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Second language inner voice and identity

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SECOND LANGUAGE INNER VOICE AND IDENTITY

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ABSTRACT

Second Language Inner Voice and Identity

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This study investigates the phenomena of second language (L2, hereafter) inner voice for three Japanese-American English bilinguals who had long-term exposure to the L2 in naturalistic contexts, that is, by living and/or working or studying in the U.S. American English learners of L2 Japanese were included in the study as well, although only one of them had naturalistic exposure, the other having traveled to Japan in addition to being married to a Japanese national. Data for the study reveals how and when L2 inner voice is utilized, how it appears to develop, how it leads to shifts in identity toward the L2 languaculture, and how and when this takes place. Moreover, the study distinguishes the functions of L2 inner voice from those of L2 inner speech, although the two were found to co-exist at times, functioning interchangeably. Furthermore, the emergence of the L2 inner voice appears to be dependent on the prior development of L2 inner speech. Overall, the main function of L2 inner voice proves to be a bridging of language and cultural gaps between the L1 and L2 languaculture.

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CHAPTER 1

INTRODUCTION

This study explored two phenomena: inner voice and different identity, which are

perceived by bilingual speakers when using and learning a second language. The

meaning and realization of the phenomena are described and examined, building on

previous research in the field. Some studies have identified the phenomena of an

inner voice in a L2 learning contexts (i.e., de Guerrero, 2004, 2005; Tomlison, 2001;

Centeno-Cortes and Jimenez, 2004; Larsen, Schrauf, Fromholt, and Rubin, 2002) and

the different identity for the L2 speaker that emerges as the speaker becomes more

acculturated into the target language.(i.e., Norton, 2000). This research also

investigates the interrelation between the two phenomena.

This chapter is divided into 9 sections: (a) statement of the problem, (b) purpose

of the study, (c) significance of the study, (d) research questions, (e) theoretical

framework, (f) definition of terms, (g) assumptions, (h) limitations, (i) summary.

Statement of the Problem

Mental development and its functioning are necessary for second language

(hereafter, L2) learners to progress and succeed in learning the target language.

According to Cohen (1994), variables such as age, ethnic and cultural background,

personality, higher mental ability, and aptitude affect learning a target language. This

interrelation of thought and language necessary in L2 learning is one of the most

complex problems to study in applied linguistics, and this problem is still under

investigation. However, that lack of research should not discourage the attempt to

research the problem, and such studies, as argued by Vygotsky (1934/1986), require a clear understanding of interfunctional relations between thought and language.

Inner speech is internalized speech aimed at oneself, which cannot be expressed in external speech – wordless communication of the most complicated thoughts and in pure meanings – and has peculiar syntax structures, such as specific abbreviation (Vygotsky, 1934/1986).

Vygotsky (1934/1986) argues that egocentric speech is inner speech in its *functions*; it is speech on its way inward, intimately tied up with the ordering of the child's behavior, already partly incomprehensible to others, yet still overt in form. In other words, egocentric speech is *vocalized* speech, but directed to oneself – comprehensible to others – whereas inner speech is *non-vocalized*, directed to oneself and yet incomprehensible to others. Speech turns inward because its function changes, and its development has three stages: external speech, egocentric speech, and inner speech (Vygotsky, 1934/1986).

In contrast, according to the theoretical framework of the Sapir-Whorf's Linguistic Relativity Hypothesis, the way people view the world is determined wholly or partly by the structure of their L1 (Richards and Schmidt, 2002). Therefore, from Sapir-Whorf's linguistic relativity hypothesis, adjusted to Shpet's claim of the *inner form* of the word and of a language, which distinguishes one group from another (Wertsch, 2005), inner voice is the use of the L2 for thinking as a way of helping one mediate the ways of the L2 and culture.

A sociocultural approach satisfies the argument of Wertsch (2005) and of Van Der Veer (2007), which states that in order to understand the inner mental processes

of human beings, we must look at them in their sociocultural contexts. In second language acquisition (SLA) research, a few studies (see de Guerrero, 2004, 2005; Tomlinson, 2001) have indicated the significance of L2 inner speech in learning the target language, depending upon the competency levels of the L2 learners. Thus, L2 development may occur through the deliberate use of the target language intrapersonally, that is, the deliberate mental practice of the target language in naturalistic contexts of the L2, where it is spoken on an everyday basis. Furthermore, other studies (see Pavlenko, 2005; Norton, 2000) have shown a "different-self" as perceived by bilingual individuals when learning and speaking an L2, and a positive or negative personal L2 learning experience – especially an emotional one – in the target language contexts or the country.

Purpose of the Study

This study, conducted through a cultural psychological approach based on an activity theory, describes the meaning for several individuals as part of their lived experiences. The primary purpose of this study was to conduct exploratory qualitative research to investigate the emergence of the inner voice in a L2, and the different sense of identity experienced and perceived by bilinguals who were exposed to naturalistic contexts when learning and using the target language. To meet this purpose, this research: (a) examined a participant's L2 proficiency level and perceptions of elements that contribute to or inhibit his/her L2 inner voice and a different self; (b) investigated the relationships among the elements that contribute to or inhibit the participant's mental experience of the L2 inner voice and a different

identity; and c) described phenomena of the L2 inner voice and a different self among bilingual speakers whose L1 was Japanese and whose L2 was English, or vice versa. The results of the study should contribute to L2 research, including the development of higher mental ability, development in relation to language learning, how inner voice develops the L2 linguistically – accuracy, fluency, etc., sociolinguistically and pragmatically, and to Shpet's theoretical framework (1996) on thought and language, which is significantly less well-known than Vygotsky's (1934/1986), who was interested in egocentric/inner speech as a thinking tool for problem-solving. Further, this study supports (as Shotter suggested, 1982) the argument that Vygotsky did not succeed in providing a genuinely sociocultural approach to mind (Wertsch, 1991). Additionally, scholars have used the terms inner speech and inner voice interchangeably and in a vague manner; hence, this inquiry illustrates the necessity to distinguish between the two in a clear manner.

Significance of the Study

A few empirical studies have provided evidence that supports the significant role of an inner voice in the L2 learning process (see de Guerrero, 2004, 2005; Tomlinson, 2001). Other studies support the interconnection between inner voice and a different self, as perceived by bilinguals when speaking in a L2 (see Pavlenko, 2005; Norton, 2000). Bilingual individuals were an extremely rich resource for studying this relationship because they were L2 learners, who might or might not have experienced a sense of different identity. By studying the role of an L2 inner voice and how it did or did not lead to a different sense of self, we strive for effective pedagogies that promote higher mental development in second language learning through the possible

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correlation between the two in the L2 learning contexts. This might also prove

especially important in relation to immigrants, who by definition live in the L2

surrounds.

Data collections from online and from interviews provide the substance the study.

Online data collection was aimed at examining the participant's language processes in

their L2 at a given point in time and investigating the frequency of such a

phenomenon occurring.   Specifically, online responses were important in

establishing what actually happened, that is, at any particular point in time, as well as

how a given participant through introspection found that his/her inner voice was

operating in relation to language acquisition and with regard to questions of identity

as well.

<center>Research Questions</center>

The central research question guiding this inquiry is:

What is the genesis of the L2 inner voice and does it also lead to a different

identity?

There are also subquestions that guide this inquiry:

1. Does an L2 inner voice develop?

2. What is the function of the L2 inner voice?

3. If so, how does the L2 inner voice develop?

4. Does the L2 inner voice lead to a different sense of self?

5. If so, how does the L2 inner voice lead to a different sense of self?

<center>5</center>

Additionally, the participants will be asked to provide information on demographic data—gender, the length of time speaking the L2 (English), proficiency level in English, the length of time studying the target-language, occupation, birth place, age, the reason for coming to the U.S., highest level of education, and language used in family (i.e., how much English is used to communicate on a daily basis; see Appendix B).

The interview protocol included questions, in the first section, about the participant's awareness of and experience with the L2 inner voice and the development of a different sense of self. The second section, online data collection, investigated the activity of mental functions of the use of the L2 inner voice during the day for over a month through the participants' reporting their thoughts – when, where, and for what reasons they used the L2 for themselves – at their convenience by e-mail. The survey concluded by asking the participant's interpretation of their use of the L2, including L2 inner voice.

Overview of Theoretical Framework

Inner Speech

Vygotsky (1934/1986) defines inner speech as speech that is directed to one's self—an internalized, tacit communication; social, or external speech, on the other hand, is used for communication with others. Hence, Vygotsky denies that "inner speech is seen as truncated external speech" —as "speech minus sound" (Muller, as cited in Vygotsky, 1934/1986) or "subvocal speech" (Watson, as cited in Vygotsky, p. 225). According to Vygotsky, the relationship between thought and speech is not parallel; instead, there is a complicated relationship. Vygotsky argued that in order to

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get a true picture of inner speech, researchers must start from the assumption that it is a specific formation, with its own laws and complex relations to other forms of speech activity. Inner speech is an autonomous phenomenon and has its own genetic root; its development occurs through private speech—a child's egocentric speech directed only to his or herself; the decreasing of vocalization of egocentric speech denotes a developing abstraction of sound, the child's new faculty to "think words," instead of pronouncing them. Thus, the syntax of these two types of speech differs. However, "egocentric is inner speech in its functions" (Vygotsky, p. 86).

Additionally, inner speech, according to Vygotsky (1934/1986), does not have equivalent expressions in external speech; it is more peculiar, with a specific form of abbreviation that omits the subject of a sentence, the "psychological predicate," and all words connected with it as his or her egocentric speech develops. Hence, the structural peculiarity of inner speech increases with age. The basic syntax of inner speech is speech almost without words. Vygotsky (1934/1986), based on his observation of children, points out the significant role of private speech/egocentric speech, whose function is similar to that of inner speech; it serves mental orientation, conscious understanding; it helps in overcoming difficulties – for example, problem solving.

Inner Voice

Vygotsky (1934/1986) is heavily indebted to Shpet's claims on thought and word – Vygotsky attended his seminar as his student for two years (Vygotsky and Lifanova, 1996, as cited in Wertsch, 2005, p. 58). However, Vygotsky did not cite Shpet's works in his writings (Wertsch, 2005, p. 58), and he understood the word

differently than Shpet (Zinchenko, 2007). To study the development of thought,

Vygotsky took *word meaning* as a unit for analysis, whereas Shpet, according to

Wertsch (2005), gave his preference to the *inner form* of the word. Moreover,

according to Wertsch (2005), Shpet's own account of the inner form of the word was

heavily indebted to Humboldt's Romantic project of understanding cultural difference

(Shpet, 1996: 78, as cited in Wertsch, 2005, p. 60). As a result, [Shpet] tends to focus

on how the inner form of the word and of a language distinguish one group from

another.   In other words, from Shpet's perspective, language and culture come

together with the use of inner speech.

L2 Inner Voice

De Guerrero (2004, 2005) defines inner speech as "not simply a silent form of

self-directed speech; it is furthermore, an instrument for thought resulting from the

internalization of social speech" (p. 15). He defines inner voice as:

> According to the "working memory" model (Baddeley, 1986; Gathercole & Baddeley, 1993), one of the components of short-term working memory is the "phonological loop," a system that operates by holding information in phonological form and maintaining it afresh by means of an articulatory or subvocal rehearsal process. In this model, the auditory imagery and subvocal articulation that accompany the handling of verbal (or verbally coded) material in working memory constitute inner speech processes sometimes referred to as the "inner ear" and the "inner voice." (p. 23)

In other words, inner voice is auditory imagery and subvocal rehearsal. However, de

Guerrero does not distinguish between inner speech and inner voice in a clear fashion

in her studies (2004, 2005). In these studies, she points out the role of inner speech in

L2 learning and its changeable form in the same contexts. Her argument is very

significant, especially because mental development in the L2 learning may occur in

the form of inner voice—the central issue of my research—within the learners.

Tomlinson (2001), like de Guerrero (2004, 2005) –although she defined inner speech and inner voice differently but not in her studies—does not distinguish significantly between the two either; he uses inner voice exclusively with definitions of speech sounds in the mind, either when talking to ourselves or when repeating what we have heard or read. In his studies (2001), Tomlinson examines the role of inner voice in L2 learning, supporting de Guerrero's conclusion, and concludes that lower proficiency L2 learners experienced more frequent inner voice with which to guide them in language tasks than did their more competent counterparts, who, in contrast, let their inner voice act as a guide to produce a "social" voice.

Language and Culture

Language and culture are inseparably interconnected to each other in L2 acquisition. According to Agar (2002), culture is something people "have," but it is also more than that. It is something that happens to "you" when you encounter people; it's what happens when you encounter differences, become aware of something in yourself, and work to figure out why the differences appeared. Further, Agar argues that culture is awareness, a consciousness that reveals the hidden self and opens paths to other ways of being. Thus, "a person," according to Agar, "must change his or her consciousness, that is tied to the old one" – the L1 – and "he or she must stretch beyond the circle of grammar and dictionary, out of the old world and into a new one" (p. 22).

Sapir–Whorf's linguistic relativity hypothesis, according to Duranti (1997), explains how semantic structures of different languages may be fundamentally incommensurable, with consequences for the way in which speakers of specific

languages might think and act. Because language, thought, and culture are deeply interlocked, each language might be thought to be associated with a distinct world view. In other words, the linguistic relativity hypothesis embodies two claims: linguistic diversity and linguistic influence on thought; the grammatical structures of any language contain a theory of the structure of the universe or "metaphysics." However, Whorf (1956) doe not develop an explicit theory about *how* languages influence thought (Wertsch, 1987, p. 73). He rather presents his argument based on his own specific comparative analyses of English and Hopi grammar, and the language category – linguistic classifications, which are tied to an infinite variety of experience – suggests to the speaker associations which are not necessarily entailed by experience, according to Wertsch (1987, p. 73).

Identity

Identity and naturalistic L2 learning in a country of origin are also interwoven together. According to Norton (2000), "Language learners do not live in idealized, homogeneous communities but in complex, heterogeneous ones; such heterogeneity has generally been framed uncritically" (p. 4). Norton also argues that "inequitable relations of power limit the opportunities L2 learners have to practice the target language outside the classroom" (p. 5). Therefore identity, according to Norton, refers to how a person understands his or her relationship to the world, how that relationship is constructed across time and space, and how the person understands possibilities for the future. Thus, "language is constitutive of and constituted by a speaker's identity" (p. 13) in order to negotiate a sense of self within and across

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different sites at different points in time and to gain or deny access to a social network and social meaning.

In contrast, Bourdieu (1991) developed a theory of "habitus," which is a set of dispositions that incline agents to act and react in certain ways analogous to one's upbringing and experience as part of a specific culture. Dispositions generate practices, perceptions, and attitudes which are "regular," argues Bourdieu. There are four classified capitals that define the location of an individual within a social market: economic capital, cultural capital, symbolic capital, and linguistic capital. According to Bourdieu, the more linguistic capital—the capacity to produce expressions for a particular market—that speakers possess, the more they are able to exploit the system of differences to their advantage and thereby secure a profit of distinction. Applying his argument to L2 learning contexts, I argue that an L2 learner, in order to better secure his/her position within a social market – the target language community – may practice the target language consciously and intrapersonally.

While Bourdieu (1991) focuses on the relationship between identity and symbolic power, Strauss and Cross (2005) investigate identity enactments through a study by Tatum (1987) of black women in the U.S. who participated in a 2-week daily diary. From an analysis of the study, Strauss and Cross (2005) argue that code switching reflects bicultural competence that allows a black person to operate effectively, smoothly, and competitively within the mainstream culture, and to shift back and forth between black cultural and mainstream circumstances.

Also, Pavlenko (1998, 2005) investigates how languages are used to represent emotional experiences. An analysis of her studies on language and emotions shows

the interrelationship between mental development in L2 acquisition and the emergence of a different identity in the target language. According to Pavlenko, L2 learning is a "departure from oneself, " and the higher the L2 proficiency level, the greater the distance between the L2 self and the L1 self.

Definitions of Terms

1. *English Language Learner (ELL)*: an adult whose native language is one other than the English language.

2. *Inner speech*: internalized speech for oneself and mental orientation, which helps in overcoming difficulties—for example, problem-solving.

3. *Inner voice*: the way people view the world according to the structure of their L1—Sapir-Whorf Linguistic Relativity Hypothesis (1956) – which is conscious use of a language that is connected with culture and helps one mediate become someone else in a new circumstance – Shpet's claim of the inner form of the word and the development of thought (Wertsch, 2005).

4. *L1 learner*: a child who learns his or her first or native language; the first language can be multiple ones – for example, English, Japanese and/or Spanish.

5. *L2 learner*: an adult who is learning a second or other language.

6. *Bilingual*: a person who either uses two languages with some degree of proficiency in the L2 or equally well (a balanced bilingual) on a daily basis, or uses only one language (L2) exclusively in everyday use (i.e., academically and socially) but understands both languages.

7. Naturalistic contexts of exposure: Although this term originally meant exposure to the L2 within the contexts of the target language without formal instruction, the term herein means proficiency came mostly through exposure in these circumstances, although a speaker might also have had classroom instruction at some point as well.

As suggested in the theoretical frameworks of Sapir-Whorf's (1939) linguistic relativity hypothesis, which is adjusted to that of Shpet (1996), of de Guerrero (2004, 2005), of Tomlinson (2001), of Agar (2002), of Norton (2000), of Bourdieu (1991), of Strauss and Cross (2005), and of Pavlenko (1998, 2005), an individual's inner voice in a L2 could offer insight into the investigation of a different sense of identity perceived by that individual when learning and using the target language, and into the ties between the two phenomena. Therefore, it was hypothesized that there is a connection between the development of the L2 inner voice and a different sense of identity. In other words, the phenomenon – inner voice in a L2 – guides one in the ways of the target culture, at the same time when improving L2 proficiency.

Participants in the study understood the concept of the L2 inner voice well enough to answer the interview questions and to share their thoughts about their inner voices, if they had them. It was also assumed that participants would specify their interpretation of a different sense of identity if they were aware of L2 inner voice influences on their psychology, and would answer the questions honestly and not in the way that they perceived the researcher wanted them to answer the question.

Limitations

This study investigates the phenomena that elicits the inner voice in an L2 and contributes to a different sense of self in the target language by means of mediation.

Experiences of such an inner voice and a different sense of identity can be significantly influenced by the individual perception of such phenomena, or the various contexts in which it does or does not occur. For this reason, in this study the data collected from a small number of bilingual individuals, their opinions and responses, therefore, should not be regarded as authoritative. In addition, the testimonies of these individuals were not viewed as a replacement for other methods of studying mental functioning. Rather, such testimonies needed to be taken into account, and were considered only as a complement to semantic and other objective approaches.

Summary

Language and culture are found to occur together in L2 learning when naturalistic exposure occurs. This study primarily investigates the genesis of L2 inner voice and its functions, as well as a possible identity shift when using and learning the target language in naturalistic learning contexts. The study was also used to describe the lived experiences of the participants and analyzed the interrelation between the emergence of L2 inner voice and a different identity shift.

In the following chapter, the literature on each phenomenon – inner speech, inner voice, language and culture, and identity in relation to L2 learning—is reviewed. In Chapter 3, the methodology used in the study is explained.

CHAPTER 2

LITERATURE REVIEW

Background literature related to mental functioning and/or its development in relation to thought and language or word meanings is examined in this chapter to provide grounding related to the research questions. The review of literature is divided into three sections. The first section examines mediation and sociocultural approaches in relation to thought and language, and defines inner speech and inner voice, exploring studies on language and culture as well as identity. It also examines the dynamics of L2 research related to inner speech and inner voice. The second section examines the differences between inner speech and inner voice, as well as the development of L2 inner voice. The third section explores relevant studies on L2 inner voice, L2 language and culture, and identity.

Thought and Language

The problems of thinking, language, thought, and word are among the eternal issues in the human sciences. According to Zinchenko (2007), Vygotsky intended to give an elementary idea of the vast complexity of this dynamic structure not to exhaust all the complexity of the structure and dynamic of verbal thinking (p. 213). Yet the Vygotskyan theoretical framework is heavily indebted to Shpet, one of Vygotsky's mentors, whose seminars Vygotsky attended for 2years (Wertsch, 2005). It is not the intent of this study to examine each scholar's ideas on thought and word in relation to the concerns of this dissertation.

