogurt. <b>L</b> (order) My <u>dog</u> has a disease. <b>L</b>
<b>Strict: 20</b>		<b>Lenient: 33</b>	
<b>PARTICIPANT 3</b>			
<b>Set size</b>	<b>1<sup>st</sup> Trial</b>	<b>2<sup>nd</sup> Trial</b>	<b>3<sup>rd</sup> Trial</b>
2	I love my mother's <u>cake</u> . <b>S</b> When I was a child I cut my <u>hand</u> . <b>S</b>	During the <u>week</u> I do exercise. <b>L</b> (grammar)	My teacher Daniel like <u>bird</u> . <b>L</b> (grammar) I generally broke <u>cups</u> at home. <b>L</b> (word form)
3	I don't remember what is <u>duck</u> . <b>L</b> (grammar)	At summer I always go to the <u>club</u> with my parents. <b>L</b> (grammar) I don't remember the meaning of <u>spring</u> . I think it's primavera. <b>S</b>	One time when I was a child <u>snowed</u> in my city. <b>L</b> (word form and grammar) I used to draw more in the computer than a <u>paper</u> . <b>L</b> (grammar)
4	When I was a student I always write in the <u>desk</u> . <b>L</b> (grammar)	My <u>table</u> is very organized. <b>S</b> I don't remember <u>deer</u> . <b>L</b> (grammar)	----- ----- -----
5	Next weekend if have <u>sun</u> I go to the beach. <b>L</b> (grammar) I don't remember what is <u>mouth</u> . <b>L</b> (grammar)	I usually not go to the <u>bank</u> , I use Internet. <b>L</b> (grammar) I don't like <u>egg</u> . <b>S</b>	Today the <u>day</u> was beautiful. <b>S</b> * I always drink <u>water</u> . <b>L</b> (word order) I don't remember <u>arm</u> . <b>L</b> (grammar)
6	When I don't know in what place is a city, I look at the <u>map</u> . <b>L</b> (grammar)	Yesterday when I went to walk I saw a <u>cow</u> . <b>S</b> I love the XXX in the <u>sea</u> . <b>L</b> (inaudible part)	I had a <u>dog</u> which name was "Pacato". <b>L</b> (grammar) I don't believe in handsome <u>woman</u> . <b>L</b> (grammar)
<b>Strict: 7</b>		<b>Lenient: 25</b>	

<b>PARTICIPANT 4</b>			
<b>Set size</b>	<b>1<sup>st</sup> Trial</b>	<b>2<sup>nd</sup> Trial</b>	<b>3<sup>rd</sup> Trial</b>
<b>2</b>	I love <u>cake</u> . <b>S</b> My <u>hand</u> is dirty. <b>S</b>	My <u>week</u> is full. <b>S</b> There's a lot of <u>rain</u> outside. <b>S</b>	The <u>birds</u> are flying. <b>L</b> (word form) There is a <u>cup</u> in the desk. <b>S</b>
<b>3</b>	<u>Ducks</u> are yellow. <b>L</b> (word form) There's a lot of <u>gas</u> in a stove. <b>S</b>	The <u>club</u> is beautiful. <b>S</b> My <u>knife</u> is not cutting. <b>S</b>	The <u>snow</u> is white. <b>S</b> So is the <u>paper</u> . <b>S</b>
<b>4</b>	There's a lot of <u>desks</u> in here. <b>L</b> (grammar and word form) The <u>road</u> to my house is dangerous. <b>S</b> The <u>glass</u> is full of water. <b>S</b>	The <u>table</u> is all full of books. <b>S</b>	My <u>blouse</u> is pink. <b>S</b> There was <u>letter</u> , wasn't it? <b>L</b> (grammar)
<b>5</b>	The <u>sun</u> is burning. <b>S</b> My <u>mouth</u> is full. <b>S</b> My <u>keys</u> are in my bag. <b>L</b> (word form) I used <u>bag</u> too. <b>S</b> The <u>files</u> in my computer are full. <b>L</b> (word form)	The <u>bank</u> has a really big line. <b>S</b> The <u>eggs</u> are raw. <b>L</b> (word form)	The <u>day</u> is rainy. <b>S</b> My <u>arms</u> are tired. <b>L</b> (word form)
<b>6</b>	The <u>clock</u> is late. <b>S</b> The <u>waves</u> are big. <b>L</b> (word form) My dad's <u>tools</u> are at my room. <b>L</b> (grammar and word form)	The <u>cow</u> is eating. <b>S</b> The <u>church</u> is full. <b>S</b>	I love <u>dogs</u> . <b>L</b> (word form)
<b>Strict: 22</b>		<b>Lenient: 33</b>	

**PARTICIPANT 5**

<b>Set size</b>	<b>1<sup>st</sup> Trial</b>	<b>2<sup>nd</sup> Trial</b>	<b>3<sup>rd</sup> Trial</b>
<b>2</b>	The <u>cake</u> is big. <b>S</b> The <u>hand</u> is over the body. <b>S</b>	The <u>week</u> is finishing. <b>S</b> The <u>rain</u> is falling a lot. <b>L</b> (grammar)	The <u>bird</u> is flying. <b>S</b> In the <u>cup</u> there is milk. <b>S</b>
<b>3</b>	The <u>duck</u> is in the lake. <b>S</b>	The <u>club</u> is very beautiful. <b>S</b> <u>Knife</u> is gray. <b>L</b> (grammar)	<u>Snow</u> is white. <b>S</b> * Mouse eat <u>cheese</u> . <b>L</b> (order and grammar) * I don't know if there is a word that's <u>paper</u> . <b>L</b> (order)
<b>4</b>	The <u>desk</u> is in the class. <b>S</b> The <u>road</u> is long. <b>S</b> The <u>glass</u> is full of water. <b>S</b> That woman has an intelligent <u>brain</u> . <b>S</b>	The <u>table</u> is large. <b>S</b> The <u>sky</u> is blue and gray. <b>S</b> I don't know what's <u>deer</u> . <b>L</b> (grammar)	Your <u>blouse</u> is white. <b>S</b> In my <u>class</u> there are lots of students, a lot of girls. <b>S</b>
<b>5</b>	The <u>sun</u> is red. <b>S</b> My mother gave me my <u>key</u> . <b>S</b>	There are a lot of people in the <u>bank</u> . <b>S</b> The <u>eggs</u> come of chicken. <b>L</b> (grammar and word form)	The <u>day</u> is terrible. <b>S</b>
<b>6</b>	There are eight <u>o'clock</u> . <b>L</b> (word form) We are in the last of <u>year</u> . <b>N</b> (meaning)	I will marry in a <u>church</u> . <b>S</b> In the <u>bus</u> it is very hot. <b>S</b> * I think there is a word that is <u>sea</u> . <b>L</b> (order)	My <u>dog</u> is beautiful. <b>S</b> The <u>room</u> is very big. <b>S</b>
<b>Strict: 24</b>		<b>Lenient: 32</b>	