Significantly, Zinchenko (2007) defines the differences between thinking and thought, and warns not to underestimate the complexity of the two:

Thinking, of course, is the movement of thought, but one should not underestimate the complexity of defining and studying thought. Thought, regardless of truth or falseness, is manifested sometimes in a word, sometimes in an image, sometimes in an action or deed, sometimes in all of these as well as something else, or as something elusive and mysterious. Perhaps, elusive nature is the most interesting thing about thought. What thought is and how it emerges are not the most important questions. Instead, the presence of the intention to learn, understand, and see something standing behind a thought is important. The emergence of such intention is a sign of a genuine thought, which is different from something that just "comes into someone's head. (p. 213)

Yet Zinchenko (2007) argues that the birth of thought remains a mystery; thought and word are no less polyphonic than mind. Out of all the polyphony of mind and thought, Vygotsky and Shpet gave their preference to word, although they understood it differently. Vygotskyan theoretical framework defines inner "speech," whereas that of Shpet is more suitable to inner "voice."

Vygotsky (1934/1986) conducted an experimental study, using his genetic method, of concept formation in children to investigate the genetic roots of thought and language. Stern (1928, as found and quoted by Vygotsky, 1934/1986) provided an intellectualistic conception of language development in the child of 1.5 or 2 years:

Stern distinguishes three roots of speech: the expressive, the social, and the "intentional" tendencies. While the first two underlie also the rudiments of speech observed in animals, the third is specifically human. Stern defines intentionality in this sense as a directedness toward a certain content, or meaning: "At a certain stage of his psychic development," he says, "man acquires the ability to mean something when uttering sounds, to refer to something objective." (p. 57)

Thus, Vygotsky (1934/1986), from Stern's great discovery, concluded that

At that age the child first realizes that each object has its permanent symbol, a sound pattern that identifies it – i.e., that each thing has a name. Stern believes that a child in the second year of his life can become aware of symbols and of the need for them, and he considers this discovery already a thought process in the proper sense. (p. 60)

In *The Mystery of the Mind*, Penfield (1975), a neurosurgeon and scientist, argued the interrelation between the brain and the action of mind; however, he did not provide an answer to the above question, either. Interestingly, Penfield argued for a child's speech development in terms of the interrelation between the brain and mind in the following way:

> A baby brings with him into the world an active nervous system. He (or she) is already endowed with inborn reflexes that cause him to gasp and to cry aloud, and presently to search for the nipple, and to suck and swallow, and so set off a complicated succession of events within the body that will serve the purpose of nourishing it. In the very first month you can see him stubbornly turning his attention to what interests him, ignoring everything else, even the desire for food or the discomfort of a wet diaper . . . Within a few months he recognizes concepts such as those of a flower, a dog, and a butterfly . . . He makes progressive additions to, or changes in, the various concepts he is forming, choosing from what he sees and hears . . . The beginning of speech is important. The first time he hears the word and imitates it, the sound will be far from his eventual pronunciation of "dog." A dog appears in the steam of consciousness, whereupon the highest brain-mechanism carries a patterned neuronal message to the non-verbal concept-mechanism. (p. 58)

Vygotsky (1934/1986), from his observation and experimental studies, however, concluded that a child grasps the relation between sign and meaning, or the functional use of signs much later than 2 years of age in a child. According to Vygotsky (1934/1986), the most important fact is that the relation between thought and speech undergoes many changes. Progress in thought and progress in speech are not parallel. Their two growth curves cross and recross, the relation of the two not an unchangeable one. Even for adults, the relation of the two varies depending on the form of verbal and intellectual activity.

Vygotsky (1934/1986) argues the existence of a pre-speech phase of thought development in childhood, which is corroborated by Buhler's study (1930, as quoted by Vygotsky, 1934/1986) on chimpanzees:

> Kohler's experiments with chimpanzees, suitably modified, were carried out on children who had not yet learned to speak . . . The findings were similar for children and for apes . . . this particular child it was about the 10, 11 and 12 [sic] months . . . It is the chimpanzee-age, therefore, that the child makes its first small discoveries. (p. 80)

Buhler (1930, cited by Vygotsky, 1934/1986) emphasizes that although the above discoveries were primitive ones, there was the great need for studies on mental development (p. 81). Vygotsky, as Penfield (1975) argued above, was aware of the pre-intellectual roots of a child's speech development, such as a child's babbling, crying, his/her first words; however, this development does not have to do with "thinking." The most important discovery, however, is that at a certain moment at about the age of 2, the curves of development of thought and speech, till then separate, meet and join to initiate a new form of behavior (p. 82). In addition,

> This crucial instant, when speech begins to serve intellect, and thoughts begin to be spoken, is indicated by two unmistakable objective symptoms: (1) child's sudden, active curiosity about words, his question about every new thing, "What is this?" and (2) the resulting rapid, saccadic increases in his vocabulary. (p. 82)

Thus, Vygotsky (1934/1986: 83) concluded:

1. In their ontogenetic development, thought and speech have different roots.
2. In the speech development of the child, we can with certainty establish a preintellectual stage, and in his thought development, a prelinguistic stage.
3. Up to a certain point in time, the two follow different lines, independently of each other.
4. At a certain point these lines meet, whereupon thought becomes verbal, and speech rational.

Mediation

Vygotsky (1934/1986) views the child's egocentric speech as mediation, preceding the development of inner speech. Hence, Vygotsky points to the three stages of speech development: external speech, egocentric/private speech, and inner speech—going from inter- to intrapersonal use. Vygotsky further argues the higher psychological tools— language and signs—play a significant role as semiotic mediation in mental development. Thus, in his studies, mediation is the central issue in intellectual development.

In this section, I will first further examine the term *mediation* from Wertsch's theoretical framework. Second, I will argue the interrelationship between human mental action and sociocultural contexts.

Vygotsky (1934/1986), according to Wertsch (2005), employed two approaches to mediation during the last decade of his life—the period during which he worked as a psychologist. Vygotsky continued to use the theoretical framework and language he had acquired in his early study of semiotics, poetics, and literary theory, which led him to take a somewhat different perspective on issues such as mediation (p. 54). Vygotsky claimed that there were two types of mediation: explicit and implicit.

Wertsch (2005) argues that Vygotsky (1987) viewed mediation as explicit in two senses; the first sense is,

> the sense that an individual or another person who is directing this individual overtly and intentionally introduces a 'stimulus means' into an ongoing stream of activity. And second, it is explicit in the sense that the materiality of the stimulus means, or psychological tools, involved tends to be obvious and non-transitory. (p. 55)

Explicit mediation was the foundation of Vygotsky's method for studying the development of concepts in the "Forbidden Colors Task" (Leont'ev, 1932; Vygotsky,

1978, as cited in Wertsch, 2005). Wertsch further argues the dual stimulation roles of explicit mediation,

> In using this method, we study the development and activity of the higher mental functions with the aid of two sets of stimuli. These two sets of stimuli fulfill different roles vis-à-vis the subject's behavior. One set of stimuli fulfills the function of the object on which the subject's activity is directed. The second function as signs that facilitate the organization of this activity. (Vygotsky, 1987, p. 127, as quoted in Wertsch, 2005, p. 56)

According to Wertsch (2005), in the Forbidden Colors Task, "the first set of stimuli" was "the set of color terms used by the subjects," whereas "the second set of stimuli" was "the colored cards introduced by the researcher." For the second set of stimuli (i.e., signs), there was a significant result that showed that "most 5- and 6-year-old children did not seem to realize that the signs had anything to do with their performance on the task," but their "10- to 13-year-olds clearly did" (p. 56). In other words, this task provided the foundation for the development of concepts, as well as memory development (Leont'ev, 1932; Vygotsky, 1978), younger children develop neither concepts nor mediated memory as of yet.

Another type of mediation, as opposed to explicit nature, is implicit mediation, which is less obvious and hence more difficult to detect (Wertsch, 2005). Although implicit mediation has no visibility or in Wertsch's term "transparency," it plays a crucial role in mental development, specifically development of the L2 inner voice, the phenomenon under study. Furthermore, Wertsch argues that implicit mediation in the form of inner speech and social behavior involves the use of cultural tools, that is an inherent part of human action.

Wertsch (2005) also indicates that these assumptions about the implicit mediation emerge in Vygotsky's works (e.g., Chapter 7 in *Thinking and Speech*). Vygotsky

(1934/1986) saw word meaning behind thought, and thus proposed word meaning as a unit for analysis to recognize the phenomenon of both speech and intellect. Additionally, Vygotsky (1987) applied "microgenetic" as well as "ontogenetic" processes (Wertsch, 2005, p. 57) to assert that word meaning changes during a child's (mental) development and with a change in the function of thought. Vygotsky (1934, 1968) argued for two planes of speech: external speech, which is the auditory aspect, and inner speech, which is the internalized, meaningful, and semantic aspect. Therefore, the mediation involved here is not explicit—not the object of conscious reflection and not externally or intentionally introduced. Instead, mediation is necessarily and automatically built into mental and communicative functioning as a result of using language (Wertsch, 2005). I revised later this line of argument by Wertsch to read: mediation is necessarily and automatically built into mental action as a result of using the target language, L2, consciously.

Sociocultural Approach

As previously argued, mediation plays a significant role in human mental action with language use. In this section, I examine how the sociocultural approach fits into the study of human mind.

According to Wertsch (1995), the term "sociocultural approach" has been used frequently in the human sciences. It has been employed by several authors from a variety of disciplines—for example, Dewey (1938, as cited by Wertsch, p. 3) used it when discussing issues of logic and inquiry, and Kress (1985, as cited by Wertsch, p. 3) used it in his studies of language and discourse. Wertsch's goal was to use this term as a general approach in the human sciences.

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The relationship between the mind and sociocultural settings has concerned scholars

for decades, but in recent years it has received renewed attention because of the

dissatisfaction with past analysis (Wertsch, 1998). One of the fundamental claims of

sociocultural approach, according to Wertsch (1995), is a focus on human action that may

be external as well as internal; thus, "human action" can be replaced with "mental"

action—external speech and inner voice. Wertsch's proposed formulation of sociocultural

approach is to explicate the relationships between human mental functioning, on the one

hand, and the cultural, institutional, and historical situations in which this functioning

occurs, on the other (Wertsch, 1995). This formulation is well fit to the purposes of this

study – the focus will be on human mental action and the cultural situation.

Inner Speech

Inner speech, according to Vygotsky (1934/1986), seems to have been understood as

verbal memory by others (e.g., silent recital of a poem known by heart). Given this vague

interpretation by others, Vygotsky strongly objected to this notion and argued that inner

speech plays a significant role in the child's mental development, and inner speech was a

key tool to his investigation of thought and word. Vygotsky (1934/1986), to be followed

by de Guerrero (2004, 2005, see below) and Tomlinson (2001, see below), defined inner

speech as internalized speech aimed for oneself as opposed to externalized – social –

speech. Vygotsky (1934/1986) argued the importance of dealing extensively with

internalized or "inner speech" to approach the relation between thought and language.

Yet, psychologists do not know how the change from overt to covert or inner speech

occurs, or at what age, by what process and why it takes place. Watson (as cited by

Vygotsky) offered a hypothesis that children develop their speech from overt to

whispered and then to inner speech; however, Vygotsky disagrees that there are no valid

reasons to assume that inner speech develops in some mechanical way through a gradual

decrease in the audibility of speech, whispering. Vygotsky, from his studies on the

whispering of young children, finds that there is almost no difference between whispering

and speaking aloud; functionally, however, whispering differs profoundly from inner

speech and does not even manifest a tendency toward the characteristics of the latter.

Furthermore, inner speech does not develop until school age, though it may be induced

very early. In addition, the inner speech of school children is immature (p. 86).

Vygotsky (1934/1986) answers the question, "Why does speech turn inward?" by

concluding that it turns inward due to the changes of its functions, and suggests the three

stages of speech: external speech, egocentric speech, inner speech. According to

Vygotsky, external speech is socialized speech aiming to communicating with people, to

exchange words, or to ask questions, whereas egocentric speech is

> inner speech in its functions; it is speech on its way inward, intimately tied up
> with the ordering of the child's behavior, already partly incomprehensible to
> others, yet still overt in form and showing no tendency to change into
> whispering or any other sort of half-soundless speech . . . egocentric speech
> readily assumes a planning function, i.e., turns into thought proper quite
> naturally and easily. (p. 86)

Vygotsky (1934/1986) also asserted that thought and speech were like two

intersecting circles (Venn diagram); in their overlapping parts, thought and speech,

coincide to produce "verbal" thought.   According to Vygotsky, verbal thought does not

include all forms of thought or all forms of speech; it is not an innate, natural form of

behavior, and has specific properties and laws that cannot be found in the natural forms

of thought and speech. There is a vast area of thought that has no direct relation to

speech. However, thinking that is manifested through the use of higher psychological

tools, such as language and signs, do belong to this area. Vygotsky asserts that there is no specific interdependence between the genetic roots of thought and speech; the inner relations under investigation were not a prerequisite, but rather a product of the historical development of human consciousness.

In contrast, Vygotsky (1934/1986) points out the complicated relations between the two—thought and speech—by arguing that it would be wrong to regard them as two unrelated processes, either parallel or crossing at certain points and mechanically influencing each other. Given that his earlier studies are largely based on the assumption that thought and speech were isolated, independent elements, and verbal thought was the product by their external union, Vygotsky tries a new approach by replacing the analysis of elements by the analysis of units. According to Vygotsky, units were products of analysis that corresponded to specific aspects of the phenomena under investigation.

Vygotsky (1934/1986) found this unit of verbal thought in word meaning; word meaning is a phenomenon of thought only insofar as thought is embodied in speech, and of speech only insofar as speech is connected with thought and illuminated by it—a phenomenon of verbal thought (p. 212). According to Vygotsky,

> word meanings are dynamic rather than static formations. They change as the child develops; they change also with the various ways in which thought functions. If word meanings change in their inner nature, then the relation of thought to word also changes. (p. 217)

> The relation of thought to word is not a thing but a process, a continual movement back and forth from thought and to word and from word to thought. In this process, the relation of thought to word undergoes changes (Vygotsky, 1934/1986). Additionally, Vygotsky (1934/1986) argued not only that thought is not merely expressed in words; it comes into existence through them; thought undergoes many changes as it turns into speech, but behind words, there is the independent grammar of thought, the syntax of word meaning. (p. 218)

Vygotsky (1934/1986) asserts that to investigate the relationship between thought and word, a clear understanding of inner speech is important, and argues that to study such a phenomenon it is necessary to externalize it experimentally by connecting it with some outer activity, which is egocentric speech. *Egocentric speech* is, according to Vygotsky, a stage of development preceding inner speech: (a) both fulfill intellectual functions; (b) their structures are similar; and (c) egocentric speech goes underground at school age (around age 7), when inner speech begins to develop (p. 226). One advantage of approaching inner speech through egocentric speech is its accessibility to experiments and observations.

Vygotsky (1934/1986) concludes, from his experimental studies, that

> . . . inner speech is not the interior aspect of external speech . . . It still remains speech, i.e., thought connected to words. But while in external speech thought is embodied in words, in inner speech words die as they bring forth thought. Inner speech is to a large extent thinking in pure meanings, which are dynamic, shifting, unstable things, fluttering between word and thought, the two more or less stable, more or less firmly delineated components of verbal thought. (p. 249)

Furthermore, Vygotsky's (1934/1986) experimental studies indicated that egocentric/private speech and inner speech serve mental orientation, conscious understanding, and help in overcoming difficulties – for example, problem solving, connected with the child's thinking.

Inner Voice

In contrast, inner voice is better defined within Sapir-Whorf's linguistic relativity hypothesis—language, thought and culture are deeply interlocked, and each language is thought to be associated with a distinct world view (as cited in Duranti, 1997)—and Shpet's, which derived from Humboldt's Romantic project of understanding cultural

difference (Wertsch, 2005) than that of Vygotsky's—higher mental functions. Unfortunately, there is very little literature available in English of Shpet's work. Because of the scarcity of Shpet's research in the English language, I will start with the Sapir-Whorf's argument and supplement this with Shpet's approach (from what little there is available).

The way in which we think about the world is influenced by the language we use to talk about it (Duranti, 2006). Edward Sapir, one of Franz Boas's gifted students in linguistics, "explored the implications of language study for the understanding of culture and personality and developed in preliminary form the proposal that each language shapes the conceptual world of its speakers," according to Wertsch (1987, p. 72). Whorf joined Sapir (Carroll, 1956; Rollins, 1980, as cited in Wertsch, 1987, p. 72), who

> under Sapir began serious work on native American languages, particularly Hopi" and found that "in the intricate grammatical patterns of these exotic languages ways of classifying and construing the world that were dramatically different from those of English and other European languages. (p. 72)

However, Wertsch (1987) argues that

> Whorf did not develop an explicit theory about how languages influence thought. Rather, he presented a series of programmatic discussions of the problem based on the general understandings about language held by the Boas-Sapir school and on his own specific comparative analyses of English and Hopi Grammar. (p. 73)

Moreover, according to Wertsch (1987),

> A central premise of Whorf's argument is that language is composed not merely of forms but of meaningful forms . . . each language must be able to refer to an infinite variety of experience. To accomplish this, languages select from and condense experience, classifying together as "the same" for the purposes of speech things which are in many ways quite different . . . A language, then, essentially provides its speakers with a ready-made classification of experience which may be used as a guide for thought. (p. 73)

However, these linguistic classifications vary considerably across languages .the system of categories which each language provides its speakers is not common, universal system but one peculiar to the individual language. Nonetheless, speakers tend to assume that the categories and distinctions of their language are natural and common to all people. Typically, they are unaware that other languages are different substantially as well as formally. (p. 73)

From Whorf's arguments, language learning deeply involves not merely learning to speak, read, write and listen, but learning the above said "ready-made classification of experience" in the target language—in other words, pragmatics.

Vygotsky (1934/1986), according to Wertsch (2005), borrowed large segments of Shpet's ideas on thought and word, but both Vygotsky and Shpet viewed thought and word differently. Shpet saw thought behind the word, the word behind thought, as opposed to Vygotsky seeing the word behind thought and emotional and volitional tendencies behind verbal thinking (Zinchenko, 2007). Shpet, according to Zinchenko (2007), viewed word meaning as deeply rooted in being, and agreed with Parmenides that "thinking and being are the same" (p. 215); he strongly objected to the notion that disembodied thought existed—there didn't exist "a monster: a dumb thought with no word" (p. 217). Additionally, Shpet argued that a thought was a cultural act—sign giving. In other words, thinking and being are, in Wertsch's terms (1998), the "agent" and a thought is a cultural act, more specifically a "mediated" act. From Shpet's argument above, language should be the meditational means; mediation will be explained more in what follows.

It is very important here, although Shpet's works in English translation are more difficult to locate, to further examine Shpet's theoretical framework on thought and language in order to define what inner voice is within the contexts of this dissertation

study. Shpet, according to Wertsch (2005), was a hermeneutic phenomenologist

dedicated to working out a set of problems whose roots were in Husserl and Humboldt,

and as such, Shpet viewed language as activity:

> Language is not completed action, but protracted activity, that is, as Humboldt
> explained, 'the perpetually repeated work of the spirit, directed at making
> articulate sound the means for expressing thought . . . Synthesis in this case
> does not consist of tying together two abstracted units: pure thought and pure
> sound, but two members of a unified concrete structure, two terms of
> relationship: object oriented sense content . . . and the external form of its
> verbal expression-embodiment . . . in sensory perceptible forms. These forms
> are transformed through a relation to sense from natural forms combined in
> the 'thing' to social signification specifically in the signs of cultural meaning.
> (Shpet, 1996: 94, as quoted in Wertsch, 2005, p. 58)

In other words, the dialectical synthesis involved is not between pure thought and

pure sound. Shpet examined thought and word as part of a unit of analysis, and his

analysis of the inner form of the word was not identical to that of Vygotsky's (Wertsch,

2005, p. 59). Shpet argued:

> We take the following . . . as a guiding definition [of inner form]: (1) *negative
> definition*: The inner form is not a perceptible sound form, and it is also not a
> form of thinking itself, understood abstractly, and it is not a form of an object
> that constitutes the thinking content that is a modification of being – an object
> that would also be understood abstractly; (2) *positive definition*: Instead, the
> inner form uses a sound form to designate objects and to connect thoughts
> according to the demands of concrete thinking. In this process it uses external
> form to mark some modification of a thinking or objective content, something
> that is named in the given case by case. (Shpet, 1996: 110, as quoted in
> Wertsch, 2005, p. 59)

Shpet's account of the inner form of word was heavily indebted to Humboldt's

romantic project of understanding cultural difference, and as a result, Shpet focused on

how the inner form of the word and of a language distinguished one group from another.

Shpet viewed language not only as a substance and subject but as a thing or product, and

a production process, as energy (Shpet, 1996: 78, as cited by Wertsch, 2005). Hence,

Shpet's notion of the inner form of a language is not one of an inert object waiting to be used by active agents, but has a sort of agency itself (Shpet, 1996: 79, as cited in Wertsch, 2005).

Shpet's view on thought and language is the basic concept of a language and the culture in origin—inseparable relations—and so distinguishing among groups. In other words, the inner form of the word – inner voice – is deeply embedded in the ways of the culture.

Inner Speech and Inner Voice

Both inner speech and inner voice are internalized mental activity. However, the differences between the two, in addition to the use of language in the mind, are their functions and development. Moreover, the term, *inner speech*, has been applied to various phenomena, and scholars argue about different things that they call by that name. Inner speech plays a role as higher mental functions, such as helping one overcome difficulties (i.e., problem-solving) (Vygotsky, 1934/1986), whereas inner voice mediates people through their culture.

As we learn our L1 in our childhood – and of course, it is possible to acquire multiple languages simultaneously as L1s (Richards and Schmidt, 2002) – inner speech and inner voice in the target language are developed *simultaneously*, which enable us to communicate pragmatically – use of the language as embedded in culture appropriate way – and cognitively – for problem solving, etc. In other words, L1 inner speech and its inner voice are developed so naturally and simultaneously that we don't consciously recognize the differences in their functions -- using the ready-made classification of

experience and cognitive functions in the target language *unconsciously* and *automatically* as needed.

Language and Culture

Previously I have examined the task of sociocultural analysis, that is, to understand how being in the world is related to cultural, institutional, and historical contexts. In this section, I examine how human action and learning in a cultural context are interconnected. In doing so, it is important to address Vygotsky's (1934/1986) primary concerns in this regard, which differ from those of other scholars, especially Whorf (1956).

Vygotsky (1934/1986) and Whorf (1956), according to Wertsch (1987), shared the same view that "language is a social and cultural phenomenon" and

> the primary function of language as being social, that is, enabling social communication, but they both argued that it serves, through its use in thought, as one of the principal means by which individual thought incorporates social elements. Language makes this transformation possible because it contains within its forms a system of socially shared classifications of experience. (p. 75)

Vygotsky (1934/1986) developed a "cultural-historical" approach to mind relying on developmental comparisons in a variety of "genetic domains." In other words, Vygotsky was primarily interested in diachronic studies of changes in the form and function of speech or a *single* language -- a diachronic differentiation of a new function within the child's language (Wertsch, 1987, p. 75). Therefore, unlike Whorf (1956), Vygotsky did not examine in detail structural differences among natural languages, and the key for him lay in the functions to which language was put, that is, its use in human activity, and in the existence of a semantic plane with some generalized meanings, according to Wertsch (1987, p. 76). In other words, as a unit for analysis, Vygotsky took word meaning to

study the interrelationship between thought and language, and argued that human mental

processes are mediated by psychological tools – higher mental functions: signs,

languages . . . etc., which are used to regulate others and oneself, that is, cognitive

function. Thus, this was his primarily concern.

How do language and culture interconnect? Linguists, educators, and anthropologists

present multifaceted views on this question. Language is an integral part of a human's

social life, which consists of the routine exchange of linguistic expressions in the day-to-

day flow of social interactions.

Agar (2002), a linguistic anthropologist, uses the term, *languaculture*, to represent the

necessary tie between language and culture. He argues that the term is a reminder of the

critical fact that in spite of the mastery of language's grammar, without culture, we

cannot communicate; in contrast, with culture, we can communicate even with poor

grammar and a limited vocabulary. This line of reasoning applies to monolingual

individuals—those who need to convey their meanings effectively in culturally-

constructed contexts—as well as I argue, for L2 learners, impossible to learn the target

language without its culture.

Agar (2002) uses the term *circle* to point out the standard language – grammar and

the dictionary, argues that:

> Language has to include more than just language *inside* the circle. To use a
> language, to live in it, all those meanings that go beyond grammar and the
> dictionary have to fit in somewhere. The circle that people – and some
> linguists – draw around language has to be erased. (p. 20)

Culture, as opposed to language—the symbolic system—is the eraser, argues Agar

(2002). Agar defines *culture* as something people have and as something that happens to

people when another person encounters them; it becomes personal. When people encounter differences, they become aware of something in themselves and work to figure out the differences that appeared. Culture is awareness, a consciousness, one that reveals the hidden self, opens paths to other ways of being, and has to do with who the person is.

Also, drawing on the concept of inseparability between language and culture, Sapir (1933), one of a group of gifted students of Franz Boas (Wertsch, 1987, p. 72) and a linguistic anthropologist, argues that language is a prerequisite to the development of culture and has its own internal logic, whereas culture represents the symbolic interplay between individuals and society—linguistic relativity hypothesis, later known as the "Sapir-Whorf hypothesis." Whorf (1956) understood language as a social and cultural phenomenon, and under Sapir he began serious work on American Indian languages, particularly Hopi and found in the intricate grammatical patterns of these languages ways of classifying and construing the world that were dramatically different form those of English (Wertsch, 1987, p. 72). Therefore, Whorf (1956) claimed that there was a relationship between language and worldview: language structure contains a theory of the structure of the universe—metaphysics, which classifies space, time, and matter (as cited in Duranti, 1997). Because people's awareness of their choices and habits of the worldview are not observable, the grammatical patterns and language differences must be studied in a systematic fashion, argues Whorf (as cited in Duranti, 1997).

However, according to Wertsch (1987), Whorf (1956) did not develop an explicit theory about how languages influence thought and "rather presented a series of programmatic discussions of the problem based on the general understandings about language held by the Boas-Sapir school and on his own specific comparative analysis of

English and Hopi grammar" (p. 73). Whorf's argument is that a language provides its speakers with a "ready-made" classification of experience which may be used as a guide for thought (Wertsch, 1987, p. 73). The problems are as Wertsch (1987) argues,

> these linguistic classifications vary considerably across languages. Not only do languages differ as to the basic distinctions which are recognized but they also vary in the configuration of these categories into a coherent system of reference. Thus, the system of categories which each language provides its speakers is not a common, universal system but one peculiar to the individual language. (p. 73)

Nonetheless,

> Speakers tend to assume that the categories and distinctions of their language are natural and common to all people. Typically, they are unaware that other languages are different substantively as well as formally. (p. 73)

Therefore, according to Wertsch (1987), the most significant point of Whorf's argument is that "these linguistic categories are in fact used as analogical guides in habitual thought," and "a speaker in attempting to interpret an experience will use a category available in his language" (p. 73).

There is evidence in both Agar's theoretical framework (2002) and that of Sapir-Whorf's linguistic relativity hypothesis (1956) that language and culture are interwoven together. Language learners must "stretch out" their mentality to use a new language effectively, argues Agar, whereas any languages have their internal logic, ties to the different worldview, according to Sapir-Whorf's linguistic relativity. Thus, it can be revised to say: language learners must change their mentality to use the target language effectively because it has different structures – linguistic categories – tied to its own worldview.

Identity

Given that the complicated relationship with mental development and the particular

ties between language and culture, it is important to understand the identity of this

relationship associated with the work of critical discourse researchers who have framed

their work with reference to poststructuralist theories of language. Such theories are

associated, among others, with the work of Bourdieu (1991), of Fairclough (1992), of

Gee (1990), and of Kress (1989). In this section I will, in order to define identity,

examine the theories of Bourdieu (1991) and of Strauss and Cross (2005).

Bourdieu

Bourdieu (1991) searched for a "concrete" conception of social life to grasp the

specific social and political conditions of language formation and use. Sociologists and

sociolinguists have been more concerned with the "interplay" between practices and

concrete forms of social life; in their work, however, they have been preoccupied with

empirical evidence of variations in accent or usage in a way that is largely divorced from

broader theoretical and explanatory concerns. Their disciplinary frameworks fail to grasp

the specific social and political conditions of language formation and use, according to

Bourdieu (1991). Therefore, Bourdieu developed the *theory of practice,* which offers

insight into a range of issues on language and language use.

According to Bourdieu's theoretical framework, language is a social-historical

phenomenon that is mundane. Through a complex historical process, sometimes

involving extensive conflict, a particular language or set of linguistic practices has

emerged as the dominant and legitimate language, while other languages or dialects have

been eliminated or subordinated to it. Bourdieu strongly opposes Chomsky's competence

and performance theory, generative capacities of competent speakers correlate to their linguistic performance; this theory is based on the premise that language is constructed as an autonomous and homogeneous object, argues Bourdieu (p. 7).

Bourdieu (1991) developed a theory of *habitus*, which is a set of dispositions that incline agents to act and react in certain ways. According to Bourdieu, dispositions generate practices, perceptions, and attitudes which are "regular" without being consciously coordinated or governed by any "rule"; the dispositions that institute the habitus are inculcated, structured, durable, generative, and transposable. Bourdieu uses different kinds of "capital" to analyze social context as a structured space of positions – economic capital, cultural capital, symbolic capital, and linguistic capital.

Economic capital is, according to Bourdieu, material wealth such as money or stock shares. Cultural capital is knowledge, skills, and other cultural acquisitions such as education and technical qualifications. For example, a doctoral course of studies creates a type of cultural *capital*, a Ph.D/Ed.D culture, or a doctoral learning culture, in the classroom. Symbolic capital, according to Bourdieu, is the accumulating of prestige or honor for a member of a particular culture or class; in other words, it is something a person is born with. For example, middle-class children are by birth imbued with middle-class capital. Lastly, linguistic capital is the capacity to produce expressions that are valued in a particular social context or "market" in Bourdieu's term. The distribution of linguistic capital is related in specific ways to the distribution of other forms of capital such as economic capital, cultural capital, or symbolic capital, which define the location of an individual within the social space, according to Bourdieu. Therefore, the differences in accent, grammar, and vocabulary are determinants of the relation between power

identity and are indices of social positions of speakers and "quantities" of linguistic

capital. In other words, the more linguistic capital speakers possess, the more they are

able to exploit the system of differences to their advantage to secure a profit of distinction.

Strauss and Cross

The theory of identity enactments by Strauss and Cross (2005) is important because it

might cross over to L2 learners in naturalistic contexts as well. While Bourdieu (1991)

focuses on the relationship between identity and symbolic power and the importance of

language in constructing the relationship between the individual and the social contexts,

Strauss and Cross (2005) have worked on identity enactments through a study by Tatum

(1987) of Black women in the U.S. who participated in a 2-week daily diary. The study

investigated racial socialization, identity orientation, and everyday identity transactions.

In the study, Tatum (1987) defined racial socialization in her research on Black families

in this way:

> black parents differ in the importance they accord race and black culture in the
> socialization of their children, with some assigning little significance, others
> taking a moderate stance, and still others injecting race messages into a broad
> range of socialization activities. (Quoted in Strauss & Cross, 2005, p. 67)

In other words, in racial socialization each Black parent's mentality is an affective

factor that constructs racial identity on their children. Racial socialization, as Stevenson,

Reed, and Bodison (1996, 1997) argue, is driven by two concerns: protective

socialization and proactive socialization (as cited by Strauss & Cross, 2005, p. 67).

According to Stevenson et al., protective socialization involves practices, messages, and

enactments that heighten awareness to societal oppression, whereas proactive

socialization includes conversations, activities, and messages promoting an appreciation

of black culture at the affective (pride), intellectual (historical awareness), and behavioral

(attendance and participation in black cultural events) levels. Black parents use these two types of concerns to fashion their children's self-concept, which is capable of carrying out, sustaining, and refining three types of identity transactions": (a) protection against racism; (b) pride, connectivity with black people, and immersion in black culture; (c) and success within mainstream culture (as cited by Strauss & Cross, 2005).

In a study of Black identity, Jack (1996) and Senghor (1988) developed Nigrescence theory on African American identity development, which highlights Black identity attitude found in everyday black life. Jack and Senghor use the labels "preencounter," "immersion-emersion," and "internalization" to assess the degree of racial salience – race and Black culture are regarded as either positive or negative, the degree of racial zeal or militancy, and the level of identity achievement (as cited by Strauss & Cross, 2005).

Drawing on activity theory, Strauss and Cross (2005) report that :

> A parent, teacher, or mentor assists the learner (child, adolescent, or doctoral student) through practice, imitation, replication, and "doing." Culture is conceived as an intrinsic component of the core learning activities . . . she or he is taking part in the passing forward and transformation of history and culture.   (p. 70)

In arguing through activity theory, Cross, Smith, and Payne (2002) take the position that Nigrescence theory conceives of black identity "as the passing down from one generation to the next of the learned experiences and identity activities that facilitate black adjustment and humanity under conditions often framed by race, racism, and the proactive dimensions of black culture" (Strauss & Cross, 2005, p. 70). Strauss and Cross further argue that a black person's identity does not change from situation to situation; instead integrated black identity involves a variety of enactments: (a) buffering—stigma management, (b) code switching—mainstream management, (c) bridging—intimacy with

selected whites, (d) bonding—positive connectivity with black people and immersion in the black experience, and (e) individualism—experiences with the personal self (p. 70).

Strauss and Cross (2005) define buffering as strategies engaged to protect oneself from an actual occurrence of prejudice or to respond to the possibility of encountering prejudice. A prime example is that a Black student feels singled out by the campus police in the aftermath of a campus incident that actually involved many people. As a result, the student might withdraw from all interactions with campus police or even more extreme, may develop an anti-campus police attitude.

Code switching reflects bicultural competence that allows the black person to operate effectively, smoothly, and competitively within the mainstream culture and to shift back and forth between black cultural and mainstream circumstances. The individual who wants to achieve a desire outcome in the mainstream contexts employs this approach (Strauss & Cross, 2005). Such examples are a job interview and an interaction with a white faculty member—the change of a black student's speech pattern to a more dominant group's – white.

According to Strauss and Cross (2005), *bridging* is the identity activity that makes possible a black person's intimate and deeply felt friendship with a person from another group, including whites. Specifically, Strauss and Cross define bridging as feeling comfortable with one's racial identity, being able to interact in a reciprocal manner with other people having different racial identities, and being open about the differences.

Lastly, *boding* is psychological transaction that black people employ to sustain, enrich, and protect their sense of connection to black people, the black community, and the larger black experience, and is defined as feeling a sense of comfort and security

(Strauss & Cross, 2005, p. 71). A prime example is being around members of the same race and a desire to support one another and share in the joy of a shared culture.

From the data analysis of the 2-week daily-diary study, Strauss and Cross (2005) argue that the most frequently reported transaction is "acting as an individual," and the average participant experiences the "nonracial" aspects of her or his self-concept and sense of individuality. The data analysis further points out that

> When whites were involved, the emotions felt were either very positive or at least neutral. Conversely, when the feelings felt toward whites were ambivalent or hateful, acting as an individual was not used by the participants to define the nature of the transaction. (p. 90)

Additionally, the data show that any one type of transaction employed by the participants developed a separate identity; it is more common that two or three transactions are used simultaneously within the same contexts, depending upon the number of people and the participant's relationship with them in the contexts (Strauss & Cross, 2005).

Application of Thought and Language to SLA

In considering the application of the previous work to L2 concerns, in this section, I first listed additional studies that were relevant to inner voice – scholars use the terms L2 inner speech and L2 inner voice in an unclear fashion; thus, I redefined them *in parentheses* in the way they are defined within my dissertation study. Second, I defined L2 private speech, L2 inner speech and L2 inner voice.

Relevant Studies on L2 Inner Voice

A study conducted by Larsen, Schrauf, Fromholt, and Rubin (2002) examined a possible correlation between the inner voice, inner speech, and bilingual autobiographical

memory. Data were collected from two groups of Poles who had immigrated to Denmark about 30 years earlier. Larsen, et al. hypothesized that bilinguals may mentally retrieve a memory in one language and narrate the memory in another language. The data analysis showed that the older Polish immigrants who had immigrated in mid-life to Denmark seemed to retrieve memories internally in specific languages: Polish for events that occurred before immigration to Denmark, and Danish for events that occurred after immigration. Thus, it is argued that the relationship between the L2 (Danish) inner voice, the inner speech (in the L1: Polish) and bilingual autobiographical memory may correlate to language attrition. Specifically, the longer immigrants are exposed to an L2, the greater the effect on their L1 in that their L1 may be taken over, or substituted for, by their L2. A prime example would be that of young bilinguals who immigrated to a foreign country when they were younger and assimilated the use of their L2 to the extent that their L1 is rarely spoken, whereas their older counterparts rely heavily on their L1.

Additionally, other variables may affect the relationship between mental action and autobiographical memory. For example, as Pavlenko (2005) argued, language learning is correlated to learners' emotional experiences in the target language or their L1 country – will be listed in what is to follow; hence, the immigrant's emotional experience(s) either in their L1 country or that of an L2 may greatly affect their biographical memory.

Steels (2003) examined the phenomenon of a steady steam of L2 inner speech fragments, which occurs after the subject immediately stops speaking aloud. The study focuses on the functional specialization of certain parts of the brain, specifically, the left inferior frontal regions used both for listening to others' speech and for listening to one's own inner speech. To simulate the learning processes in the brain, Steels used two

robotic heads to play language games, requiring the invention of verbal communication.

Steels, from the data analysis, concluded that the L2 inner speech is closely linked to

invention and language learning, as well as to one's sense of self; that inner speech

contributes to self-awareness. As people self-monitor and self-correct their own speech,

the inner voice (*speech*) seldom produces well-formed sentences, but rather fragments of

speech.

In contrast, DiCamilla and Anton (2004) investigated the role of private speech –

egocentric speech—in L2 acquisition, and examined the occurrences of private speech in

the interactions of English-speaking students of Spanish who worked in pairs to produce

a composition in Spanish. Data were collected from a group of 14 university-level

students of Spanish enrolled in first-year (beginning), third-year (intermediate), and

fourth-year (advanced) classes. An analysis of the data showed that the occurrence of

speech marked by low volume, whispering, mumbling, ellipsis, and odd or vague

pronunciation was evidence of the participants' "externalization" of their language for

thought in the form of private speech. The participants' "internalization" of their private

speech resulted in inner speech (in Spanish, their L1).

The result of the study of Larsen et al. (2002) showed a correlation among inner voice

(*not relevant*), inner speech and bilingual autobiographical memory of the immigrants,

and thus, variables such as L1 attrition and emotional difficulties experienced by

bilinguals may further affect such a relationship (see Cook, 2003).

It is well-accepted that the L1 affects a L2 (e.g., the foreign accents we hear in an

L2). Cook (2003), however, argues that the L2 influences the L1 as much as the L1

influences the L2, and he is perhaps the first scholar who is devoted only to the effects of

the L2 on the L1. Few people seem to notice "reverse" or "backward" transfer. This can

be evidenced that an interlocutor brings more and more L2 words into his or her L1,

equaling L1 disappearance and attrition.

Cook (1991, cited in 2003) introduced "multicompetence" to mean knowledge of two

or more languages in one mind. According to Cook, since the first language and the other

language or languages are in the same mind, they must form a language super-system at

some level rather than being completely isolated systems. As a result, Cook offers four

models: separation model, integration model, interconnection model, and integration

continuum model (see the figures in Cook, 2003, p. 7-9). Cook explains the first

model—a separation model—in the following way:

> The separation model forms the basis for much language teaching
> methodology that teaches without reference to the first language and
> discourages its use in the classroom, hoping that the students will build up a
> new language system with no links to the first. (p. 7)

The second model—an integration model—is one in which

> the languages form a single system in this model. In the area of vocabulary
> some people have claimed that, rather than two separate mental lexicons, the
> L2 user has a single lexicon where words from one language are stored
> alongside words from the other (Caramazza & Brones, 1980). In terms of
> phonology some have found that L2 users have a single merged system for
> producing speech, neither L1 nor L2 (Williams, 1977). Integration does not
> say that L2 users are unable to control what they do; they can still choose
> which language to use in a given context. (p. 7)

In the end, Cook (2003) concludes that neither of these two models can be absolutely

true; total separation is impossible since both languages are in the same mind; total

integration is also impossible because L2 users can keep the languages apart.

Cook (2003) further explains the third model—interconnection model—as a linked

languages model with partial integration. The linked languages model indicates

influence between two essentially separate language systems in the same mind, i.e. it is a variant of the separation model in which the two separate language components interact with each other. This is perhaps the typical model assumed in much L2 acquisition research; development and use of the L2 is affected by the already-existing L1. (p. 8)

In contrast, the partial integration model is

a partial overlapping of the two language systems in the same mind; it is a limited version of the integration model. Inevitably this is bi-directional in a particular area since, like the integration model, it does not distinguish between languages in the areas of overlap but shows how the single conjoined system differs from monolingual versions of either aspects of language knowledge. (p. 8)

The last model—the integration continuum model is explained by Cook (2003) as

displaying

the integration continuum as a whole, and continuum does not necessary imply a direction of movement. It may be that some people start with separation and move towards integration or vice versa, or the languages might stay permanently separate . . . The integration continuum does not necessarily apply to the whole language system (Cook, 2002a); a person's lexicon might be integrated, but the phonology separate. Nor doe sit necessarily affect all individuals in the same way; some may be more integrated, some not. (p. 9)

In both the interconnection models and the integration continuum model, the

integrated area may be greatly affected by the length of exposure to a L2, influencing the

L2 inner voice in the autobiographical memory of the immigrant, and as a result of the L1

attrition, that too may affect metal action—the L2 inner voice.