<b>PARTICIPANT 6</b>			
<b>Set size</b>	<b>1<sup>st</sup> Trial</b>	<b>2<sup>nd</sup> Trial</b>	<b>3<sup>rd</sup> Trial</b>
<b>2</b>	I like chocolate <u>cake</u> . <b>S</b> I have a big <u>hand</u> . <b>S</b>	It wasn't a stressing <u>week</u> for me. <b>S</b> There's a light <u>rain</u> falling in Florianópolis. <b>S</b>	I saw a <u>bird</u> when I was coming; it went to a tree. <b>S</b> I had a <u>cup</u> of tea. <b>S</b>
<b>3</b>	I never had a <u>duck</u> . <b>S</b> I use <u>pen</u> to write in class. <b>S</b>	I don't know any <u>club</u> in Florianópolis but I used to go to one in my hometown. <b>S</b> I use <u>knife</u> to eat. <b>L</b> (grammar)	I never saw real <u>snow</u> in my life. <b>S</b> I use <u>paper</u> to write. <b>S</b> I like to eat <u>cheese</u> with the food. <b>S</b>
<b>4</b>	There are a lot of <u>desks</u> in this room. <b>L</b> (word form) There are some <u>roads</u> in a bad state here in Brazil. <b>L</b> (word form) * My <u>brain</u> is not working very well at the moment. <b>L</b> (order) That window is made of <u>glass</u> . <b>S</b>	I don't know what is <u>deer</u> . <b>L</b> (grammar) I have one plastic <u>ball</u> that I use to play. <b>S</b> * The <u>sky</u> is a little bit cloudy today. <b>L</b> (order)	I have a physics <u>class</u> when this thing is over. <b>S</b> I never really write any <u>letters</u> . <b>L</b> (word form) * You're not using a green <u>blouse</u> . <b>L</b> (order and grammar)
<b>5</b>	There's no <u>sun</u> here in Florianópolis today. <b>S</b> I'm using braces not in my <u>mouth</u> , in my teeth. <b>S</b>	You have a kind of blond <u>hair</u> . <b>S</b>	Tomorrow is going to be a free <u>day</u> for me. I don't have any classes. <b>S</b> * I think is healthy for us to drink <u>water</u> . <b>L</b> (order)  I like my <u>arm</u> . <b>S</b>
<b>6</b>	I don't have any <u>clocks</u> . <b>L</b> (word form) I don't have any <u>tools</u> for working. <b>L</b> (word form) I should be wearing a <u>coat</u> 'cause it's a little bit cold today. <b>S</b> * There are a lot of <u>waves</u> in the beach. <b>L</b> (order and word form)	A <u>cow</u> are good animal, I think, gives us milk. <b>L</b> (grammar) The <u>sea</u> is blue in some beaches in Florianópolis. <b>S</b>	I have a <u>dog</u> in my hometown. <b>S</b> I think there was " <u>woman</u> " too but I'm not sure. <b>S</b>
<b>Strict: 24</b>		<b>Lenient: 37</b>	

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**PARTICIPANT 7**

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<b>Set size</b>	<b>1<sup>st</sup> Trial</b>	<b>2<sup>nd</sup> Trial</b>	<b>3<sup>rd</sup> Trial</b>
<b>2</b>	I don't know how to make a <u>cake</u> . <b>S</b> I have a scar on my <u>hand</u> . <b>S</b>	Monday is th1 0 [(Ir)6inning of the <u>week</u> . <b>S</b> I don't like <u>rain</u> . <b>S</b>	