L2 Private Speech

L2 private speech, in another term: egocentric speech—as Vygotsky (1934/1986)

borrowing from Piaget calls it—is inner speech in its functions, is overt in form and at the

mid-point to the development of internalized, covert speech in L2.

L2 Inner Speech

Previous scholars (see de Guerrero, 2004, 2005; Tomlinson, 2001; Centeno-Cortes and Jimenez, 2004) have used the terms—inner speech and inner voice—interchangeably in an unclear fashion. Within the contexts of this dissertation study, however, I distinguish L2 inner voice from L2 inner speech.

As cited the Vygotskyan theoretical framework on inner speech earlier, inner speech is a cognitive, mental tool that helps in overcoming difficulties. Therefore, L2 inner speech functions the same way in the process of the target language learning (e.g., pronunciation, grammar, etc.).

L2 Inner Voice

L2 inner voice is a hybrid voice with L2 inner speech to gain *knowledge* of the target language as a *cultural* system in relation to the contexts of the target language *activity*. In other words, L2 inner voice and L2 inner speech are inseparable to better acquire the target language – cognitively and pragmatically.

However, as argued above, inner speech has also been defined differently among L2 scholars. For example, inner speech, according to Klein (1982, as cited by Tomlinson, 2001), represents speech sounds in the mind, and it uses a variety of the same language (Tomlinson, 2001, p. 26). Tomlinson further argues that inner speech uses a special kind of linguistic code to interact with sensory images and with affect in order to achieve a multidimensional self-communication code (p. 26). In other words, inner speech is a fragmented, incomplete sentence aimed at communication for oneself. According to Tomlinson (2001), it relies to a great extent on such nonverbal features as intonation and stress and its pronunciation is similar to that of intimate, colloquial conversation (p. 26).

The data analysis of de Guerrero (2004)—which will come in what to follow—also supports Tomlinson's conclusions on L2 inner speech. Additionally, de Guerrero's data show that "inner speech" engaged in consciously by lower-proficiency ELLs was made up of fragmented or uncompleted utterances, whereas higher level peers consciously engaged in more words. Moreover, according to de Guerrero (2004, 2005), there is evidence that with the acquisition of a L2, inner speech can change—she too uses inner voice and inner speech interchangeably in her studies; however, as my study exposes the different functions between the two, I employ inner *speech* for her study results. Thus, in L2 acquisition, mental development can occur in the form of inner speech within the learners. Additionally, these studies further indicate that English language learners (ELLs) may consciously use L2 inner speech in the target language learning contexts (de Guerrero, 2004, 2005).

In her 2004 study, de Guerrero pointed out the idea that mental development occurs in the form of inner speech in L2 learning contexts. The study used diary and stimulated recall techniques in the elucidation of the L2 inner speech phenomenon to investigate the early stages of the L2 inner speech development. The data were collected from 16 Spanish-speaking, beginning ESL college students taking a pre-basic ESL course at a major university in Puerto Rico. Over a period of 4 months, the participants kept diaries on the inner speech they had experienced in their English (L2) during classes and outside of the classrooms. De Guerrero employed stimulated recall technique for clarification and expansion of the diary entries. An analysis of the study data delineated four main types of the L2 inner speech reported by the participants, from the most frequent to the least frequent, as follows: (a) concurrent processing of language being heard or read; (b) recall

of language heard, read, or used previously; (3) preparation before writing or speaking; and (4) silent verbalization of thoughts for private purposes. Thus, de Guerrero concluded that the early stages of L2's inner speech can be characterized as deliberate and spontaneous attempts to internalize external social L2 speech, and that L2 inner speech activity is necessary for the further development of L2 inner speech as a tool for thought.

She concluded that lower proficiency levels of the ELLs—novice-level learners—rely on L2 inner speech mental activity to retrieve the pronunciation of particular words, remember speech sounds, align the language read and the language heard, and to prepare mentally for writing and/or speaking in the target language. These study results indicate, in Vygotskyan terms, higher mental skills, that is the Vygotskyan definition of inner speech – problem-solving. The use of L2 inner speech to prepare for speaking the target language, however, can be a function of L2 inner voice as well. More specifically, the participants in the study may have *unconsciously* used their inner voice in the target language to prepare for writing *pragmatically* (i.e., in a genre-appropriate way).

De Guerrero (2005) conducted another study on L2 inner speech that focused on the significance of the L2 inner speech and the proficiency levels of the ELLs to examine the function of the phenomenon. Data were collected from a group of 472 Spanish-speaking ESL students at a large, private university in Puerto Rico, who were selected on the basis of their scores on the English as a Second Language Achievement Test (ESLAT), which is required for admission to the university. De Guerrero, from the analysis of the data, concluded that as the level of proficiency increased, L2 inner speech became more replete, being more words, phrases, sentences, and dialogues. At lower-levels of

proficiency, the role of L2 inner speech involved correcting pronunciation of words and grammatical errors and rehearsing answers to questions. De Guerrero, thus, argued that the inner speech is a mental process of transforming thoughts into words, or vice versa, and involved far more than just talking to oneself. Here, Shpet's claim, "there exist words behind thought and thought behind words" (as quoted in Zinchenko, 2007, p. 215) is applicable. Additionally, de Guerrero argued that L2 inner speech activity is necessary for further development of target language learning and competency.

Again, these findings point to the definition of inner *speech*—mental orientation which helps in overcoming difficulties (Vygotsky, 1934/1986).

Data analysis from other studies support de Guerrero's (2005) conclusion that L2 inner speech activity is necessary to further L2 proficiency. For example, Tomlinson (2001), who also uses the terms inner voice and inner speech interchangeably—although owing to the definition of inner voice herein, I employ the term, inner speech, for his study as well—also examined the role of inner speech in L2 learning contexts. The data were collected from both native-speakers of English and ELLs, and his data analysis showed that the participants' mental images reflected their inner speech, and that the use of such speech was crucial in L2 learning. The native-speakers used their inner speech less than did higher proficiency level ELLs. Therefore, Tomlinson concluded that their inner speech was different from their public voice, and that lower-proficiency level learners experienced their inner speech more frequently in order to guide them in language tasks than did their more competent counterparts, who, in contrast, let their inner speech act as a guide to produce a "public" voice. This study's findings too

indicate cognition, which are higher mental skills that help in problem solving (Vygotsky, 1934/1986).

The de Guerrero (2004, 2005) and Tomlinson (2001) studies showed that L2 inner speech is a necessary tool for learners, not native-speakers of the target language; the lower the L2 proficiency level of the learners, the more they retrieved the particular pronunciation of words, speech sound, mental preparation for writing or speaking, as opposed to their higher proficient counterparts who used their inner speech as a guide to them to produce utterances and whose inner speech were made up of more words.

Another study, conducted by Centeno-Cortes and Jimenez (2004), who also use both terms in an unclear manner and examined the use of "private verbal thinking" during problem-solving activities in a L2. Centeno-Cortes and Jimenez labeled the combined terms—private speech and thinking aloud—as "private verbal thinking." As argued by Vygotsky (1934/1986), private speech or egocentric speech is intended for oneself, and in acquiring language, children use private speech to overcome cognitive difficulties they encounter (e.g., when playing a game or completing a puzzle). Private speech (Lantolf, 1997; McCafferty, 1992) represents thinking aloud and helps clarify thought. Richards and Schmidt (2002) too argue that L2 learners may also use private speech (e.g. whispering to themselves) to help them overcome difficulties they encounter when trying to communicate in L2 or to use the target language to complete a classroom task. Private speech can thus serve an important strategic function serving to mediate or redirect a learner's own activity. Additionally "thinking aloud" is another interpretation of private speech (Centeno-Cortes & Jimenez, 2004). Thus, to characterize the externalization of the process of reasoning during a problem-solving activity and to offer less-confused

term, Centeno-Cortes and Jimenez (2004) labeled this speech as "private verbal thinking" (PVT).

Centeno-Cortes and Jimenez (2004) collected data from a group of 18 volunteer L2 learners and instructors at a major research university in the U.S., and an analysis of the data showed that fragmented, or unfinished, utterances were experienced among the learner participants; it could be considered breakdowns in the activity of thinking when the focus of reasoning was changed. In addition, a long silence followed the unfinished utterances, marking a transition from private, verbal thinking to an inner, non-vocalized speech. Thus, inner speech is the use of language to retrieve speech sounds, to repeat what the learner has heard or read, and to prepare for writing or speaking in the mind. Inner *voice* is, however, the use of the L2 which, from the Shpet's (1996) argument modified to that of Whorf's (1956), mediates people into the target language culture, which at times also offers ready-made classifications of experience that may, of course, differ from the L1 and its culture. Hence, L2 inner voice too is a necessary tool to further develop a higher proficiency level for the target language learners.

Differences between the Two Definitions

As already indicated, Tomlinson (2001) argues that [inner speech] has been given many names by researchers and is commonly referred to as "inner speech" (e.g., Sokolove, 1972, as cited by Tomlinson, p. 26) or as silent speech (e.g., Edfelt, 1960, as cited by Tomlinson, p. 26). Because inner voice is the focus of this study, I will start with inner voice first, followed by the definition of inner speech from a Vygotskyan theoretical framework.

Inner voice, as argued by Shpet (1996, as cited by Wertsch, 2005), together with Sapir-Whorf's linguistic relativity (cited in Wertsch, 1987) in the preceding section, is the use of language connected with the target language culture as a way of mediating a L2 learner to be able to participate in a different languaculture.

In contrast, inner speech, according to Vygotsky (1934/1968), is speech for oneself with its own laws and with complex relations to the other forms of speech activity. The function of inner speech is similar to that of egocentric speech:

> a phenomenon of the transition from inter-psychic to intra-psychic functioning, i.e., from social, collective activity of the child to his more individualized activity – a pattern of development common to all the higher psychological functions. Speech for oneself originates through differentiation from speech for others. (p. 228)

Inner or egocentric speech serves a mental orientation, a conscious understanding; it helps in overcoming difficulties; it is speech for oneself, intimately and usefully connected with the process of thinking. Additionally, the structural peculiarity of inner speech and its differentiation from external speech increases with age. For example, in a 3-year-old child, the difference between egocentric speech and external, socialized speech equals zero; at seven, structure and functions of inner speech are unlike that of external speech. Inner speech cannot find expression in external speech; it is disconnected and incomplete (e.g., specific form of abbreviation, omitting the subject of a sentence and all words connected to with it—the basic form of inner speech syntax). Hence, inner speech is similar to what Piaget originally called egocentric speech in the function, but internalized it becomes a thinking tool with the use of language for self-regulation purposes (e.g., a child's problem solving).

Development of L2 Inner Voice

Inner voice is the knowledge of and use of a L2 as a cultural system in relation to the

L2 activity. What is most significant here is the "conscious" mental effort to use the

target language by learners. Tomlinson (2003) argues that unfortunately the L2 classroom

learner has little exposure to the concept of L2 inner speech—as well as its inner voice—

and is taught from the very beginning to produce outer speech—externalized, social

speech—utterances. In other words, L2 curricula are not designed to help learners

effectively develop their inner speech and inner voice in target language classrooms. The

learner's mental efforts represent Zones of Proximal Development (ZPD)[1]. For example,

in the classroom, the learner, with guidance and help from the teacher, would be able to

solve or engage in a more cognitively demanding task, and as a result the learner uses as

his or her newly acquired techniques for similar tasks in the future. In other words, the

learner engages in mental dialogue to retrieve the teacher's instruction, pronunciation,

speech sounds, and grammatical explanations to solve a problem on his or her own –

more like the function of inner speech, which is used to gain self-regulation (Vygotsky,

1934/1986). Furthermore, the internal stimulus—the learner's conscious mental play

back—develops the inner voice in the target language. Additionally, Alvarez (2007)

argues that "the construction of internal mental operations requires the prior construction

of external mental actions to be accessible to the learner, and that this is precisely the

viable mechanism of the ZPD" (p. 301).

Inner speech, according to Vygotsky (1934/1986), develops from inter-psychic to

intra-psychic, through a slow accumulation of functional and structural changes, branches

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[1] In sociocultural theory, the distance between what a learner can do by himself or herself and what he or she can do with guidance from a teacher or a more capable peer. The theory assumes that learners use the techniques used during collaborative efforts when encountering similar problems in the future.

off from the child's external or socialized speech simultaneously with the differentiation of the social and the egocentric functions of speech. Finally, the speech structures mastered by the child become the basic structures of his thinking. Additionally, Vygotsky points to the significance of language and the sociocultural experience of a child that plays a crucial role in the development of thought—the development of inner speech.

L2 Language and Culture

Agar's (2002) claim is that languaculture (above) can too be applied to L2 learners. In other words, it is impossible to learn the target language without its culture. Furthermore, I argue that it is closely tied to the mental action—inner voice in a L2, the phenomenon under study. As Wertsch (2005) argues, mediation is necessarily and automatically built into mental and communicative functioning as a result of using language, I make the argument that mental development—inner voice, language and culture—are tied closely to one another and constitute an "implicit" form of mediation.

Significantly, Agar (2002) claims that "culture happens when you learn to use a second language" as well as "inside your own language" (p. 20). Therefore, "you can't use a new language unless you change the consciousness that is tied to the old one, unless you stretch beyond the circle of grammar and dictionary, out of the old world into a new one" (p. 22). In other words, given that languages are interconnected with the culture in an inseparable fashion, to use and comprehend a L2 effectively, one must change his or her mentality or put him or herself into a native-speaker's shoes of the target language (pragmatically).

L2 Identity

There is a belief that researchers should avoid recruiting bilingual and multilingual subjects because their perceptions, intuitions, and performances are considered as "impure" knowledge and thus skew the results, according to Pavlenko (2005). There are, he argues, various problems and challenges in cross-linguistic research on language and emotions. There is, however, evidence that this form of identity construction is receiving some attention in the mainstream L2 acquisition literature. In arguing Vygotsky's (1934/1986) definitions of inner speech (i.e., as being internalized and directed to oneself, having its own structure, constituting fragmented words representing many meanings and feelings, and not being translatable to external (social) speech), I take the position that this definition offers a foundation for investigating the correlation between L2 inner voice and creating different identities among bilinguals.

In arguing that L2 learning in naturalistic contexts involves more than grammar and dictionary use, I take the position that a L2 and the target culture are tied in an interconnected way as a result of the mastery of effective use of a L2, and as a consequence, the L2 learner's identity possibly changes, and in a complicated manner. Such multiple-identities (in this study, I mainly focus on bilingual individuals) cannot be understood without a clear picture of the complicated relationship between mental development and L2 languaculture. In this section I will, in order to define L2 identity, examine the theories of Norton (2000) and Pavlenko (2005).

According to Norton (2000), many L2 acquisition theorists have not addressed the experiences of language learners with reference to inequitable relations of power between language learner and target language speakers; such theorists instead focus on group differences to determine human agency, that is, the social distance and degrees of

acculturation that they believe play a crucial role in language learning. However, the

conceptualization of identity differs among scholars from different disciplines and

research traditions as well as the different emphases of their research projects. In contrast,

Norton takes the position that "The 'good language learner' is one who seeks out

opportunities to learn the language, is highly motivated, has good attention to detail, can

tolerate ambiguity, and has low levels of anxiety" (p. 3).

Furthermore, to indicate L2 theorists' general failure in conceptualizing the identity

of language learners, I cite Norton's (2002) fictional story:

> As Saliha takes the envelop, she says, 'Merci beaucoup, Madame Rivest.'
> Stepping out the door, she switches the plastic bag containing her work
> clothes form her right hand to her left hand and extends her right hand to
> Madame Rivest and says, 'Bonjour, Madame Rivest' and smiles. These are
> the first real words she has uttered since she woke up that Morning. (Ternar,
> 1990, p. 327-8, as quoted in Norton, p. 1)

From Saliha's story, L2 acquisition theorists may examine her low motivation in

learning a L2 (in this case, French) because of her very limited L2 proficiency. However,

Norton (2002) argues that identity construction is more than a language learner's

motivation or language anxiety; it is the defining of identity, which is more complex and

dynamic.

Moreover, the fictional story continues:

> In the elevator, going down, Saliha is alone. She checks the contents of the
> envelops and smiles with satisfaction. Before the elevator reaches the ground
> floor, Saliha has time to reflect on her day. She has earned enough for the
> week's food and cigarettes. Last week, she paid the last installment for her
> tuition at Plato College. She is tired but life is under control. Her only regret is
> that she hasn't answered Madame Rivest in longer sentences. But she chases
> away her regrets with a light shrug and admits the reality. We come here to
> speak like them, she thinks; but it will be a long time before they let us
> practice. (Ternar, 1990, p. 327-8, as quoted in Norton, p. 1)

Saliha has little opportunity to practice French, because of the nature of the work she does and the way power is structured in her workplace (Norton, 2000). According to Norton, in this story, resemblance to the "immersed" francophone community in Quebec, Canada, Madame Rivest has the power to influence when, how much, and about what she can speak; this context reflects the relationship between identity and language learning, between the individual language learner and the larger social world. Norton uses a fictional story to illustrate notions of power, identity, and investment (which are examined in this study) and conceptions of ethnicity, gender, and class.

As illustrated in the above story, a language learner's motivation or position in the target language community is complex and cannot be understood without reference to the notion of power and the identity of language learners in the social world. Norton (2002) claims that without understanding the identity construction, the reason why language learners may sometimes be motivated, extroverted, and confident, and sometimes unmotivated, introverted, and anxious, cannot be theorized in an adequate manner. Krashen (1981) and Ellis (1985), as well as other L2 theorists, recognize that language learners do not live in idealized, homogeneous communities, but rather in complex, heterogeneous ones, and such heterogeneity has not generally been framed critically (as cited in Norton). Hence, Norton argues, "Identity construction must be understood with reference to relations of power between language learners and target language speakers" (p. 6).

Norton (2002) classifies two types of language learning: natural language learning and formal language learning. According to Norton, *natural language learning*—or naturalistic learning contexts—is the natural or informal environment of the target

language community, where the language is being used for communication, where the learner is surrounded by fluent speakers of the target language, where the context is the outside world, open and stimulating, where the language used is free and normal, and where the attention on the meaning of the communication. In contrast, in *formal learning contexts*, language is used only to teach, where only the teacher (if anyone) is fluent, where the context is closed, where language is carefully controlled simplified, and where attention is on meaningless drill. Thus, the term *identity*, according to Norton's argument, is defined as one's understanding his or her relationship to the world, with that relationship constructed across time and space, and one's understanding of possibility for the future (p. 5).

In the relationship between power and identity, as illustrated in the above fictional story, Madame Rivest has the power to influence when Saliha can speak, how much she can speak, and what she can speak about, and as such their relationship can be easily determined. However, in other contexts, this is not always the case. Even Saliha is "permitted" to utter freely to Madame Rivest because linguistic exchange can express relations of power in many ways. For example, the variations in accent, intonation, and vocabulary reflect different positions in the social hierarchy.

Pavlenko

Pavlenko (2005) investigated how languages are used to represent emotional experiences, or how emotions affect language choice or use in bilinguals. An analysis of Pavlenko's studies on language and emotions shows the interrelationship between the mental development in L2 acquisition and the emergence of a different identity (L2 self) in the target language. For example, Pavlenko (1998) investigated a direct correlation

between L2 discourse and identity. Pavlenko used the autobiographic narratives written by various bilingual fiction writers to identify and examine the stages of L2 learning, as well as to assess the writers' current levels in terms of their L2 competency. She concluded that L2 learning is a "departure from oneself," and that the higher the L2 proficiency level, the greater the distance between the L2 self and the native (L1) self. Pavlenko believes that this departure from the native self leads to split national loyalties and feelings of not belonging to either country. Pavlenko's conclusion indicates the negative aspects of the mastery of an L2. These negative aspects are inseparable from developing two identities over the course of the target language acquisition. The degree of different L2 selfness can also be a criterion for one's L2 proficiency. Pavlenko maintains that this departure from the native self occurs in both bilingual and multilingual persons.

Using her theoretical framework on the L2 different self, Pavlenko (2005) also examined the emotional difficulties experienced by bilinguals, as well as the emotional representations used by bilingual and multilingual speakers. Examining her personal experience as a Russian immigrant to the U.S., Pavlenko believed that embracing freedom meant to abandoning Russia. Pavlenko hypothesized the interrelationship between the L2 different self and emotional feelings in the target language and asserted that English (one of her L2s) is a language that offered her freedom, through which she could freely express herself. Each language, Russian as her L1 and English as her L2, ties her differently with bonds that she cannot shake loose. Pavlenko uses both English and Russian on a daily basis, and she has no choice but to use both languages when expressing her emotions. Her choice between speaking English to her English-speaking

partner and Russian to her Russian-speaking grandmother are determined not only by her

interlocutors' language proficiency, but by her bilingual emotions. In other words,

Pavlenko expresses her feelings in either language, depending upon the emotional

nuances that she wishes to communicate to her listener, thus, illustrating her "positively"

affected identity created in the L2.

This is not the case for every bilingual speaker. Pavlenko (2005) views her L1 as the

language of emotions, and her L2 as the language of distance and detachment (p. 30). For

those who have been traumatized emotionally through their L1 culture, or in their native

country, the L2 becomes a language of escape and freedom. In contrast, a study

conducted by Heinz (2001, as cited in Pavlenko, 2006) shows the importance of the L2

proficiency that affects the L2 learner's emotions: those with lower proficiency in the L2

felt freer and more comfortable in the L1, whereas those whose L1 was undergoing

attrition favored the L2, felt able to express themselves freely in that language, and felt

liberated from the taboos and constraints of the L1. A L2 that provides these positive

aspects, especially emotionally, can help the learner emerge more easily into a different

L2 one.

This positive aspect of the L2 role in a different self is well-explained in Vygotsky's

(1934/1986) argument that thought has its own word structure, yet it cannot be translated

into external (socialized) speech. Therefore, regardless of one's L2 language proficiency

level, one can be "saturated" mentally in their L2. In other words, in arguing the

Vygotsky's definition—the inner speech is directed only to oneself, I take the position

that the more one "communicates" with oneself internally and tacitly in their L2, the

more one's thinking and emotions are dominated by their target language, thereby creating either a positively or negatively affected identity in the L2.

Based on Pavlenko's (1998, 2005) and Vygotsky's (1934/1986) theoretical frameworks, it appears that L2 competence and identity are interwoven with one another. More specifically, the more L2 proficiency increases, the more the L2 dominates the L1 in an individual's mental processes. As illustrated above, Cook's (2003, p. 2) multicompetence models also help to demonstrate this phenomenon. According to Cook, multicompetence means "knowledge of two or more languages in one mind" and is evidenced in the bilingual's ability to readily code switch between the L1 and the L2. In other words, one mind is integrated with two languages and dominated by one or the other, and the degree of this domination is determined by the L2 competency. Hence, the domination of a L2 (in this study the focus is on bilingualism) plays a crucial role in affecting one's identity.

In the following chapter, the methodology used in the study is explained.

CHAPTER 3

METHODOLOGY

The primary purpose of this study is to describe the development and the role of the L2 inner voice and to investigate how a different identity as perceived by bilinguals when speaking and learning the target language may have developed with the inner voice. The meaning and realization of participants' lived experiences of the phenomena were also examined. This research topic was best presented from the cultural aspects of human psychology that "originate in, are formed by, reflect, perpetuate, and modify social processes and factors outside the individual mind" (Ratner, 2002, p. v), activity theory that is, "a unified account of Vygotsky's original proposals on the nature and development of human behavior" (Lantolf, 2000, p. 8) and ethnography that "describes and interprets the shared and learned patterns of values, behavior, beliefs, and language of a culture-sharing group" (Harris, 1968, as cited by Cresswell, p. 68).

Several empirical studies of L2 inner speech have been conducted (i.e., de Guerrero, 2004, 2005; Tomlinson, 2001; Larsen, Fromholt and Rubin, 2002; Dicamilla and Anton, 2004; Centeno-Cortes and Jimenez, 2004); however, they do not present concrete evidence supporting the development and significant role of L2 inner voice in the target language learning process—de Guerrero and Tomlinson use the terms: inner speech and inner voice, interchangeably; thus, within my dissertation research I employed inner speech for their study results in order to distinguish between the two terms (see Chapter 2 for details of these studies). Additionally, other studies (i.e., Pavlenko, 1998, 2005, 2006) point to the construction of a different identity, as perceived by bilinguals when learning the L2. Hence, bilingual-speaking individuals were an extremely rich resource

for studying language and identity. By studying such phenomena –L2 inner voice and a sense of different identity – we can shed light on the interrelation of thought and language, which was clearly important in applied linguistics, especially in relation to people who live and work in a country not originally their own.

<center>Research Design</center>

The interrelationship of thought and language is one of the most complex problems to study in psycholinguistics, and this problem has not yet been investigated extensively. Such study, as Vygotsky (1934/1986) argued, requires a particularly clear understanding of interfunctional relations. Zinchenko (2007) also notes the complexity of the interrelationship and cautions against underestimating studying thought as thought is manifested in mysterious ways. Furthermore, mental development is an indispensable issue in L2 learning contexts and as Cohen (1994) argues, is not exempt from complex variables such as age, personality, cognitive style, and aptitude (p. 74-84).

Qualitative methods are used in this pioneering study to investigate the emergence of L2 inner voice and ties with a different identity as perceived by bilinguals. This study is pioneering because little is known about the interrelationships between L2 learning and identity with regard to the development of an inner voice. Qualitative methods were the best choice for this study because qualitative methods allow the researcher to listen to the views of the research participants, while focusing on the natural settings or context, such as the classroom, in which participants express their views. Denzin and Lincoln (2005) argue that

> qualitative research is a situated activity that locates the observer in the world.
> It consists of a set of interpretive, material practices that make the world

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visible. These practices transform the world. They turn the world into a series of representations, including field notes, interviews, conversations, photographs, recordings, and memos to the self. (as quoted in Creswell, 2007, p. 36)

Furthermore, Creswell (2007) argues that qualitative research begins with assumptions, a worldview, the possible use of a theoretical lens, and the study of research problems inquiring into the meaning individuals or groups that ascribe to a social or human problem. Thus, qualitative research was conducted to understand the contexts or settings in which participants in a study addressed a problem or issue. Additionally, according to Merriam (1998), qualitative research is an umbrella concept covering several forms of inquiry that help to understand and explain the meaning of social phenomena with as little disruption of the natural settings as possible. The key concern of a qualitative researcher is to understand the phenomenon of interest from the participants' perspectives, not the researcher's.

Research Methodology

The researcher conducted cultural psychology research from the perspective of activity theory and of ethnography, combined with online data collection. According to Ratner (2002),

> The political orientation of cultural psychology is to enhance psychological functioning through comprehending and improving the social fabric advances the scientific understanding of psychology as a cultural phenomenon. Social goals direct cultural psychology to devise special theories and methods that investigate cultural origins, formation, characteristics, and functions of psychology. (p. v).

Further,

> Culture is a system of enduring behavioral and thinking patterns that are created, adopted, and promulgated by a number of individuals jointly. (p. 9)

Moreover, Ratner (2002) points to the objectives of cultural psychology research:

1. Explore the manner in which activities, artifacts, and concepts penetrate psychological phenomena and constitute their cultural features (p. 105).
2. Compare the cultural origins, formation, characteristics, and functions of psychological phenomena in diverse societies . . . cultural psychology relate the characteristics of psychological phenomena to cultural activities, artifacts, and concepts (p. 106).
3. Investigate the psychology of individuals to ascertain the presence of various activities, artifacts, and concepts in the formation, function, and character of psychological phenomena (p. 107).
4. Predict trends in the qualities of psychological phenomena from trends in activities, artifacts, and concepts (p. 108).
5. Identify aspects of psychological phenomena that contradict normative activities and concepts. The origins of these psychological phenomena should be explained (p. 108).
6. Investigate the cultural formation of psychological phenomena (p. 108).

Secondly, activity theory, according to Lantolf (2000),

> . . . addresses the implications of his [Vygotsky's original] claim that human behavior results from the integration of socially and culturally constructed forms of mediation into human activity. (p. 8)

Further, Luria (1973, 1979) refers to activity theory as

> the system that results from the integration of artifacts into human activity, whether that activity be psychological or social, as a *functional system* . . . Mind . . . is a functional system formed when the brain's electro-chemical processes come under control of our cultural artifacts: foremost among these is language. (as cited in Lantolf, 2000, p. 8)

Vygotsky also argues "if psychology was to understand these functional systems it had to study their formation (i.e. their history) and activity and not their structure" (Lantolf, 2000, p. 8). Activity theory is explained in detail in what is to follow.

Lastly, ethnography is "new kind of science" (Agar, 2004, p. 17), and Agar links ethnography with this new type of science from his "non-linear dynamic lens" (p. 24). According to him, " For an ethnographer, what's interesting is the discovery of connections" (p. 16). In more detail,

[an ethnographer] notices a "variable" in a situation, maybe one that he/she had never thought about before, but then he/she wonders what other things it might be connected with, in that situation and outside of it. The goal [of ethnography] is to build patterns of many interacting things that *include* what was noticed. (p. 16)

Further, Agar (2004) characterizes

> . . . this "new kind of science" with the standard phrase "complex adaptive systems," abbreviated "CAS" for ease of writing . . . because it summarizes the basics, with one caveat. (p. 17)

> . . . In fact, if you take CAS seriously and want to do *social research*, ethnographic logic is where you have to go. A second way to explore the relationships . . . lies in the question of just what it is we produce at the end of a study . . . what [ethnography and CAS] are after are ways to describe systems that mix order and disorder, systems that move and change, sometimes in major ways that change the nature of what it means to be a participant. A third way . . . involves how the *research process* itself mirrors the epistemology and the representation. In other words, ethnographic research is, in and of itself, a complex adaptive system. (p. 18)

Moreover, Agar (2004) specifies ethnographic complexity when compared to

traditional social research:

> An ethnography will *always* be higher in algorithmic complexity . . . Traditional social research is *lower* on the algorithmic complexity scale compared with ethnography. (p. 18)

> . . . our ethnographer-to-be will also learn a meta-lesson. ("Anything you can do I can do meta," as a colleague is fond of saying). The meta-lesson says, learn as many algorithms as you can, but understand that you won't know which ones will apply, at what point in the study, in what kind of combination, until you're actually doing the study itself. (p. 18)

> [Ethnography] always develops, methodological speaking, in ways unforeseen at the beginning. (p. 19)

Theoretical Framework

Five major psychological and educational theories made up the framework for this

study, which takes a broad sociocultural perspective: (a) thought and word – inner speech

(Vygotsky, 1934/1986); (b) inner voice from Shpet's argument (as cited in Zinchenko,

2007; Wertsch, 2005); (c) Sapir-Whorf's linguistic relativity hypothesis (1939); (d)

language and culture by Agar (2002) and linguistic relativity by Sapir-Whorf (1939); and

(e) Identity by Norton (2000), Bourdieu (1991), Pavlenko (2005) and Cross (2005).

These five elements combined to help theorize the genesis of L2 inner voice and a

possible identity shift in naturalistic learning contexts. The design of this study was such

that the theoretical frameworks were intertwined and interdependent; at times one

framework was primary, and at other times, a different framework took the forefront.

This is suggestive of a montage, which has been defined by Denzin and Lincoln (2005) in

the following way:

> In montage, several different images are juxtaposed to or superimposed on
> one another to create a picture. In a sense, montage is like *pentimento*, in
> which something that has been painted out of a picture (as image the painter
> "repented" or denied) becomes visible again, creating something new. What
> is new is what had been obscured by a previous image. (p. 4)

Thought and Word - Inner Voice

Both Vygotsky (1934/1986) and Shpet (1996) investigated the interrelationship

between thought and language. However, both of them understood it differently.

Vygotsky focused on cultural "patterns" of social interaction which he argues plays a

crucial role in the development of thought and language—from inter-psychological

process to intra-psychological one, such that externalized/socialized speech aimed at

communication with others, egocentric speech, which is "voiced" but for oneself,

preceding inner speech. In other words, Vygotsky's primary concern was cognition—

higher mental functions, such as signs, language—semiotic mediation, and his focus was

not on inner voice but on inner speech (see Chapter 2 for his argument in detail). Shpet,

however, was primarily concerned with thought and language from the perspective of the

inner form of the word and as a result, focused on "how the inner form of the word and of

a language distinguish one group from another" (Wertsch, 2005, p. 60)—as stemming

from Humboldt's Romantic project of understanding cultural difference (Wertsch, 2005).

Therefore, the researcher believes that Shpet follows more of the concerns that were

central to this study—language and culture come together with the use of inner voice—

and the focus in this study was not thinking in language, but rather the focus was that

inner voice mediates one in the ways of the target language culture.

Since there is very little literature of Shpet's work available in the English language at

this time, the researcher employed Sapir-Whorf's linguistic relativity hypothesis to

strengthen Shpet's claims. I first begin with Shpet's argument and then move on to

Sapir-Whorf's claims.

According to Shpet, there is thought behind word, the word behind thought, the word

in thought, and not all words have meaning or thought; meaning is deeply rooted in

being, and thinking and being are the same (as cited in Zinchenko, 2007, p. 215). In

other words, there does not exist "a monster"—a dumb thought with no word, or

unembodied thought (Shpet, as cited in Zinchenko, 2007, p. 217). Additionally, Shpet

argues that a thought is a *cultural* act—the essence of which is in the sign giving; a

meaningful image as an object that possesses genuine concreteness in its quality of object

and transmits its concreteness to thought and word. Furthermore, language and word, as

Shpet argues, rule not only thinking but spirit—people's language and mind. A word is an archetype of *culture*—understanding the word and its meaning as a logical tool, logical form, or term (Zinchenko, 2007, p. 220), embodiment of reason, its origin, and its nurturing environment.

Sapir-Whorf's linguistic relativity hypothesis argues that the way in which we think about the world is influenced by the language we use to talk about it (Duranti, 2006). Sapir argued that "each language shapes the conceptual world of its speakers" (Wertsch, 1987, p. 72), and Whorf, after had joined Sapir, found that

> . . . in the intricate grammatical patterns of [Hopi language] ways of classifying and construing the world that were dramatically different from those English and other European languages." (Wertsch, 1987, p. 72)

Therefore, inner voice is the knowledge of language as a *cultural* system in relation to its classifications of the world, whereas inner speech is a mental function for problem-solving. More specifically, inner voice is a mixture of inner speech cognitive functions, and inner voice is the cultural system of language.

L2 Inner Voice

From the above definitions of inner voice—within the context of my dissertation study— L2 inner voice is a hybrid—a tool to gain knowledge of the L2 as a *cultural* system in relation to the context of L2 *activity*, and L2 inner speech—problem-solving (i.e., pronunciation and grammar; see de Guerrero (2004, 2005) and Tomlinson (2001) for detail).

Language and Culture

Culture, as Agar (2002) argues, happens when we learn to use a L2 in naturalistic contexts, emphasizing the inseparable interconnectedness between language and its

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culture. Culture is something people "have," but it's more than that, according to Agar. It is something that happens when a person encounters people; it is what happens when a person encounters differences, becomes aware of something in him or herself, and works to figure out why the differences appeared. Further, Agar (2002) argues that culture is awareness, a consciousness, one that reveals the hidden self and opens paths to other ways of being. Thus, to use a new language effectively, one should live in it; all those meanings that go beyond grammar and the dictionary have to fit in somewhere. One cannot change his or her consciousness that is tied to the old one—L1, unless he or she stretches beyond the circle of grammar and dictionary, out of the old world and into a new one.

According to Sapir -Whorf's linguistic relativity hypothesis (1939, as cited in Duranti, 1997), as cited above, semantic structures of different languages may be fundamentally incommensurable. Language, thought, and culture are deeply interlocked, so that each language has a distinct world view. In other words, the grammatical structures of any language contain a theory of the structure of the universe or "metaphysics" (Duranti, 1997). However, "Whorf did not develop an explicit theory about how languages influence thought" (Wertsch, 1987, p. 73). Further,

> . . . he presented a series of programmatic discussions of the problem based on the general understandings about language held by the Boas-Sapir school and on his own specific comparative analyses of English and Hopi grammar. (p. 73)

Hill and Mannheim (1992: 387, as cited in Duranti, 1997) also point out that

> The issue of whether or not, or to what extent, language influences thought is likely to remain an important topic within linguistic anthropology . . . of testing . Whorf's intuitions about how "grammatical categories, to the extent that they are obligatory and habitual, and relatively inaccessible to the average

speaker's consciousness, will form a privileged location for transmitting and reproducing cultural and social categories. (p. 61)

Identity

Identity and L2 learning are interwoven. Norton (2000) argues that "Language learners do not live idealized, homogeneous communities but in complex, heterogeneous ones, such heterogeneity has generally been framed uncritically" (p. 4). Additionally, Norton (2000) suggests that "inequitable relations of power limit the opportunities L2 learners have to practice the target language outside the classroom" (p. 5). Therefore, identity, according to Norton, refers to how a person understands his or her relationship in the world, how that relationship is constructed across time and space, and how the person understands possibilities for the future. Language is constitutive and constituted by a L2 learner's identity to negotiate a sense of self within and across different sites at different point in time and to gain or deny access to social network or social meaning.

Bourdieu (1991) developed a theory of "habitus," which is a set of dispositions that incline agents to act and react in certain ways—analogous to one's upbringing and experience as part of a specific culture. Dispositions generate practices, perceptions and attitudes which are "regular," argues Bourdieu. There are four classified forms of capitals that define the location of an individual within the social market: economic capital, cultural capital, symbolic capital and linguistic capital. For example, the more linguistic capital those speakers possess, the more they are able to exploit sociocultural differences to their advantage and thereby secure a profit of distinction, according to Bourdieu. In other words, applying Bourdieu's claim to the context of L2 learning, the more linguistic capital—the target language—L2 learners possess, the more they can secure their position in the social market—the target language community; the more the target

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language proficiency levels of L2 learners improve, the more they experience L2 inner voice development—knowledge of the L2, mediated to culture. This supports Shpet's (1996) claim that cultural system in relation to language, as well as Sapir-Whorf's argument that each language offers peculiar classifications of ways to view the world.

Pavlenko's study (1998) on language and emotions shows the interrelationship between the mental development in SLA and the emergence of a different identity in the target language. In this study, she used the autobiographic narratives written by various bilingual fiction writers to identify and examine the stages of L2 learning, as well as assess the writers' current levels of their L2 competency. As her conclusion, L2 learning is the "departure from oneself" (p. 17). In other words, the greater the distance between the L2 self and the native (L1) self, the higher the L2 proficiency level.

In another study (Pavlenko, 2005) Pavlenko examined the emotional difficulties as experienced by bilinguals, as well as the emotional representations used by the participants. Pavlenko concluded that for those who have been traumatized emotionally through their L1 culture, or in their native country, the L2 becomes a language of escape and freedom. Also, she cited a study of Heinz (2001), which shows the importance of the L2 proficiency that affects the L2 learner's emotions: those with lower proficiency in the target language felt freer and more comfortable in the L1, whereas those whose L1 was undergoing attrition favored the L2, felt able to express themselves freely in the target language, and felt liberated from the taboos and constrains of the L1.

From the data analysis of the 2-week daily-diary study to investigate racial socialization, identity orientation and everyday identity transaction among black students, Strauss and Cross (2005) argue that a black person's identity does not change from

situation to situation; instead integrated black identity involves a variety of enactments:

(a) buffering—stigma management, to protect oneself from an actual occurrence of

prejudice or to respond to the possibility of encountering prejudice; (b) code-switching—

mainstream management, bicultural competence used to shift back and force between

black cultural and mainstream circumstances; (c) bridging—intimacy with selected

whites, feeling comfortable with racial identity; (d) bonding—positive connectivity with

black people and immersion in the black experience to sustain, enrich, and protect their

sense of connection to black people and the black community; and (e) individualism—

experiences with the person's self.

From these theoretical frameworks, the researcher investigated the phenomena of

inner voice in the target language learning process and of a different identity when

learning and speaking the L2, and the possible ties between the two.