**PARTICIPANT 8**

<b>Set size</b>	<b>1<sup>st</sup> Trial</b>	<b>2<sup>nd</sup> Trial</b>	<b>3<sup>rd</sup> Trial</b>
<b>2</b>	I enjoy make a <u>cake</u> . <b>L</b> (grammar)	I feel very tired in the end of the <u>week</u> . <b>S</b>	I hear <u>birds</u> now. <b>L</b> (word form)
<b>3</b>	Have a lot of <u>duck</u> that travel a lot in the winter or the summer. <b>L</b> (grammar) I use different colors of <u>pen</u> . <b>S</b>	My soccer team or <u>club</u> is Curitiba Football Club. <b>S</b> I have many <u>knife</u> . <b>L</b> (grammar)	I never see <u>snow</u> . <b>S</b> I have a <u>paper</u> about instructions of this lesson. <b>L</b> (grammar) I enjoy very kinds of <u>cheese</u> . <b>L</b> (grammar)
<b>4</b>	----- -	The book is on the <u>table</u> . <b>S</b>	I have many <u>classes</u> last year. <b>L</b> (word form)
<b>5</b>	I prefer <u>sun</u> that rain. <b>L</b> (grammar) I work with <u>file</u> systems in computer science. <b>S</b>	I don't like queue in <u>banks</u> . <b>L</b> (word form) I have a lot of colored <u>t-</u> <u>shirts</u> . <b>L</b> (word form) I know different ways of make <u>eggs</u> . <b>L</b> (word form and grammar) I need cut my <u>hair</u> . <b>L</b> (grammar)	I wake up early this <u>day</u> . <b>S</b> Recently population of Brazil have discussion about <u>arm</u> . <b>L</b> (grammar)
<b>6</b>	I have many <u>clocks</u> . <b>L</b> (word form) Ocean have many <u>waves</u> . <b>L</b> (word form) My wallet is made of <u>coat</u> . <b>N</b> (meaning)	* Wife and husband make or do the <u>pair</u> . <b>L</b> (order and grammar) At Brazil many <u>cows</u> have disease this time. <b>L</b> (word form and grammar) * I like <u>sea</u> . <b>L</b> (order and grammar) I go to the <u>church</u> fews days at year. <b>L</b> (grammar)	I don't have a <u>dog</u> but I like dogs. <b>S</b> My house don't have <u>room</u> because I only have the kitchen, the bedroom and a bathroom. <b>L</b> (grammar) I work at <u>night</u> . Yesterday I worked at night. <b>S</b> * My mother is a beautiful <u>woman</u> . <b>L</b> * I use a <u>spoon</u> to make a cake or a candy. <b>L</b> (order) Sometimes I eat <u>butter</u> at my breakfast. <b>L</b> (grammar)
<b>Strict: 9</b>		<b>Lenient: 32</b>	

<b>PARTICIPANT 9</b>			
<b>Set size</b>	<b>1<sup>st</sup> Trial</b>	<b>2<sup>nd</sup> Trial</b>	<b>3<sup>rd</sup> Trial</b>
2	I love <u>cake</u> . <b>S</b> I shake somebody's <u>hand</u> . <b>S</b>	I saw an old friend last <u>week</u> . <b>S</b> It was <u>raining</u> yesterday. <b>L</b> (word form)	<u>Bird</u> sings. <b>L</b> (grammar) I had a <u>cup</u> of coffee. <b>S</b>
3	I saw a white <u>duck</u> . <b>S</b> I hate the smell of <u>gas</u> . <b>S</b>	It's been a long time I'm going to a <u>club</u> . <b>S</b> I cutted myself with a <u>knife</u> . <b>L</b> (grammar)	I saw <u>snow</u> once. <b>S</b> I write in the <u>paper</u> . <b>S</b>
4	The computer is on a <u>desk</u> . <b>S</b> Human <u>brain</u> is really complicated. <b>L</b> (grammar)	There's a <u>table</u> in the kitchen. <b>S</b> I have a soccer <u>ball</u> . <b>S</b>	I don't remember what <u>blouse</u> means. <b>S</b> I've never been to a <u>farm</u> . <b>S</b> I wrote a <u>letter</u> . <b>S</b>
5	The <u>sun</u> shines. <b>S</b> * I have to pack my <u>bags</u> . <b>L</b> (order and word form) * I lost the <u>key</u> of my house. <b>L</b> (order) I have a big <u>mouth</u> . <b>L</b>	I gotta go to the <u>bank</u> get some money. <b>L</b> (grammar) I like fried <u>eggs</u> . <b>L</b> (word form)	Today is a hot <u>day</u> . <b>S</b> I got a black <u>box</u> . <b>S</b>
6	The <u>clock</u> is ticking. <b>S</b> The sea has <u>waves</u> . <b>L</b> (word form) * The <u>year</u> is almost ending. <b>L</b> (order) I forgot my <u>coat</u> at home. <b>S</b>	I saw a <u>cow</u> . <b>S</b> * I didn't have <u>dinner</u> yesterday. <b>L</b> (order) I always take the <u>bus</u> . <b>S</b>	I like <u>dogs</u> . <b>L</b> (word form) I have a <u>spoon</u> in my kitchen. <b>S</b> I'm a <u>woman</u> . <b>S</b>
<b>Strict: 24</b>		<b>Lenient: 37</b>	

<b>PARTICIPANT 10</b>			
<b>Set size</b>	<b>1<sup>st</sup> Trial</b>	<b>2<sup>nd</sup> Trial</b>	<b>3<sup>rd</sup> Trial</b>
2	I like <u>cake</u> . <b>S</b> My <u>hand</u> is hurting. <b>L</b> (grammar)	This <u>week</u> I'll go there. <b>S</b> The <u>rain</u> is too strong. <b>L</b> (grammar)	I have a <u>bird</u> . <b>S</b> The World <u>Cup</u> happens every four years. <b>S</b>
3	The <u>duck</u> is white. <b>S</b> The <u>pen</u> is on my book. <b>S</b>	I go to the <u>club</u> everyday. <b>S</b> <u>Spring</u> is a nice season. <b>S</b> That <u>knife</u> cuts very well. <b>S</b>	I like <u>snow</u> . <b>S</b> The <u>paper</u> is white. <b>S</b> Mice like <u>cheese</u> . <b>S</b>
4	The <u>desk</u> is dirty. <b>S</b> The <u>road</u> is big. <b>S</b> My <u>brain</u> has many parts. <b>S</b>	Book is on the <u>table</u> . <b>S</b> The <u>sky</u> is blue. <b>S</b>	I like this <u>blouse</u> . <b>S</b> The <u>class</u> is full. <b>S</b>
5	The <u>sun</u> is hot. <b>S</b> My <u>mouth</u> is big. <b>S</b> I have the <u>key</u> . <b>S</b>	The <u>bank</u> is big. <b>S</b> I like my <u>t-shirt</u> . <b>L</b> (word form) The duck put an <u>egg</u> . <b>S</b> My <u>hair</u> is black. <b>S</b>	The <u>day</u> is beautiful. <b>S</b> My <u>arm</u> is broken. <b>S</b> The <u>box</u> is full. <b>S</b> I have <u>mail</u> for you. <b>S</b>
6	I have a <u>clock</u> . <b>S</b> The <u>map</u> is here. <b>S</b> This <u>year</u> I'll go there. <b>S</b> * I have a <u>coat</u> . <b>L</b> (order)	That <u>cow</u> is white. <b>S</b> The <u>church</u> is very big. <b>S</b> I want pizza for <u>dinner</u> . <b>S</b>	I have a <u>dog</u> . <b>S</b> The <u>room</u> is full. <b>S</b> The <u>night</u> is beautiful. <b>S</b> That <u>woman</u> is wearing a black dress. <b>S</b> I put <u>butter</u> on the bread. <b>S</b>
<b>Strict: 40</b>		<b>Lenient: 44</b>	



<b>PARTICIPANT 11</b>			
<b>Set size</b>	<b>1<sup>st</sup> Trial</b>	<b>2<sup>nd</sup> Trial</b>	<b>3<sup>rd</sup> Trial</b>
<b>2</b>	I like to eat <u>cake</u> . <b>S</b> I have two <u>hands</u> . <b>L</b> (word form)	During the <u>week</u> I go to the movies. <b>S</b> I don't like when the <u>rain</u> comes on the weekend. <b>S</b>	I love when some <u>bird</u> sings. <b>S</b> I don't like to have <u>cup</u> of tea. <b>L</b> (grammar)
<b>3</b>	I like to eat <u>duck</u> . <b>S</b> I have just one <u>pen</u> . <b>S</b> Is there <u>gas</u> today for sell? <b>L</b> (grammar)	I love going to the <u>club</u> . <b>S</b> <u>Spring</u> is an excellent season. <b>S</b> I have difficulty to use a <u>knife</u> . <b>S</b>	<u>Snow</u> is white. <b>S</b> I have to buy many <u>papers</u> . <b>L</b> (word form)
<b>4</b>	I like to write on the <u>desk</u> . <b>S</b> Hit the <u>road</u> Jack. <b>S</b>	I like to eat on the <u>table</u> . <b>S</b> The <u>sky</u> is blue today. <b>S</b> I don't know what's <u>deer</u> . <b>L</b> (grammar)	I like black <u>blouse</u> . <b>L</b> (grammar) * I like to write <u>letter</u> once a week. <b>L</b> (grammar and order) * I went to my uncle <u>farm</u> recently. <b>L</b> (grammar and order)
<b>5</b>	Today the <u>sun</u> is very good. <b>S</b> Daniela Cicarelli's <u>mouth</u> is big. <b>S</b>	* My <u>hair</u> is curly. <b>L</b> (order) * I love eating <u>egg</u> on breakfast. <b>L</b> (grammar and order)	I wanna have a nice <u>day</u> tomorrow. <b>S</b> I like to drink cold <u>water</u> . <b>S</b> My father has a heavy <u>toolbox</u> . <b>L</b> (word form)
<b>6</b>	Now in the <u>clock</u> on the church it may be 5:30. <b>L</b> (grammar) I don't know what's <u>coat</u> . <b>L</b> (grammar)	I like to drink milk direct from the <u>cow</u> . <b>S</b> I usually travel by <u>bus</u> . <b>S</b>	I like to play with <u>dog</u> . <b>L</b> (grammar) * I don't like to eat <u>butter</u> . <b>L</b> (order) * <u>Woman</u> was made from the man. <b>L</b> (grammar and order) * I love eating ice cream with <u>spoon</u> . <b>L</b> (grammar and order)
<b>Strict: 19</b>		<b>Lenient: 37</b>	

<b>PARTICIPANT 12</b>			
<b>Set size</b>	<b>1<sup>st</sup> Trial</b>	<b>2<sup>nd</sup> Trial</b>	<b>3<sup>rd</sup> Trial</b>
<b>2</b>	My mums makes a gorgeous <u>cake</u> . <b>L</b> (grammar) I can make a cake with my <u>hand</u> . <b>S</b>	Is very sunny this <u>week</u> . <b>L</b> (grammar) It will probably <u>rain</u> on the next week. <b>L</b> (grammar)	There is a <u>bird</u> singing behind us. <b>S</b> I just drank a <u>cup</u> of water. <b>S</b>
<b>3</b>	I don't see <u>duck</u> so often. <b>L</b> (grammar) I just used a <u>pen</u> to write a e-mail. <b>L</b> (grammar)	I went to the <u>club</u> on weekend. <b>L</b> (grammar) I cut myself with a <u>knife</u> . <b>S</b>	Last year I went to a city which has lots of <u>snow</u> . <b>S</b> * I don't eat any hamburger without a <u>cheese</u> . <b>L</b> (order and grammar) * I have a hard <u>paper</u> to do tonight. <b>L</b> (word order)
<b>4</b>	I'm reading words in a computer on a <u>desk</u> . <b>S</b> My aunt has lots of <u>glass</u> in house. <b>L</b> (grammar)	I left my bag on the <u>table</u> . <b>S</b> We don't have so many <u>deers</u> around Santa Catarina. <b>L</b> (word form)	* My aunt has a big <u>farm</u> in the country. <b>L</b> (order) My <u>blouse</u> is tear. <b>L</b> (grammar) I don't know what <u>class</u> means. <b>S</b>
<b>5</b>	There was a lot of <u>sun</u> today. <b>S</b> I have at least two <u>keys</u> in my bag. <b>L</b> (word form) * People say my <u>mouth</u> is big. <b>L</b> (order) I carry my <u>bag</u> everywhere. <b>S</b> My computer has lots of <u>files</u> . <b>L</b> (word form)	Many robbers robbed a <u>bank</u> yesterday. <b>S</b> I bought a beautiful <u>shirt</u> to my dad. <b>S</b> I don't eat <u>egg</u> in the morning. <b>S</b> I like to have my <u>hair</u> long. <b>S</b>	The <u>day</u> after my birthday was so sad. <b>S</b> I grab the bottle with my <u>arm</u> . <b>S</b>
<b>6</b>	It's 6:30 by now in my <u>clock</u> . <b>S</b> Last week I went to see the best surfers in the world in our <u>waves</u> . <b>L</b> (word form) I didn't bring any <u>coat</u> today. <b>S</b>	* I'll probably have a <u>dinner</u> tonight with my aunt and my uncle. <b>L</b> (order) The Brazilian <u>cow</u> are having a problem. <b>L</b> (grammar) I don't have to take a <u>bus</u> to come to school. <b>S</b>	I had two <u>dogs</u> very lazy in my house. <b>L</b> (grammar and word form) * I drink hot chocolate with a <u>spoon</u> . <b>L</b> (order) Doesn't have enough <u>room</u> in my house. <b>L</b> (grammar) I love to eat bread with <u>butter</u> . <b>S</b>
<b>Strict: 20</b>		<b>Lenient: 41</b>	