Appropriateness of Design

The desire to understand human psychology—human experience of thought and

language—is the object of cultural psychology research. Ratner (2002) addresses the

importance of cultural psychology research:

> [Cultural psychology] studies the content, mode of operation, and
> interrelationships of psychological phenomena that are socially constructed
> and shared, and are rooted in other social artifacts. It investigates the cultural
> origins, formation, and characteristics of psychological phenomena as well as
> the ways that psychological phenomena perpetuate and modify other cultural
> artifacts. (p. 9)

Based on the definitions of a cultural psychology research, and from the perspective

of activity theory and of ethnography, as well as through my personal L2 learning

experience, a cultural psychology study best examined and described lived

experiences of the phenomenon among L2 learners (L1: Japanese; L2: English, or vice versa) to understand the "meaning" of the phenomenon. Additionally, an online data collection approach, combined with the study, will serve as introspection that examines the participants' use of a L2 inner voice—when, where and under what circumstances—with regard to the question of identity.

Research Questions

The central research question guiding this inquiry is:

What is the genesis of L2 inner voice and does it also lead to a different identity? There are also subquestions that will guide this inquiry:

1. Does L2 inner voice develop?

2. What is the function of L2 inner voice?

3. How does L2 inner voice develop?

4. Does L2 inner voice lead to a different-sense of self?

5. How does L2 inner voice lead to a different-sense of self?

Population

The number of participants was dependent upon saturation of the phenomena— L2 inner voice and a different identity—and until the answers to research questions were obtained. However, the final number of participants was 5, as recommended by Polkinghorne (1989) who reported that "researchers should interview from 5 to 25 individuals who have experienced the phenomenon" (as quoted by Creswell, 2007, p. 61). The demographic information for each participant is provided below.

Participant S

This participant, to whom I will refer to as "S" for the purposes of this study, is a female between the age of 18 and 20, and from Japan. At the time of the study, she was an undergraduate student at a college in the Southwest. S self-assessed her L2—English –proficiency level as "intermediate" and she had been learning the target language for approximately seven years.

Participant K

My second participant, whom I will call "K" for the purposes of this study, is a female between the age of 31 and 35, and originally from Japan. K graduated from a university in the Northwest before relocating to Las Vegas; she married a native English speaker and assessed her L2—the English language—proficiency level at the midpoint between intermediate and advanced. At the time of the study she had been living in the U.S. for thirteen years.

Participant H

My third participant, whom I will call "H" for the purposes of this research, is a male between the age of 51 and 55, and from Japan. He is a licensed real estate agent and realtor in the southwest. He also graduated from a university in the Northeast before moving to where he resides now. Like my second participant, K (above), H married a native speaker of the English language, and the medium for communication at home is English, or his L2. H showed his reserve at first, but assessed his L2 proficiency level as advanced; at the time of the study he had been living in the U.S. for over twenty years.

Participant D

My fourth participant, whom I will call "D" for the purposes of this research, is a male between the age of 36 and 40 and originally from the Northeast. D now resides in the Southwest and teaches ESL at a college. D is a native speaker of the English language and a learner of the Japanese language, in addition to the Chinese and Korean languages—which he is able to speak fluently because he lived in both Korea and China. In this research, however, I will focus on his Japanese language skills. Additionally, D obtained a master's degree in Applied Linguistics from a university in Australia through an online degree program. He also married a native Japanese speaking woman, who is an English language learner. D self-assessed his current L2 proficiency as intermediate, and at the time of the study he had been learning it for eight years, since 2001. Moreover, D went to Japan for the first time in 2001, and he recalled his L2 proficiency level then was beginner; he taught English there for three years

Participant B

My last participant, "B" for the purposes of this research, is a male between the age of 36 and 40, and from the Southwest. At the time of the study, B was an operations manager at a company. He is a native speaker of the English language and a learner of the Japanese language, his L2. Like the previous participant, B married a native Japanese speaking woman, who was my second participant, K. B obtained a bachelor's degree in business management from a university in the Southwest, and he self-assessed his Japanese language proficiency as a novice and has been learning the target language, on and off, for about three years, since 2006. The medium for communication with his wife

at home is his L1, the English language. Because of his busy work schedule, B has not been taking any Japanese courses.

Informed Consent

I met prospective participants to explain the purpose of this study and how their identity and personal information would be protected in the study. I answered any questions prospect participants had, and provided them with the consent form to be taken home to read thoroughly. Upon their agreement and willingness to participate in this study, I set a time and place for their convenience for an initial interview (see Appendix A for Consent Form).

Sampling Frame

The selection of participants for this research was very crucial, and thus, handled with caution, especially in that the study investigated one of more difficult areas of study—inner voice. The selection was a purposive sampling that provides rich information for in-depth research (Mason, 2002; Patton, 2002) that aims to select groups that display variation on the phenomena under investigation. Further, the sample was based on the assumption that the investigator wanted to discover, understand, and gain insight, and therefore, selected a sample from which the most could be learned, as argues Patton (1990). To begin purposive sampling, the selection criteria for the participants in this study were as below:

1. Participants were recruited in Las Vegas.

2. The participants were Japanese students who were either attending an ESL program or a degree-seeking program at a higher educational institution, Japanese non-students who were businesspeople, Japanese housewives who were

married to a native speaker of the English language, or Japanese language learners' husbands of the Japanese wives and/or students learning Japanese at the time of this study.

3. The level of English language proficiency—for Japanese L2 learners—was not considered as a selection criterion.

4. The participants' age and duration of their stay in the U.S. were at least a year; the minimum duration of time was set to observe the phenomena of L2 inner voice and its identity shift.

The participants were recruited through ESL programs, language schools, degree-seeking programs, colleges and universities, and advertisements in the Japanese community; I selected as many participants as possible, and then a sample within the criteria was selected prior to the data collection activity began. The final participants were 5, within the recommended number, 5 to 25 individuals as recommended by Polkinghorne (1989). In case a participant transferred to another location during the study, with the consent of the participant, the study continued via e-mails and telephone conversations.

Human subject protocols for my doctoral pilot studies on L2 inner speech and a different identity were originally approved last year by the UNLV OPRS, and extensions were also approved (see Appendix D).

This research was conducted throughout the spring, with possible extensions if deemed appropriate. Ideally, the participants and I met several times for multiple interviews, if needed, and also communicated by means of e-mails for online data collection to investigate what their thought was at a given point in time. The meetings

were held on the UNLV campus or at off-campus sites such as libraries at a convenient time for them.

Confidentiality

All information gathered in this study has been and will be kept completely confidential. No reference has been made or will be made in written or oral materials that could link any participant to this study. All records have been and will be stored in a locked facility at UNLV for at least 3 years after completion of the study. After the storage time the data will be destroyed.

Data Collection

Data collection occurred during the spring of 2009. All data gathered from participants resources were collected with explicit permission from the participants and in full compliance with Institutional Review Board guidelines.

Data collection occurred in four phases. The first phase was largely spent on trust building and developing an understanding of each other; in the second, third and fourth phases, as the qualitative research tradition (Denzin & Lincoln, 2005; Merriam, 1998) suggests, multiple data sources were collected.

The second phase was organized into two sets: a questionnaire and online data collection. The questionnaire (see Appendix B), which took approximately 10 to 15 minutes in length, was made up of the background and sociolinguistic information about each participant—for example, education, length of residency in the U.S., and L2 proficiency level—was stated explicitly by the participants. After the researcher explained to participants the concept of inner voice and reflect on it— "turned on" their

thinking processes to become metalinguistically aware of their use of English, L2, such as when, where and under what circumstances. Their awareness of the L2 inner voice—by the use of English language—was assessed by their answers to the following questions (illustrated only a part of them; see Appendix B in more detail) in the section C of a questionnaire:

    1. Have you ever experienced an L2 inner voice?

    2. If so, when, where, and under what circumstances?

    3. Do you use the L2 inner voice on a daily basis?

    4. If so, when, where and for what?

The reliability of the answers to these questions were tested during online data collection activity (see below). However, regardless of their answers, if necessary, an explicit explanation about the concept of L2 inner voice was again offered online.

The second set was online data. The participants participated in this data collection approach through e-mails, in which they conveyed what their thoughts were after first seeing the e-mail prompt. The online responses played a crucial role as a stimulus and was significant in establishing what actually occurred, that is, at any particular point in time, how a given participant, through introspection, found that his or her inner voice was operating with regard to the question of identity. To best investigate the phenomenon, this phase was conducted in Japanese for Japanese L2 learners and English for Japanese language learners. The benefit for the participants was to get feedback or follow-up e-mails from the researcher; yet, this data collection method required great deal of openness and trust between participants and the researcher, as did the interviews. This data collection activity, hence, was conducted in the second phase of

the study after mutual trust was built between participants and the researcher in the first phase.

The third phase was interview data, and as Ratner (2002) argues, "Interviews are an excellent means to ascertain the cultural origins, formation, characteristics, and functions of psychological phenomena" (p. 145). Further,

> The subject can be questioned about cultural activities, artifacts, and concepts that influenced various psychological phenomena. In addition, interviews encourage subjects to describe their experience in detail so that the cultural psychology can apprehend cultural elements embedded within experience that may escape the attention of the subject. (p. 145)

According to Ratner (2002), interviews facilitate specifically the objectives of

1. Ascertaining the meaning of words by questioning subjects . . . Each phrase can convey a variety of meanings . . . Cultural psychologists use interviews to identify which social meaning an individual has adopted (p. 145-146).
2. Penetrating beneath immediate, superficial responses to comprehend true motives, perceptions, attitudes, emotions, and personality traits . . . Proving questions yield vital information about the psychological issue that is not obvious in immediate responses (p. 147-148).
3. Considering implications of an opinion that may alter the subject's responses (p. 148).
4. Considering alternate possibilities about issues that may alter the subject's responses (p. 148).
5. Ascertaining the frame of reference that interviewees use when answering a question. This is important for knowing the situations to which an attitude, emotion, perception, or motive applies (p. 148).
6. Understanding inconsistent responses . . . [the researcher] can ask the subject to explain whether she regards them as discrepant. This process clarifies the subject's full meaning (p. 149).
7. Considering the complexity of psychological phenomena (p. 150).
8. Ascertaining the intensity (importance) of the issue to the subject (p. 150).
9. Becoming sensitive to the sensitiveness of the subject about what kinds of questions are appropriate to ask, when to ask them, how long to stay on a topic and when to shift topics, whether to prove more deeply (p. 152).

Because of the importance of interviews in a cultural psychology study as

Ratner (2002) points out above, I tape recorded the interviews. Tape recording the

interviews ensured that everything had said was preserved for analysis (Merriam, 1998).

The interviews were conducted in Japanese for Japanese L2 learners of English and in English for non-Japanese speaking Japanese language learners, individually. Both individual and group interviews have advantages and disadvantages; one-on-one interviews, as Merriam (1998) argues, may be better because group interviews may be impoverished because the participant feels pressured to respond or not wanting to be embarrassed in front of the researcher or other interviewees; one-on-one interviews unfold the perspectives on the phenomenon under study of the participant with an immediate follow-up by the researchers. Despite these negative aspects, however, the group interviews too offer a positive aspect—an individual's attitudes and beliefs do not form in a vacuum; people often need to listen to others' opinions and understandings in order to form their own, according to Marshall and Rossman (1999). In this phase, however, the interviews were set up individually—in the last phase, group interviews were used (see below). The researcher also by this point in time expected the full exposure of the participants to the phenomena of L2 inner voice and the possibility of an identity shift being under study.

Moreover, as Ratner (2002) suggests, "unstructured and semistructured interviews are most appropriate for cultural psychological research" (p. 154), the researcher conducted semistructured interviews. According to Ratner, the semistructured interview is:

> organized by a specific plan that is formulated in advance. The plan, or *interview guide*, is a written list of questions and topics that need to be covered more or less in a particular order. The plan even includes the kinds of probes that should be initiated after various responses. The interview guide elicits reliable, comparable data because it asks all the subjects the same specific questions. (p. 154)

Ratner (2002, p. 154) also points to two types of interview questions:

One type specifies a stimulus (cause) and gives the subject freedom to discuss any effect he desires. An example is, "How did you feel about the argument scene in the movie?" Here, the interviewer fixes the stimulus (the argument scene) but allows the subject to speak about any response he had to it. The other format is to ask a general question and restrict the response, for example, "What about the movie made you feel sad?" In this case, the interviewer specifies the response (sadness) and allows the subject to speak about any aspect of the movie (stimulus) that generates the sadness. (Merton & Kendall, 1946, p. 546)

Keeping these points in mind, the researcher used the semistructured interview questions (see Appendix C), which lasted approximately within an hour depending upon each participant's responses. During interviews the researcher, as Ratner (2002, p. 158) suggests, did

- Listen to what the interviewee is saying, interpret what the subject means, and be sensitive to implicit ideas in his/her statements.
- Try to decide whether what the subject says bears on what the interviewer wants to know.
- Refine what the interviewer wants to know.
- Formulate an appropriate response to the answer.
- Establish rapport with the interviewee—make the subject feel comfortable expressing him-/herself, helping to articulate his/her opinion.
- Think of appropriate following questions to clarify a response.
- Think of appropriate following questions that might extend into new areas.
- Attend to the interviewee's demeanor and interpret it.
- Reflect on previous answers and compare with present response.
- Keep track of the time.
- Take notes or watch recording devices.
- Deal with distractions such as noises, passerby, phones ringing.

In the last phase, final interview data were collected, and this time the researcher conducted group interviews after a month of the individual interviews. As group interviews offer a positive aspect (see Marshall and Rossman, 1999, above), this

phase helped the subjects form their own opinions about phenomena under study by

listening to others' opinions and understandings.

Time Schedule for the data collection activities is shown below:

April 1, 2009	The researcher met the participants at a designated Starbucks Coffee shop and explained the study.
April 15, 2009	The researcher met and interviewed participant D, at 2:00 p.m. at the school at which he was teaching.
	The researcher interviewed another participant, S, at 4:00 p.m. at her school library.
April 16, 2009	The researcher met and interviewed participant, H, at 10:00 a.m. at his office.
April 16 – 24	The interview data were transcribed.
April 25, 2009	The researcher met and interviewed participants K and B at 11:00 a.m. in one of the public libraries (one came after the other).
April 25 – May 31	The interview data were transcribed.
June 2, 2009	The researcher met the participants and answered any questions they may have had at a designated Starbucks coffee shop.

Data Analysis

To analyze data the researcher utilized (a) interview transcriptions and (b) online

data. First, data collected from the background questionnaire and from each interview

were transcribed and translated into English. Second, the researcher organized the online

data collected from the participants in the study by logging the types of data according to

dates and names.

After these verbal accounts were organized, the researcher, as Ratner (2002) suggests, "explicated the cultural features of psychological phenomena expressed therein" (p. 167). In other words, the researcher "identified forms of social activities, artifacts, and concepts that were embedded in the subject's statements" (p. 167). Hence, in order to analyze cultural themes, the researcher followed a detailed procedure outlined by Ratner (2002).

The first step was to identify "meaning units" within the document—coherent and distinct meanings embedded within the protocol; could be composed of any number of words; preserved the psychological integrity of the idea being expressed. In the second step, the meaning units were paraphrased in central themes, which should represent the psychological significance of the meaning units. Lastly, the researcher organized several related central themes into a general theme, which names the meaning of the central themes and was explained in a general structure, and then integrated it in the general summary, a summary statement.

In qualitative research paradigm, perspectives of validity are (a) the accuracy of the findings, as best described by the researcher and the participants, (b) a distinct strength of the study through extensive time spent in the field, the detailed thick description, and the closeness of the researcher to participants in the study, and the research process (Creswell, 2007), whereas those of reliability, according to Creswell (2007), are (a) detailed field notes with a good-quality tape for recording and its transcription with trivial things—pauses and overlaps, and (b) use of multiple coders.

To insure the quality of the study, as Polkinghorne (1989, as cited in Creswell, 2007) suggests, first, the researcher attempted to conduct interviews in an open-ended manner so as to minimize the influence of the interview on the participants' descriptions

to ensure that the descriptions truly reflected the participants' actual experience. Second, the researcher wrote descriptions of each participant's experience as accurately as possible and convey the meaning of the oral presentation in the interview. Third, the researcher made sure that there were no conclusions offered by the researcher in the transcriptions. Fourth, the researcher wrote structural descriptions in a situation-specific fashion.

CHAPTER 4

ANALYSIS OF THE SECOND LANGUAGE LEARNERS'

INNER VOICE AND IDENTITY

Inner voice and a different sense of self-perception when speaking a second language (L2) was the focus of the current research. Inner voice – in either the English or Japanese language in this research – may be a psychological or mental tool to mediate learning the target language and culture, and as a result, a different sense of identity is expected to develop. There were two types of data in this dissertation study: (1) data collected online during a period of four weeks; and (2) data collected through in-depth interviews. When the online responses received from the participants had not indicated the context under which they were thinking in an L2 and/or their experience they had perceived when thinking in the target language, they were asked to elaborate about the responses in retrospect during interviews. Also, the interview data showed evidence that not all of the participants experienced an L2 inner *voice* consciously at first, especially when at lower proficiency levels; rather, they experienced L2 inner speech instead, which is related to problem solving and higher psychological skills, according to Vygotsky (1934,1986).

There are six research questions in the current study: one central research question and five subquestions (to be repeated for each participant below). In this chapter, I will analyze how each of the participants experienced inner voice in a L2 and perceived a different sense of self when using the target language. The approach of data analysis in the current study is to identify psychological themes in verbal accounts, as illustrated by Ratner (2002). As discussed in Chapter Three, I will: (1) identify meaning units which are coherent and in distinct meanings embedded within the documents; (2) paraphrase the

meaning units into central themes; (3) organize several related central themes into general themes; (4) explain each general theme in a general structure; and (5) compare and explain all of the general structures in a general summary. After each participant's verbal accounts are analyzed, I will examine all of the data by comparing each participant's findings with the others.

<center>Participant S</center>

This participant, to whom I will refer to as "S" for the purposes of this study, is a female between the age of 18 and 20, and from Japan. At the time of the study, she was an undergraduate student at a college in the Southwest. S self-assessed her L2 – English – proficiency level as "intermediate," and she had been learning the target language for approximately seven years. Other relevant information from the interview appears below:

The Questionnaire

Section A

Q3. How long have you been studying the English language? In Japan, English as a Foreign Language is a required subject in middle-school through high school. Due to the grammar-translation pedagogies, S was not interested in learning the target language at all at first; however, she began to learn English with interest from ninth grade on:

S: From the ninth grade . . . .

S: I did very well (in the English language classes throughout high school).

S: In high school, it was required to take oral communication courses aimed at improving speaking skills in English on Mondays, Tuesdays, Wednesdays . . . four times a week.

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Research Subquestion 1: Does an L2 Inner Voice Develop?

Online Data

S's online data were collected between February 23 and April 2. Her total responses received online were 27; among them, 15 were responded to when S was actively thinking in English. S's responses point out her thinking in English especially when interacting with her English-speaking friends on campus, as well as when studying – reading textbooks written in English – at home at night. In other words, without so-called L2 stimuli, S tended to think in her L1.

Among S's online responses, the following was her first online response when thinking in the L2, which shows her mental activity, or L2 inner speech, when trying to decode the meanings of short sentences in the L2:

Online Response 1

On February 23, at around 7:00 p.m., S was thinking in the L2, when she received my e-mail, trying to decode the meanings of sentences in the target language. Because of no further online responses received from her on this day, during the interview, S elaborated about her thinking below:

S 1:   I was thinking in the L2 when translating from English to Japanese.

S 2:   In the textbooks written in English, for example, for sentences which are difficult to comprehend the meanings after reading, I translate into Japanese.

Despite S's response of thinking in the L2, these excerpts point out her engagement in *both* her L1 and L2, for the fact that both languages are needed when translating from one language to another. Thus, S must have engaged in mental translation in both her L1 and the L2, which indicates her conscious use of the L1 inner speech as well as the L2 inner

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speech that helped her decode the meanings of the L2 complex sentences. In contrast, S
recalled her L2 inner voice:

S 3:   I tend to think in the L2, as long as they are simple sentences.

Based on this statement, unlike the use of her L1 inner speech and of L2 inner speech
shown above, because of the simple sentences in the L2, which do not require S to use
higher psychological skills, such as mental translation, the L2 simple sentences can be the
stimulus that cause S to engage in her L2 inner voice instead, or natural thinking, in the
L2 in an unconscious fashion. S's first online response is listed below:

Date & Time	Language	Context	Experience
February 23, 6:59 p.m.	L2	Trying to understand short sentences in the L2	Translating difficult vocabulary or sentences into the L1

Interview Responses as Unrelated to Online Data

During the interview, S recalled her "thinking" in the target language, as illustrated
below. In each of S's statements, brackets point out meaning units that express issues
related to thinking in an L2:

S 4:   Probably, [after six months] in New Zealand. [One day], my host mother
            told me that [I didn't do much thinking saying "uh" like I used to]. It took
            me . . . uh, longer to disappearing].