## APPENDIX Q

### Frequency Tables

#### 1. Brazilian participants

Table Q1

*Frequency Table - L2 SST (strict scores)*

Scores	Frequency	Percent	Valid Percent	Cumulative Percent
7	1	8,3	8,3	8,3
9	1	8,3	8,3	16,7
19	1	8,3	8,3	25,0
20	1	8,3	8,3	33,3
21	1	8,3	8,3	41,7
22	1	8,3	8,3	50,0
24	3	25,0	25,0	75,0
29	2	16,7	16,7	91,7
40	1	8,3	8,3	100,0
Total	12	100,0	100,0	

Table Q2

*Frequency Table - L2 SST (lenient scores)*

Scores	Frequency	Percent	Valid Percent	Cumulative Percent
25	1	8,3	8,3	8,3
32	2	16,7	16,7	25,0
33	4	33,3	33,3	58,3
37	3	25,0	25,0	83,3
41	1	8,3	8,3	91,7
44	1	8,3	8,3	100,0
Total	12	100,0	100,0	

Table Q3

*Frequency Table - MLR English (Description)*

Scores	Frequency	Percent	Valid Percent	Cumulative Percent
2,45	1	8,3	8,3	8,3
2,73	1	8,3	8,3	16,7
2,75	1	8,3	8,3	25,0
2,94	1	8,3	8,3	33,3
3,11	1	8,3	8,3	41,7
3,18	1	8,3	8,3	50,0
3,35	1	8,3	8,3	58,3
3,94	1	8,3	8,3	66,7
3,95	1	8,3	8,3	75,0
4,17	1	8,3	8,3	83,3
4,20	1	8,3	8,3	91,7
4,82	1	8,3	8,3	100,0
Total	12	100,0	100,0	

Table Q4

*Frequency Table - MLR BP (Description)*

	Scores	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3,15	1	8,3	9,1	9,1
	3,57	1	8,3	9,1	18,2
	3,72	1	8,3	9,1	27,3
	4,12	1	8,3	9,1	36,4
	5,81	1	8,3	9,1	45,5
	5,90	1	8,3	9,1	54,5
	6,00	1	8,3	9,1	63,6
	6,15	1	8,3	9,1	72,7
	6,73	1	8,3	9,1	81,8
	6,78	1	8,3	9,1	90,9
	7,50	1	8,3	9,1	100,0
	Total	11	91,7	100,0	
Missing	100,00	1	8,3		
Total		12	100,0		

Table Q5

*Frequency Table - MLR English (Narrative)*

Scores	Frequency	Percent	Valid Percent	Cumulative Percent
2,27	1	8,3	8,3	8,3
2,61	1	8,3	8,3	16,7
2,82	1	8,3	8,3	25,0
3,01	1	8,3	8,3	33,3
3,19	1	8,3	8,3	41,7
3,28	2	16,7	16,7	58,3
3,78	1	8,3	8,3	66,7
4,01	1	8,3	8,3	75,0
4,07	1	8,3	8,3	83,3
5,25	1	8,3	8,3	91,7
5,74	1	8,3	8,3	100,0
Total	12	100,0	100,0	

Table Q6

*Frequency Table - MLR BP (Narrative)*

Scores	Frequency	Percent	Valid Percent	Cumulative Percent
4,16	1	8,3	8,3	8,3
4,28	1	8,3	8,3	16,7
4,63	1	8,3	8,3	25,0
5,07	1	8,3	8,3	33,3
5,44	1	8,3	8,3	41,7
5,90	1	8,3	8,3	50,0
6,43	1	8,3	8,3	58,3
6,45	1	8,3	8,3	66,7
6,80	1	8,3	8,3	75,0
7,01	1	8,3	8,3	83,3
7,62	1	8,3	8,3	91,7
9,13	1	8,3	8,3	100,0
Total	12	100,0	100,0	

Table Q7

*Frequency Table - Pauses at boundaries English (Description)*

Scores	Frequency	Percent	Valid Percent	Cumulative Percent
6,47	1	8,3	8,3	8,3
7,04	1	8,3	8,3	16,7
7,73	1	8,3	8,3	25,0
8,36	1	8,3	8,3	33,3
8,67	1	8,3	8,3	41,7
10,27	1	8,3	8,3	50,0
11,24	1	8,3	8,3	58,3
11,56	1	8,3	8,3	66,7
13,09	1	8,3	8,3	75,0
13,58	1	8,3	8,3	83,3
13,63	1	8,3	8,3	91,7
17,07	1	8,3	8,3	100,0
Total	12	100,0	100,0	

Table Q8

*Frequency Table - Pauses within boundaries English (Description)*

Scores	Frequency	Percent	Valid Percent	Cumulative Percent
9,46	1	8,3	8,3	8,3
11,90	1	8,3	8,3	16,7
13,01	1	8,3	8,3	25,0
18,23	1	8,3	8,3	33,3
19,01	1	8,3	8,3	41,7
19,75	1	8,3	8,3	50,0
21,33	1	8,3	8,3	58,3
21,34	1	8,3	8,3	66,7
21,80	1	8,3	8,3	75,0
24,26	1	8,3	8,3	83,3
25,59	1	8,3	8,3	91,7
35,20	1	8,3	8,3	100,0
Total	12	100,0	100,0	

Table Q9

*Frequency Table - Pauses at boundaries BP (Description)*

	Scores	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3,15	1	8,3	9,1	9,1
	4,43	1	8,3	9,1	18,2
	4,84	1	8,3	9,1	27,3
	4,85	1	8,3	9,1	36,4
	8,07	1	8,3	9,1	45,5
	8,40	1	8,3	9,1	54,5
	8,66	1	8,3	9,1	63,6
	8,88	1	8,3	9,1	72,7
	11,87	1	8,3	9,1	81,8
	14,40	1	8,3	9,1	90,9
	16,16	1	8,3	9,1	100,0
Total		11	91,7	100,0	
Missing	100,00	1	8,3		
Total		12	100,0		

Table Q10

*Frequency Table - Pauses within boundaries BP (Description)*

	Scores	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	4,92	1	8,3	9,1	9,1
	8,00	1	8,3	9,1	18,2
	8,88	1	8,3	9,1	27,3
	10,00	1	8,3	9,1	36,4
	10,68	1	8,3	9,1	45,5
	11,39	1	8,3	9,1	54,5
	12,63	1	8,3	9,1	63,6
	15,20	1	8,3	9,1	72,7
	15,70	1	8,3	9,1	81,8
	16,14	1	8,3	9,1	90,9
	16,16	1	8,3	9,1	100,0
Total		11	91,7	100,0	
Missing	100,00	1	8,3		
Total		12	100,0		

Table Q11

*Frequency Table - Pauses at boundaries English (Narrative)*

Scores	Frequency	Percent	Valid Percent	Cumulative Percent
8,23	1	8,3	8,3	8,3
8,50	1	8,3	8,3	16,7
8,68	1	8,3	8,3	25,0
9,41	1	8,3	8,3	33,3
9,43	1	8,3	8,3	41,7
9,45	1	8,3	8,3	50,0
10,35	1	8,3	8,3	58,3
10,60	1	8,3	8,3	66,7
11,85	1	8,3	8,3	75,0
11,90	1	8,3	8,3	83,3
12,89	1	8,3	8,3	91,7
14,45	1	8,3	8,3	100,0
Total	12	100,0	100,0	

Table Q12

*Frequency Table - Pauses within boundaries English (Narrative)*

Scores	Frequency	Percent	Valid Percent	Cumulative Percent
7,14	1	8,3	8,3	8,3
8,45	1	8,3	8,3	16,7
12,29	1	8,3	8,3	25,0
13,83	1	8,3	8,3	33,3
18,39	1	8,3	8,3	41,7
18,91	1	8,3	8,3	50,0
21,47	1	8,3	8,3	58,3
22,72	1	8,3	8,3	66,7
22,85	1	8,3	8,3	75,0
23,23	1	8,3	8,3	83,3
23,34	1	8,3	8,3	91,7
38,78	1	8,3	8,3	100,0
Total	12	100,0	100,0	

Table Q13

*Frequency Table - Pauses at boundaries BP (Narrative)*

Scores	Frequency	Percent	Valid Percent	Cumulative Percent
5,66	1	8,3	8,3	8,3
5,85	2	16,7	16,7	25,0
7,07	1	8,3	8,3	33,3
7,45	1	8,3	8,3	41,7
7,54	1	8,3	8,3	50,0
7,96	1	8,3	8,3	58,3
8,68	1	8,3	8,3	66,7
8,76	1	8,3	8,3	75,0
10,12	1	8,3	8,3	83,3
11,00	1	8,3	8,3	91,7
11,55	1	8,3	8,3	100,0
Total	12	100,0	100,0	

Table Q14

*Frequency Table - Pauses within boundaries BP (Narrative)*

Scores	Frequency	Percent	Valid Percent	Cumulative Percent
5,34	1	8,3	8,3	8,3
5,66	1	8,3	8,3	16,7
7,01	1	8,3	8,3	25,0
7,03	1	8,3	8,3	33,3
7,43	1	8,3	8,3	41,7
8,78	1	8,3	8,3	50,0
10,41	1	8,3	8,3	58,3
10,73	1	8,3	8,3	66,7
11,87	1	8,3	8,3	75,0
13,12	1	8,3	8,3	83,3
13,33	1	8,3	8,3	91,7
16,33	1	8,3	8,3	100,0
Total	12	100,0	100,0	

## 2. American Participants

Table Q15

*Frequency Table - MLR AE (Description)*

Scores	Frequency	Percent	Valid Percent	Cumulative Percent
3,89	1	11,1	11,1	11,1
3,90	1	11,1	11,1	22,2
4,32	1	11,1	11,1	33,3
4,37	1	11,1	11,1	44,4
4,60	1	11,1	11,1	55,6
4,84	1	11,1	11,1	66,7
5,20	1	11,1	11,1	77,8
5,30	1	11,1	11,1	88,9
6,92	1	11,1	11,1	100,0
Total	9	100,0	100,0	

Table Q16

*Frequency Table - MLR AE (Narrative)*

Scores	Frequency	Percent	Valid Percent	Cumulative Percent
3,94	1	11,1	11,1	11,1
4,24	1	11,1	11,1	22,2
5,20	1	11,1	11,1	33,3
5,58	1	11,1	11,1	44,4
5,73	1	11,1	11,1	55,6
6,19	1	11,1	11,1	66,7
6,50	1	11,1	11,1	77,8
6,93	1	11,1	11,1	88,9
7,11	1	11,1	11,1	100,0
Total	9	100,0	100,0	