S's response points out a sudden discovery of her improved L2 proficiency. She
became aware of her no longer speaking the way that she used to when heavily engaging
in L1 inner speech (i.e., mental translation from Japanese to English), which was
"interrupted" by a different internal speech – L2 inner speech. In other words, because of
the improvement of her English proficiency, it was no longer necessary for her to engage

in L1 inner speech like before, and as a result, she began to think in the L2 in more a spontaneous fashion.

S 5:   People around me indicated [my target language improvement].

Additionally, this response is an affirmation of S's improvement of her L2 proficiency by other people. More specifically, once her L2 proficiency had improved, S stopped unconsciously engaging in the higher psychological skill of mental translation from her L1, which, at the same time, seemed to be an indicator of the beginning of both her L2 inner speech and L2 inner voice development. What's more, S promptly consciously noticed the difference of her utterances in the target language below:

S 6:   When talking with my host father (L2 native speaker), I see speaking the L2 [naturally], [rather than thinking in the target language in my head].

Because of her smoother L2 utterances, S was convinced of her improved L2 skills which enabled her to naturally speak the L2, without much thinking in the target language; this indicates L1 inner voice rather than L2 inner speech. This phenomenon is explained in the excerpt below.

S 7:   When talking with (my L2 speaking friends), [it doesn't require much English language proficiency].

This response also points out that S seemingly developed an L2 inner voice in interacting contexts. In other words, such interactions with her (L2 speaking) friends appeared to help S develop a spontaneous L2 inner voice.

S 8:   [Yes](explicitly), [I can tell my English language proficiency has improved this much to utter the L2 naturally] without much thinking in her [when talking with my friends in the L2].

This shows S's realization when she accidentally discovered how much she had improved her L2 competency. Excerpts 6, 7 and 8 indicate S's mental activity by examining what occurs prior to uttering the L2; again, they show that she no longer used her L1 inner speech or L2 inner speech when conversing with her friends, in which higher mental skills are not required. However, as a result of her better L2 competency, she began "naturally" and "fluently" uttering the target language – which surprised her.

As excerpts 4 and 5 above indicate, it seems that the development of her L2 inner voice occurred once her target language proficiency improved. Until then, as pointed out in the interview protocol, S actively used her L1 or L2, or both for inner speech below:

S 9:   Yes, I [believe in my head I tried to translate (Japanese into English), rearranging grammar].

S 10:   Yes, I [should use "will" or . . .], uh, we learned past tense . . . I [should use "have"] . . . I was [speaking thinking this way].

S 11:   I was . . . going to a private language school, so, then, I [practiced speaking in the L2] there, but no opportunity to do so at high school at all.

S 12:   But, I learned vocabulary at school, [which I practiced in the language school].

Table 1 below lists S's statements illustrated above and show: (1) the meaning units in brackets; (2) central themes into which the meaning units are paraphrased; (3) general themes into which several related central themes are organized; and (4) general structures that explain each general theme.

Table 1: Development of the L2 Inner Voice

Statement [Meaning Units]	Central Theme	General Theme	General Structure
(4) Probably, [after six months] in New Zealand. [One day], my host mother told me that [I didn't do much thinking saying "uh" like I used to]. It took me . . . uh, longer to respond in English because of thinking at first, but. . . uh, that [started disappearing]. (5) People around me indicated [my target language improvement]. (6) When talking with my host father, I [see speaking the L2 came naturally, rather than thinking in L1 in my head]. (7) When talking with my friends, [it doesn't require much English language proficiency]. (8) [Yes](explicitly), [I can tell my English language proficiency has been improved this much to speak English naturally] when talking with my friends in the L2.	Uttering in the L2 naturally Examining mental L2 process before uttering in the target language in retrospect	L2 proficiency improvement L2 proficiency improvement	Improved L2 proficiency plays a crucial role in natural L2 speaking, which helps not to heavily rely on L2 inner speech Improved L2 proficiency plays a crucial role in natural L2 speaking, which helps not to heavily rely on L2 inner speech

Based on S's responses that identify psychological themes illustrated in Table 1 above, evidence of the development of her L2 inner voice was found in the excerpts. From these data analysis, for the question: "Does the L2 inner voice really develop?" the answer, at least for S, seems to be a positive one.

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Research Subquestion 2: What is the Function of the L2 Inner Voice?

Since S's development of L2 inner voice has been shown, I will next analyze the function of the inner voice.

 S's second online responses are illustrated below:

Online Response 2

On February 25, at around eight-thirty in the morning, S was talking with her (L2 native-speaking) friends on the campus and reported online: (1) her natural thinking in the L2; (2) her gesture use when speaking the L2; but (3) feeling frustrated because of her inability to communicate freely in the L2. S's natural thinking was a result of the L2 stimulus, or the medium used for communication with her friends was the L2, that caused her to think naturally in the L2; this reflects her L2 inner voice, or natural L2 utterances. Also, S reported that she uses gestures when speaking the L2, which shows her meta-awareness of gesture use as part of the inner voice experience, and which she rarely uses when speaking the L1. During the interview, S elaborated about her gesture use below:

S 13:   I don't know how to explain (why I use such gestures when thinking and speaking in the L2).

S 14:   Yeah, (overly used gestures). I unconsciously use gestures not used when speaking the Japanese language.

S 15:   Uh, when talking with my (L2 speaking) friends, like saying "why?"

 S was unable to offer a concrete explanation in regard to why she uses gestures that she does not use when speaking her L1. However, one thing was clear: Such gestures were correlated to the L2, or the L2 mediated gestures. Interestingly, S explained how she has learned such gestures and the purpose of using them in the following:

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S 16:   People around me use gestures . . . uh, I've learned naturally, I believe, not consciously.

S 17:   I'm using (gestures) unconsciously.

S 18:   No, (I don't use such gestures) as an aid to convey my meanings (or don't simply use them). Coincidentally, I use (gestures).

These excerpts point out that in the L2 settings, such as in classrooms or on the campus where the L2 is used actively. S has naturally acquired not only the authentic L2, but also the gesture use. In addition, the use of the authentic L2 and its gestures may be an indicator of the development of the L2 inner voice.

Another online response:

Online Response 3

On February 26 at around nine-thirty in the morning, S was in class, English 114, in which many L2 non-native speaking students were enrolled. In addition to the L2 stimulus in class, due to her peers' positive effects— asking questions actively—S was stimulated to actively participate in class in the L2 as well. As a result, S seemingly engaged in her L2 inner voice, which enabled her to speak the L2 fluently because of the worry-free context, where many of her peers were L2 learners, which resulted in her feeling at ease when speaking the L2. More specifically, spontaneously utilizing the L2 inner voice allowed S to speak the target language fluently in the languaculture. Her online responses are shown below.

Date & Time	Language	Context	Experience

February 25, 8:28 a.m.	L2	Talking with friends in the L2	Thinking in the L2 naturally; using gestures naturally, which I don't use when speaking the L1; but feeling frustrated when unable to convey what I want to say
February 26, 9:29 a.m.	L2	In ENG114, where there are many ESL students	Easily able to speak the L2; my peers asking questions actively stimulated me to do the same in class

Interview Responses as Unrelated to Online Data

S's statements during the interview and the meaning units in brackets are shown

below:

S 19:   When studying (reading), [if (I encounter) simple sentences (in the textbooks), then, I think in the L2].

This excerpt indicates L2 stimuli. More specifically, simple sentences are the

stimulus that caused S to naturally think in the L2. Also, it connotes that S does not

engage in her L1 and L2 inner speech (i.e., translating from English to Japanese,

analyzing the meanings of vocabulary, etc.).

S 20:   (I think in the L2) [when talking with non-Japanese speaking friends].

This statement too points out the L2 stimulus, or the L2 speaking friends who caused

S to promptly communicate in the target language fluently.

S 21:   (Since he's the L2 native speaker, I communicate) [with my host father in the English language].

Due to the fact that S's host father is a non-Japanese individual, which is also an L2

stimulus, S naturally thinks and speaks the L2 as an aspect of relating to him.

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S 22: [When reading of something, and it's something written in the English language, then, uh, I think in the language . . .].

S 23: I [believe (uttering the L2 naturally, rather than thinking in the target language in my head)].

In statement 22, S tends to think automatically in the L2 when stimulated by sentences in (text) books written in the L2. Additionally, S unconsciously engages in her L2 inner voice when speaking the target language, as illustrated in statement 23.

Also, on a daily basis, S seems to realize that she does much thinking in the L2 when being in the L2 contexts, such as in a restaurant where it's required to communicate in the target language, and that indicates her natural, yet unconscious L2 inner voice engagement, as opposed to her L1 inner voice when being alone:

S 24: On a daily basis, I [believe I think in the English language in my head a lot] . . . uh, [when ordering in a restaurant), (I speak) English, but uh, when I'm alone, (I normally think in Japanese)].

S 25: Like now I'm speaking (with you in this interview), then, uh, [speaking naturally], but uh, [when saying my points of view in class, I do think (in my head)].

These statements point out circumstances in which S engages in either an L2 inner voice or L2 inner speech. As evidenced above, when being interviewed in an informal setting, which did not make S become nervous, which thus resulted in her L2 inner voice engagement in an unconscious fashion, while in academic contexts where students are expected to express their points of view; class participation in the form of discussion in the L2 plays a role as a stimulus in causing S to engage instead in her L2 inner speech in a conscious way to assess her L2 use – the L2 grammar, vocabulary, and pronunciation – before speaking in the L2 in class.

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S 26:   [Depends on the environment (which language I think in)].

S is seemingly convinced by the crucial role of both L1 and L2 stimuli that cause her to use a particular language in her mind.

S 27:   [With my (native English-speaking) friends, (I think) in English].

Like her host father, when interacting with her L2 native-speaking friends, the L2 becomes a stimulus that causes S to naturally think in the L2.

S's above responses during the face-to-face interview, the meaning units, central theme, general theme and general structure are illustrated in Table 2 (next page).

The statements show how the L2 inner voice functions with the target language and the languaculture. Thus, thinking in the L2 inner voice allows smooth interactions with the target language and the culture, from her point of view.

Based on all of these data, the primary function of L2 inner voice can be said to be the "spontaneous" engagement in the target language embedded in the culture, which helps S speak the target language naturally.

Table 2: Function of the L2 Inner Voice

Statement [Meaning Units]	Central Theme	General Theme	General Structure
(19) When studying (reading), [if (I encounter) simple sentences (in the textbooks), then, I think them in the English language].	Spontaneous L2 use	L2 inner voice	Stimulus, such as simple syntax, books, and contexts, stimulate thinking in the L2.
(20) (I think in the L2) [when talking with non-Japanese speaking friends].			
(21) (Since he's the L2 native speaker, I communicate) [with my host father in the English language].			
(22) [When reading or something, and it's something written in the English language, then, uh, I think in the language . . .].	Thinking in the L2 on a daily basis	Stimulus from outside	
(23) I [believe (uttering the L2 naturally, rather than thinking in the target language in my head)].			
(24) On a daily basis, I [believe I think in the English language in my head a lot] . . . uh, [when ordering (in a restaurant), (I speak) English, but uh, when I'm alone, (I normally think in Japanese)].			

Research Subquestion 3: How does the L2 inner voice develop?

Despite the positive answers to the research subquestions 1 and 2 above, the answer to this question was not forthcoming. The analysis of S's verbal accounts does not seem to offer a concrete answer to this question.

Research Subquestion 4: Does the L2 Inner Voice Lead to a Different Sense of Self?

S's relevant online responses when thinking in the L2 are shown below:

Online Response 4

On March 25 at around quarter till nine in the morning, S responded online that she perceived activeness when thinking in the L2. Immediately, I e-mailed her back inquiring what she had meant; however, no response was received. Therefore, I attempted to confirm her online response in the face-to-face interview. After a few moments, S responded:

S 28:   Never thought about it consciously.

   In addition,

S 29:   Um . . . let me see . . . .

This is her response to the questions: "What happens when you are thinking in the English language?" and "As responded online on this day, do you perceive activeness, or directness?"

Based on her above online data and two elaborations, S perceived "directness" the moment she was thinking in the L2, which seemingly points out to the characteristics of the L2 culture embedded in the language, or L2 languaculture. More specifically, in the L2 culture people are expected to speak in more a direct manner – while it is polite to be indirect in her L1 culture – which causes her to feel direct when thinking in the L2. However, it was very difficult to confirm such these feelings in a retrospective manner.

Furthermore, S responded:

S 30:   Well . . . if I'm thinking alone.

S 31:   Ah . . . (seems don't know which). Maybe, I am active (when thinking in
           the L2)?

The first statement indicates the L2 stimuli that may play a crucial role in leading one

to the L2 different sense of self. But, the more retrospectively that S tried to analyze her

L2 self-perception, the more confused she became, as shown in the second excerpt above.

In contrast, S asserted her perception of an L2 different self when speaking the L2

below:

S 32:   Yeah, (I become active when speaking the L2).

 S is consciously able to reflect on her different perceptions speaking the L2.

Otherwise, she is unable to do so, as shown above. More specifically, speaking the L2

allows S to be spontaneously saturated in the languaculture, which results in feeling

energetic.

Her above online response is shown below:

Date & Time	Language	Context	Experience
March 25, 8:47 a.m.	L2	N/A	Feeling active

Another online response:

Online Response 5

On these days at different times, S responded online feeling that she could say

anything in a straightforward fashion in the L2. Due to the fact that her host father drops

her off at the campus every morning before her host father goes to work, S was in the L2

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contexts on these days. During the interview, S elaborated her response that she speaks

the L2 in the way of expressing explicitly "yes" or "no." As a result, S consciously

perceived her L2 self differently when speaking the target language.

S's online data are listed:

Date & Time	Language	Context	Experience
March 5, 10:30 a.m.; March 7, 12:26 a.m.; March 10, 8:25 a.m.; March 12, 10:27 a.m.; March 19, 11:43 a.m.; March 24, 12:33 a.m.; March 31, 10:09 a.m.; and April 2, 9:31 a.m.	L2	On campus	Feeling and speaking in a straight-forward manner

Her next one was:

Online Response 6

On March 11 before 9:00 a.m., S was again in L2 contexts, or on the CSN campus,

and replied online that she was feeling "friendly" and "optimistic." S elaborated about her

feelings below:

> S 33:   One of my Japanese friends who is five years older (than me) and for three
> days we had fun spending time together. Then, uh, she told me not to use
> "keigo" or polite expressions any longer (to her), but you know, I cannot
> do that now, and I still use them (when talking with her). On the other
> hand, when speaking the L2, I tend to feel friendly and active. I can say
> yes or no explicitly (answering positively my question, "In the English
> language you can explicitly say yes or no, right?").

This statement indicates a so-called psychological obstacle for S when speaking the

L1. Unlike speaking the L2, it is the L1 culture that polite expressions should be used

when conversing with older interlocutors to show respect.

Online response is shown:

Date & Time	Language	Context	Experience
March 11, 8:44 a.m.	L2	On campus	Feeling friendly and optimistic

In addition,

Online Response 7

On March 4 at 4:15 p.m. S had lunch with one of her L2 speaking friends and responded online that she was feeling very comfortable speaking the L2. During the interview, S elaborated below:

> S 34:   I went to have lunch with my older friend. In spite of an older age (than me), and even a few times (we) have met, (we) enjoyed the conversation at lunch. I believe I can communicate without worrying about ages or other things (of interlocutors).

This statement, too, points out worry-free feelings when speaking the L2.

Online response:

Date & Time	Language	Context	Experience
March 4, 4:15 p.m.	L2	At lunch with an L2 speaking friend	Feeling easier to speak the L2

Also, S responded online when interacting with her English-speaking friends on the campus below:

Online Response 8

On March 9 before 10:00 a.m., S was interacting with her another L2 native-speaking friend (hereafter, L2 friend) who was learning the Japanese language, or S's L1. When

this L2 friend told S and S's Japanese friend a Japanese joke in the L1, both S and her

friend could not help feeling embarrassed. S elaborated her feelings:

> S 35:   My English speaking friend who has been learning the Japanese language at the college, uh, said a sarcastic joke (in Japanese), and then, uh, I laughed and felt weird . . . the way of laughing is different with a joke with a similar meaning. For example, uh, I don't know how to say . . . uh, if (someone) says a joke in a language that we don't understand, uh, then we don't feel embarrassed, right? Even (we) understand the meaning, uh, (because of the syntax of) the language . . . like this way, uh, even in the English language, (I) don't get to the full meanings of it as of yet. Uh, if it's said in Japanese, we feel weird or something . . . but a different way of feeling in case of the English language.

This statement points out sociolinguistic differences in languages that affect one's

perceptions of jokes. As indicated above, although she literally understands the meanings

of L2 joke, S is afraid that the joke is beyond her grasp because of the sentence structure,

or nuances of lexical meanings. Therefore, it can be assumed that S's L2 native-speaking

friend told S a joke in her L2, the Japanese language, which sounded funny and weird

because of the above-mentioned differences.

Online response is listed:

Date & Time	Language	Context	Experience
March 3, 9:59 a.m.	L2	Interacting with the L2 student	When hearing a joke in the L1, I laughed out of embarrassment.

Interview Responses as Unrelated to Online Data

At first, S's confusion about the L2 different sense of self was shown, as illustrated in

statement 19 below, but gradually she responded in a concrete manner:

> S 36:   [Um . . . (thinking)].

S recalled for a moment to answer the question: "Do you perceive the interconnection between the L2 and its culture when thinking in the L2?" S then responded below:

S 37:   [Not really, (I don't perceive the L2 connected to the culture through mediation when thinking in the L2)].

This statement points out her not having experienced such a perception. Furthermore, S responded:

S 38:   That's correct [I think (in the L2) in my head unconsciously].

This response shows S's rationale for not perceiving such interconnectedness between the L2 and the culture when thinking in the target language because of her "unconscious" thinking in the L2. In other words, S believes that "conscious" thinking in the L2 is a stimulus that causes a different sense of identity.

In order to clarify her above response, I refined the previously asked question to help S penetrate the interconnectedness between the L2 and the culture by reflecting on the differences between Japanese culture and that of the L2. For example, when uttering the Japanese language, speakers are expected to use "keigo," polite or honorific expressions, to interlocutors who are older or when meeting someone for the first time, whereas in the English language, it is pretty much common to begin a greeting casually, such as "Hi," "How are you?" Then, S finally grasped the idea:

S 39:   Ah, right, right. After all, (I believe they're) interconnected. Saying hi . . .].S was now aware of the differences deeply embedded in both languages. However, as shown in excerpt 40 below, S responded negatively when reflecting on her awareness of a different sense of self when "thinking" in the L2:

S 40:   [No, not really. (I don't perceive an L2 different self when thinking in the target language). But, unconsciously they're interconnected, I believe].

This statement indicates her unsureness of the interconnectedness between the L2 and the culture, but she also believes that it exists.

Table 3 shows the meaning units, central theme, general theme and general structures.

Table 3: A Different Sense of Identity

Statement [Meaning Units]	Central Theme	General Theme	General Structure
(36) [Um . . . (thinking)]. (37) [Not really, (I don't perceive the L2 connected to the culture through mediation when thinking in the L2)]. (38) That's correct [I think (in the L2) in my head unconsciously]. (39) [Ah, right, right. After all, (I believe they're) interconnected. Saying hi . . .]. (40) [No, not really, (I perceive it consciously). But, unconsciously, they're interconnected, I believe].	Getting in touch with feelings when thinking in the L2	Process feelings	Culture is indispensible when learning the L2; when the L2 proficiency was improved, the culture was acquired naturally through the L2 inner voice

In addition, S showed her experiences when reading L2 comics, as illustrated below:

S 41:   I don't watch TV in the L2, and I [don't feel like reading comics in the English language, either].

S 42:   Because of [different nuances] . . . Well, uh, [different expressions] (in the L2 comics).

S 43:   I have read (the L2 comics) before. [Totally different enjoyment].

The above statements 41, 42 and 43 indicate S's L2 inner voice and L2 inner speech while reading comics in the L2, and that S literally decodes the meanings of expressions and phrases used in the comics, but the nuances of the expressions are beyond her grasp. S further tried to decode the unfamiliar meanings in the L2 comic books and expressed her emotional feelings below:

S 44:   [Sick and tired of understanding the meanings].

This reflects S's conscious engagement in the L1 inner speech. Additionally, the following response points out her mental comparison between the L1, Japanese, comic books, and those in the L2.

S 45:   I [can laugh reading Japanese comics at the same time] (but not the ones in the L2).

As seen in the statement above, the L2 written in the L2 comics is authentic, which is yet beyond her natural comprehension. As a result, S consciously engages in the higher psychological skill of mental translation through the L1 inner speech, which, unlike when reading the L1 comics, prevents her from enjoying the L2 comics as the L2 native speakers do.