Table Q17

*Frequency Table - Pauses at boundaries AE (Description)*

Scores	Frequency	Percent	Valid Percent	Cumulative Percent
4,36	1	11,1	11,1	11,1
5,97	1	11,1	11,1	22,2
6,99	1	11,1	11,1	33,3
8,11	1	11,1	11,1	44,4
8,74	1	11,1	11,1	55,6
9,79	1	11,1	11,1	66,7
10,63	1	11,1	11,1	77,8
11,11	1	11,1	11,1	88,9
13,80	1	11,1	11,1	100,0
Total	9	100,0	100,0	

Table Q18

*Frequency Table - Pauses within boundaries AE (Description)*

Scores	Frequency	Percent	Valid Percent	Cumulative Percent
3,60	1	11,1	11,1	11,1
10,47	1	11,1	11,1	22,2
10,60	1	11,1	11,1	33,3
11,79	1	11,1	11,1	44,4
12,28	1	11,1	11,1	55,6
14,68	1	11,1	11,1	66,7
14,75	1	11,1	11,1	77,8
17,16	1	11,1	11,1	88,9
17,60	1	11,1	11,1	100,0
Total	9	100,0	100,0	

Table Q19

*Frequency Table - Pauses at boundaries AE (Narrative)*

Scores	Frequency	Percent	Valid Percent	Cumulative Percent
4,70	1	11,1	11,1	11,1
5,38	1	11,1	11,1	22,2
5,49	1	11,1	11,1	33,3
5,92	1	11,1	11,1	44,4
6,50	1	11,1	11,1	55,6
7,35	1	11,1	11,1	66,7
7,87	1	11,1	11,1	77,8
9,10	1	11,1	11,1	88,9
11,67	1	11,1	11,1	100,0
Total	9	100,0	100,0	

Table Q20

*Frequency Table - Pauses within boundaries AE (Narrative)*

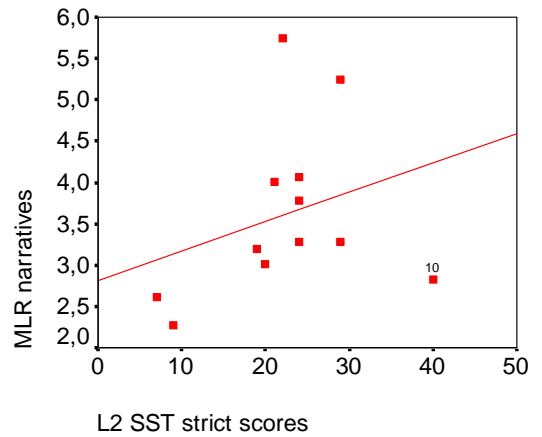
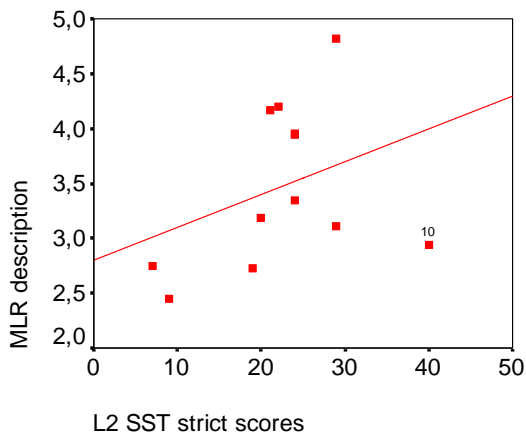
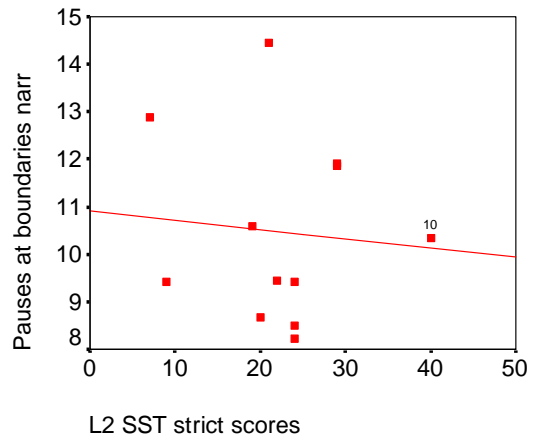
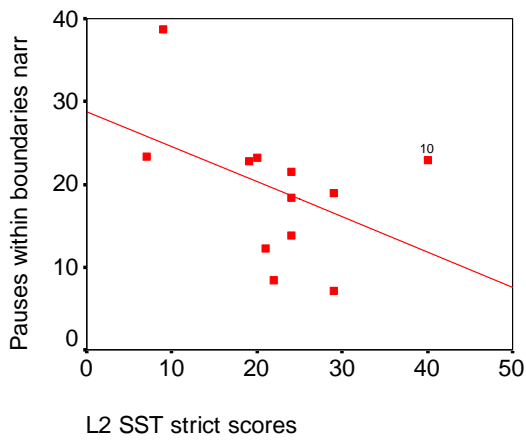
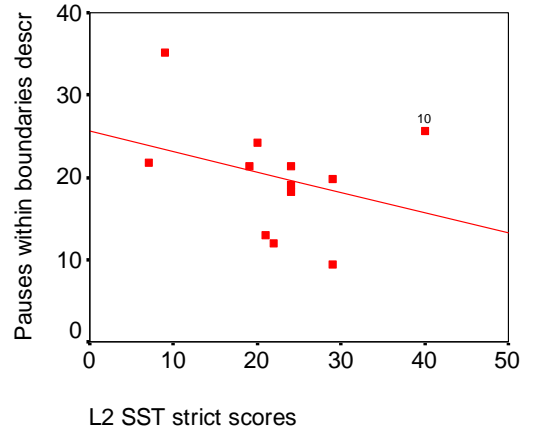
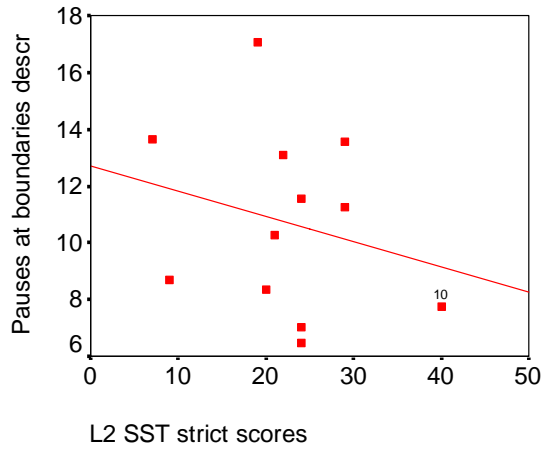
---

Scores	Frequency	Percent	Valid Percent	Cumulative Percent
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8,19	1	11,1	11,1	22,2
9,24	1	11,1	11,1	33,3
9,94	1	11,1	11,1	44,4
11,03	1	11,1	11,1	55,6
11,34	1	11,1	11,1	66,7
12,39	1	11,1	11,1	77,8
12,77	1	11,1	11,1	88,9
15,48	1	11,1	11,1	100,0
Total	9	100,0	100,0	

---

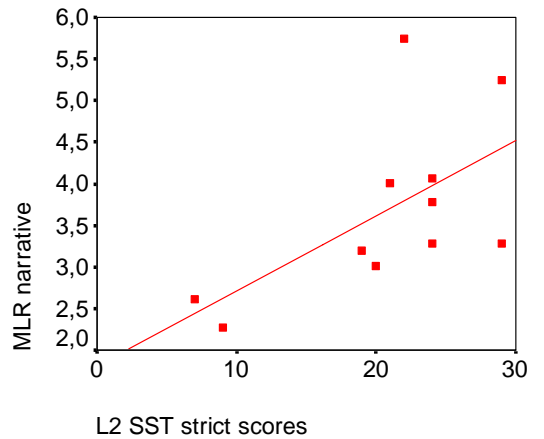
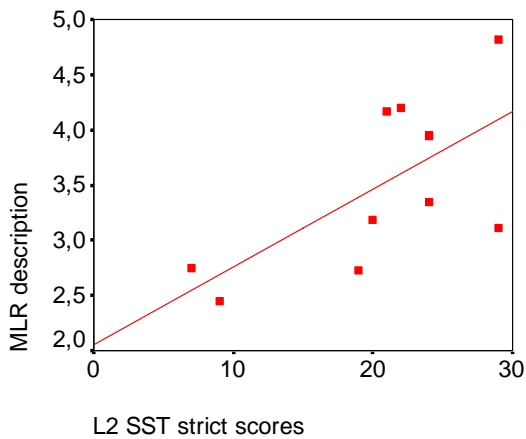
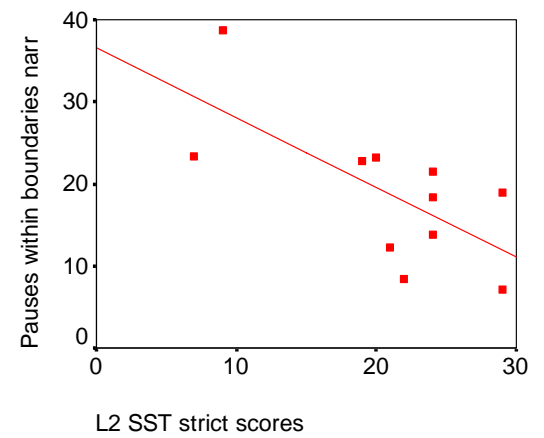
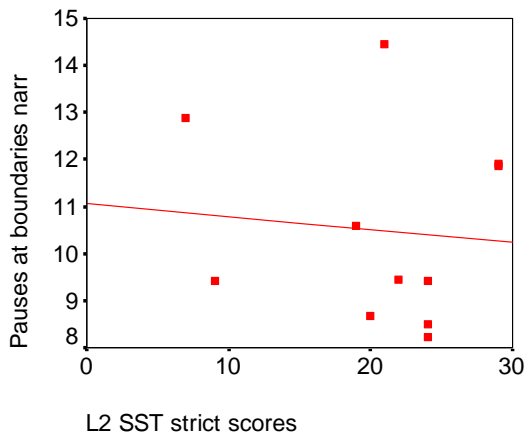
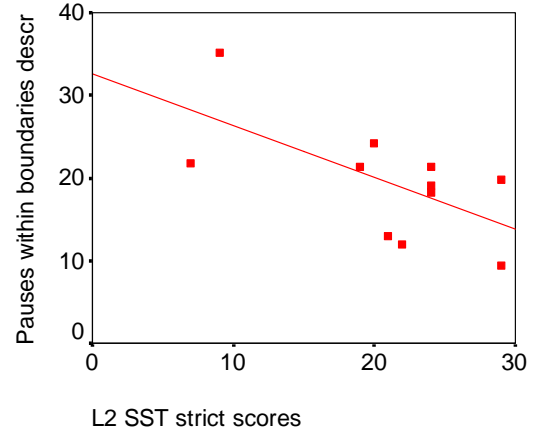
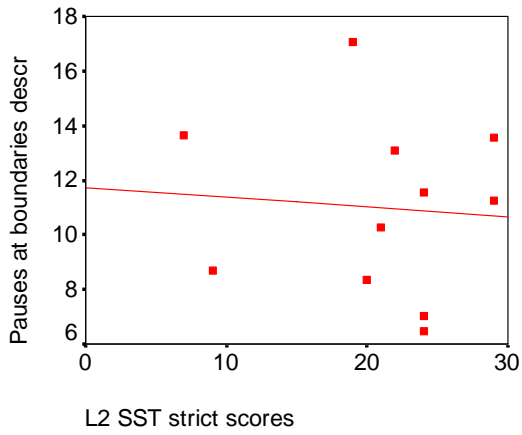
# APPENDIX R

## Scatter plots - all group



# APPENDIX S

## Scatter plots – without outlier



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