The statements are listed in table 4 below: Based on the analysis, the answer to the question: "Does the L2 inner voice lead to a different sense of self?" seems to be a positive one.

Table 4: A Different Sense of Identity

Statement [Meaning Units]	Central Theme	General Theme	General Structure
(41) I don't watch TV in the L2, but I [don't feel like reading comics in the English language, either]. (42) Because of [different nuances] . . . Well, uh, [different expressions] (in the L2 comics). (43) I have read (the L2 comics) before. [Totally different enjoyment]. (44) [Sick and tired of understanding the meanings]. (45) I [can laugh reading Japanese comics at the same time].	Language and culture are inter-connected.	Language-culture	Culture is indispensible when learning the L2; when the L2 proficiency was improved, the culture was acquired naturally

Research Subquestion 5: How Does the L2 Inner Voice Lead to a Different Sense of Self?

   This question may not be answered in a concrete fashion. Despite the evidence of the L2 inner voice that led to the L2's different self-perception, S's online and interview protocol do not seem to offer indisputable evidence about how the L2 inner voice leads to such an identity. However, based on the data analysis, S perceives friendliness and open-mindedness when speaking the L2, rather than when thinking in the target language.

Participant K

My second participant, whom I will call "K" for the purposes of this study, is a

female between the age of 31 and 35, and originally from Japan. K graduated from a

university in the Northwest before relocating to Las Vegas; she married a native English

speaker and assessed her L2 – the English language – proficiency level at the midpoint

between intermediate and advanced. At the time of the study she had been living in the

U.S for thirteen years. K's responses to the questionnaire are shown below:

Section A:

> Q2:   When did you begin to study English? When I was 10 years old.

> Q3:   How long have you been studying English language? For 21 years.

Unlike many of her Japanese peers (7th graders) in middle school, with her mother's

advice, K began to learn the English language much earlier – when she was in the 4th

grade. K's mother had been learning English – the spoken language – at that time and

suggested that K learn the basics of the target language before studying English as

required in middle school. K followed her mother's advice. What K had learned,

however, was English grammar rather than the spoken target language. Despite her

mother's expectations, K disliked English courses in middle school, as illustrated below:

> K: I hated the English courses at school, for you know, I was unable to speak
> it at all.

> K: (In middle school), the curriculum was not designed to help develop
> English oral skills, but rather prepared students for high school entrance
> exams.

As evident above, the English language curriculum in middle school was based on the

grammar-translation method, designed to help students prepare for entrance exams for

high school. Thus they did not greatly interest her, for they did not help her acquire

English language oral skills. Thus, K finally told her mother that she did not like the

English language curriculum at all at her school, and with her mother's understanding of

her feelings about the courses, K began going to the same English language school where

her mother had been learning the English oral skills once a week. This resulted in helping

K become fond of the English courses at school – in spite of the grammar-translation

approach – and K began making good grades in the courses throughout high school. At

the same time she had a desire to come to the U.S. someday to study at a college or

university.

Research Subquestion 1: Does an L2 Inner Voice Develop?

   K's relevant online data were collected between February 8 and March 22; her total

online responses were 21, from which 13 were in response while K was thinking in

English. Thinking in the L2, according to K, was natural, especially when stimulated by

the L2 medium, such as e-mails. When her mind was not dominated by either language –

her L1 nor the L2, e-mails written in the L2 stimulated her mind and K began to think in

the target language in a spontaneous manner.

   Among K's online responses, the followings show K's thinking in the L2, which

reflects her L2 inner speech, rather than the L2 inner voice, when reading e-mails written

in the target language:

   On these particular days, K responded online when reading e-mails in the L2. During

the face-to-face interview, K elaborated:

Online Response 1

> K 1:   Completely (thinking in the L2 when reading e-mails written in the target language).   I see written materials in the English language, and then, cognitively process them in (my) head, and yet thinking in the same language.

> K 2:   Yeah, (thinking naturally in the L2).

These excerpts point out that the L2 e-mails play a role as stimuli that cause K to utilize the L2 inner voice in a seemingly unconscious fashion. Yet K consciously utilizes the L2 inner speech as needed:

> K 3:   Yes, I try to decode the meanings (of e-mails), depending upon the content.

What intrigued me was K's response in regard to the complexities of the L2 e-mails' content, shown below:

> K 4:   (For both simple and complex L2 content), they're all in English, aren't they? When e-mails are written in the L2, then, of course, (we) decode the meanings in the same language, don't we? Even in our head. (We) seldom translate them from English to Japanese, right?

> K 5:   Everything, yes, (I decode the meanings naturally when reading (the L2 e-mails) simultaneously . . . .

These excerpts show that the target language in the L2 e-mails sets a tone for her mind, or stimulates her to utilize not only the L2 inner voice, but also L2 inner speech, which helped her naturally decode and understand the L2 e-mails' contents.

These online responses are listed below:

Date & Time	Language	Context	Experience
February 8, 9:44 a.m.; February 12, 7:30 a.m.; February 27, 7:22 a.m.	L2	Reading e-mails in the L2	Naturally thinking in the L2

Another online response:

Online Response 2

On February 18 before 8:00 a.m., K was reading the L2 e-mails and thinking in the target language. However, K's mental experience, as shown above, further intrigued me. I had sent all of the participants an e-mail with the question, "Which language are you thinking in?" in the subject line, and interestingly, K responded online that the moment she saw my e-mail, she experienced unusual mental activity. More specifically, on this particular day, as soon as she saw my e-mail's subject line, the question began flashing back and force endlessly in K's mind. K further elaborated during the face-to-face interview:

    K 6:   Right, (I responded that the question in the subject line was flashing around in my head). When my head is not clear, thinking nothing, and see that subject line (in your e-mail), then, uh, gives (cognitive) impact.

This excerpt indicates the crucial effects of the L2 stimulus on K's vulnerable mind. More specifically, when thinking nothing, K's mind was vulnerable. Thus, K was easily affected by what she saw in the L2 e-mail, which resulted in K's thinking in the target language naturally.

Date & Time	Language	Context	Experience
February 18, 7:57 a.m.	L2	Reading e-mails in the L2	Repeating the phrase, "Which language are you thinking in?"

Interview Responses as Unrelated to Online Data

During the interview, K responded in regard to her thinking in English, an L2, as

shown below:

K 7:   (In high school), I was too busy decoding the meanings of the L2 when speaking the target language. But, [gradually, after I came to San Diego, that definitely caused changes a little].

K 8:   [Compared with before, (my English language skills) too, were improved then].

K 9:   After the winter break, I communicated with the ALT about what I did over the break, and I [understood].

K 10:   [Right, (naturally communicated without thinking)].

Furthermore, as mentioned earlier, K had an experience of learning the L2 in San

Diego for two weeks, which exposed her to the authenticity of the target language:

K 11:   [After I came to San Diego, that definitely caused changes a little]. (After a two- week stay in San Diego), definitely I [was able to communicate](in the English language) a little.

This excerpt was already shown earlier, but shows that while staying in San Diego, K

became aware of her natural thinking in the L2. In addition, even for the short, two-week

stay in the L2 speaking country, K developed the L2 inner voice spontaneously.

Furthermore, the medium used for communication with K's host family appeared to

become a stimulus that motivated K to use the L2 as much as she could, which seemed to help K improve her L2 proficiency, even a little.

K also responded that her L2 proficiency while in San Diego was much better than what it was before coming there:

K 12:   [Unlike before, (my English language skills) were improved then].

As a result of her improvement in the L2, even a little, K began to speak the target language more naturally – she believes without her L2 inner speech (i.e., mental translation that she heavily used to rely on before), as below:

K 13:   [I don't think I (translated) . . . I did maybe].

This is K's response to the question: "Did you then translate, for example, from Japanese to English, in your head?" K tried to recall for a moment, and responded as shown above. It was very difficult for her to recall her mental activity in a concrete fashion. After her memorable two-week stay in the U.S, K returned to Japan, and one day, she amazingly realized her L2 improvement when talking with one of her school's native English speaking Assistant Language Teachers (ALT):

K 14:   I talked with the ALT about my winter break, and I [understood] well.

Unlike before, K had no difficulty understanding what the ALT said. It seemed that K stopped relying on her L1 inner speech:

K 15:   [Right, (naturally communicated without thinking)].

Additionally, K shared with me her amazing discovery of her improved L2 proficiency in

San Diego:

    K 16:   But, uh, when I went to a store (in San Diego), I [did normally what I didn't do, couldn't do before].

    K 17:   [Yes, (I noticed my L2 improvement because my conversation went smoothly)]. Probably, improved skills [to think naturally in my head].

All these excerpts show K's sudden realization of her smoothness in her L2

utterances; smooth language delivery seems to be a benchmark for one's L2

improvement.

Table 5 below illustrates the meaning units in brackets, central theme, and general

theme and general structures regarding her responses:

Table 5: Development of the L2 Inner Voice

Statement [Meaning Units]	Central Theme	General Theme	General Structure
(7) (In high school), I was too busy decoding the meanings of the L2 when speaking the target language. But, gradually, after I came to San Diego, that definitely caused changes a little. (8) [Compared with before, (my English language skills) too, were improved then]. (9) After the winter break, I communicated with the ALT about what I did over the break, and [I understood].	Exposure to authentic L2, which resulted in the L2 improvement Uttering in the L2 naturally	L2 proficiency improvement L2 proficiency improvement	The beginning of the L2 improvement was not easily detectable; the more improved, the better and natural L2 utterances become

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(10) [Right, (naturally communicated without thinking)]. (11) [after I came to San Diego, that definitely caused changes a little]. (After a two-week stay in San Diego), definitely I [was able to communicate](in the English language) a little. (12) [Unlike before, (my English language skills) were improved then]. (13) [I don't think I (translated) . . . I did maybe]. (14) I talked with the ALT about my winter break, and I [understood] well. (15) [Right, (naturally communicated without thinking)]. (16) But, uh, when I went to a store (in San Diego), I [did normally what I didn't do, couldn't do before]. (17) [Yes, (I noticed my L2 improvement because my conversation went smoothly)]. Probably, improved skills [to think naturally in my head].			

Based on all of K's data analysis herein, the answer to the first question: "Does an L2 inner voice really develop?" seems to be a positive one.

Research Subquestion 2: What is the function of the L2 inner voice?

After the emergence of K's L2 inner voice has been established, the function of her

L2 inner voice will be analyzed.

K's relevant online responses are shown:

Online Response 3

On February 14 after 8:30 a.m., K reported online about her thinking in the L2.

During the interview, K elaborated:

K 18:   Probably in the contexts of the English language (I was thinking in the
          L2). I believe something like (reading) e-mails (in the L2).

K 19:   Yeah, I do (think in the same language when reading e-mails in the L2).

These excerpts show L2 stimuli, such as e-mails, seem to cause K to utilize the same

language, or the L2 inner voice. Also, as part of her response "probably" shown above,

K was uncertain about what contexts exactly that cause her to think in the L2. Yet K

appeared to be convinced that the L2 contexts are the stimuli that cause her natural

thinking in the L2. In addition, K responded that her feelings were not confused and

were very clear in mind when thinking in the L2, which reflects the L2 inner voice.

Below is her online response:

Date & Time	Language	Context	Experience
February 14, 8:36 a.m.	L2	At home	No confusion; very clear in mind

Online Response 4

This online response indicated that on March 1 at a little after 9:00 a.m., she was thinking in the L2, despite the fact that she was exposed to her L1. During the interview, K explained in detail:

K 20:   Right, (I) was thinking in English. Not because my husband might ask me for the meanings or anything, naturally I did that. Depending on the circumstances . . . what to say, the language in my head changes, probably. Even when reading something in the English language.

K 21:   Maybe . . . for example, (I) sometimes think in the Japanese. When reading (something) in Japanese, (I) think in the same language. On the other hand, when reading in Japanese, (I) think in English, too.

These excerpts point out not only the stimulated act – thinking in the L2 – by the L2 stimulus, but also the negative effects of the L2 on K's mind. K appeared to have developed a mental habit, that is, mental preparation through the utilization of L2 inner speech to translate what was said on Japanese TV shows into the L2 to explain the meanings to her husband. As a result, regardless of her husband's presence, this mental habit – thinking in the L2 – affects her daily life as below:

K 22:   (Although) my husband has been away on business nowadays . . . the proportion of the English language is larger (in my mind), I believe.

Yet, the following excerpt illustrates the complexities in her mind:

K 23:   I think about e-mails, or how to respond them, or . . . something totally different. What I see does not match with what I think about in my head at all . . . sometimes (laughing). Like what to do today . . . .

The excerpt 23 shows that the visual stimulus seemingly does not always stimulate K's mind at all, when reading e-mails in the L2, for example. It can be very difficult decoding the texts of e-mails in the L2 while thinking about something else, or in her L1. K, however, responded:

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K 24:   Just a little (affected), I suppose. Not often . . . .

K 25:   The moment (I) am reading e-mails . . . for example, an e-mail sent from you and when reading it, and understanding the text at the same time, thinking what to do (today) . . . after (I) respond to your e-mail, go back to thinking about what to do today . . . (laughing).

K 26:   (Thinking) . . . the English language (I am thinking in after I get up in the mornings). What time should I take (her dog) for a walk? . . . (laughing). (I) am making schedule in my head.

These excerpts indicate K's unfocused mind in the L2, yet she understands the e-mails in the L2 while thinking about totally different things. K appeared to be able to do so without any problem with what seems to be simple and short e-mail texts – such as mine, with the very simple "Which language are you thinking in?" in the subject – that enabled K to think about something else in the L2. Furthermore, K responded that she also thinks in the L1 while reading in the L2:

K 27:   (Thinking in Japanese) too happens after awhile thinking in the L2. The language in mind changes in a second].

The online response as related to the above responses is shown below:

Date & Time	Language	Context	Experience
March 1, 9:11 a.m.	L2	N/A	Thinking in the L2 while reading in the L1, or vice versa

Interview Responses as Unrelated to Online Data

K's relevant responses about her natural thinking in the L2 show her exposure to a medium, such as e-mails, TV shows, etc. As seen below, excerpt 28 points out K's stimulated L2 thinking, which is reiterated from earlier illustration, below:

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K 28:   [Completely (thinking in English when reading e-mails written in the same language)].

K spontaneously thinks in the L2 when watching TV in the L2, as depicted below:

K 29:   [Even watching TV (in the L2), the same thing (I think in the L2)]. When Watching Japanese TV shows, I too think in the Japanese language, but (I) listen to Japanese (on TV), then, (I) think in the English language a lot, definitely.

The excerpt 29 indicates K's "conscious" utilization of the L2 inner speech. As was evidenced above, even when watching the L1 TV shows, K thinks in the L2 a lot. K further elaborated:

K 30:   Of course, I understand (the TV shows in the L1). But, [in case (my husband) asks me the meanings (of the TV scenes), I mentally prepare to explain, for example, how to explain in the L2].

K's husband, who was also a participant in this research, frequently asks her meanings of the TV scenes in the L1, which has resulted in becoming K's mental "habit" when watching TV together. Furthermore, K responded:

K 31:   [Yeah, I believe, I speak the L2 at the same time understanding the L1 on TV. For example, when watching some (Japanese) TV scenes and (my husband) asks me what's happening, I cognitively process in English immediately].

K 32:   I [never cognitively process in Japanese].

Based on these excerpts, when mentally preparing to explain to her husband meanings of the L1 TV scenes in the L2, K appears to utilize both her L1 and L2 inner speech, rather than the L2 inner voice, due to the fact that Japanese is K's L1 and that the L2 inner speech helps her "translate" what was said on TV from Japanese to English.

K further explains:

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K 33:   Yes, (I think in the L2 if what I see is English).

This response shows the L2 "visual" stimuli, such as e-mails, TV shows, newspapers, etc., which seemingly "trigger" K's utilization of the L2 inner voice, as well as her conscious use of the L2 inner speech concurrently, as shown below:

K 34:   Yes, (trying to decode the meanings when reading the L2 e-mails).

K 35:   When e-mails are sent in [the English language, then, of course, (we) decode] them in the same language, don't we? Even in our head.

These excerpts indicate K's utilization of both the L2 inner voice and the L2 inner speech that are stimulated by the L2 e-mails.

 Also, K emphasized the importance of the use in mind of the same language used in the e-mails:

K 36:   (When reading the L2 e-mails), we seldom translate them to Japanese, right?

This excerpt points out to two things: (1) K's natural thinking in the L2, or utilization of the L2 inner voice, when exposed to the L2 contexts; (2) K's higher L2 proficiency enables her L2 inner voice function spontaneously and unconsciously. Otherwise, she would have utilized only the L2 inner speech – to decode the meanings by mental translation between her L1 and the L2.

Table 6 illustrates K's responses:

Table 6: Function of the L2 Inner Voice

Statement [Meaning Units]	Central Theme	General Theme	General Structure
(28) [Completely (thinking in English when reading e-mails written in the same language)]. (29) [Even watching TV (in the L2), the same thing]. When watching Japanese TV shows, I too think in the Japanese language, but (I) listen to Japanese (on TV), then, (I) think in the English language a lot, definitely. (30) [Yes, (I think if what I see is English)]. (31) [Yes, (trying to decode the meanings)]. (32) When e-mails are sent in the English language, then, of course, (we) decode them in the same language, don't we? [Even in our head]. (33) When reading the L2 e-mails, [we seldom translate them to Japanese, right?].	Thinking in the L2	Stimulus for thinking in the L2	Upon the L2 improvement, the L2 stimuli cause one to use the target language naturally.

Based on the analysis of all these excerpts, the answer to the question: "What is the function of the L2 inner voice?" is that the L2 inner voice appears to play a crucial role in

leading K to spontaneous thinking in the L2 in an unconscious manner, which also

results in her ability to speak the target language spontaneously.

Research Subquestion 3: How Does the L2 Inner Voice Develop?

The first question: "Does the L2 inner voice really develop?" has already been

answered positively as for K. As outlined in the excerpts, her L2 inner voice appeared to

emerge once K's target language proficiency improved. To answer a question: "How

does the L2 inner voice develop?" some relevant online and interview responses

unrelated to online data will be analyzed. Responses 20, 29, 30, and 31 are part of the

excerpts which were illustrated earlier:

Online Response 4

    K 20:   Right, I was thinking in English (even when reading something in
            Japanese).

This excerpt reflects K's unconscious mental habit, that is, thinking in the L2, which

resulted from preparing to explain to her husband meanings of the Japanese TV shows,

while reading something even in her L1. K appears to do so in an unexplainable manner.

<div align="center">Interview Responses as Unrelated to Online Data</div>

    K 29:   But, I listen to Japanese (on TV), then, I think in the English language a
            lot, definitely.

    K 30:   [In case (my husband) asks me for the meanings], I prepare to do so (in
            my head), for example, how to explain in English.

    K 31:   [When watching some (Japanese) TV scenes, (I cognitively process) in
            English immediately].

These excerpts show K's conscious mental translation of what is said on Japanese TV

shows for her husband, who frequently asks K for the meanings of expressions or phrases

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when watching Japanese TV shows together. As a result, K promptly utilizes her both L1 and the L2 inner speech in case her husband asks her for help. As previously evidenced, L2 stimuli, such as TV shows and e-mails, are crucial "triggers" to the function of the L2 inner voice; in the same sense, when watching TV or reading e-mails in the L1, Japanese L2 learners evidently think in the L1; however, that is not always the case for K.

Furthermore, during the interview, an interesting discovery was her beliefs about the cause of the L2 inner voice emergence:

K 37:   Probably, (I improved L2 skills to think naturally in my head).

This excerpt shows K's acknowledgement of thinking naturally in the target language as a goal when learning an L2. It also indicates that the L2 proficiency improvement is a "stepping stone" to the natural development of L2 inner voice.

Another interesting discovery was K's unawareness of the L2 inner voice:

K 38:   (thinking). Well . . . There're many circumstances in which I don't realize it.

This excerpt is her response to the question that reconfirmed her previous answer: "So, you are thinking in the English language first thing after you get up in the mornings, right?" K appeared to be well-convinced of the significance of the L2 inner voice, at the same time, she was seemingly unable to detect the existence of her L2 inner voice, in retrospect. More specifically, the further K tried to locate her L2 inner voice, the more confused, or manipulated, her mind became.

These responses are listed in Table 7:

Table 7: How to Develop the L2 Inner Voice

Statement [Meaning Units]	Central Theme	General Theme	General Structure
(20) [Right, I was thinking in English (even when reading something in Japanese)]. (29) But, I listen to Japanese (on TV), then, I think in the English language a lot, definitely. (30) [In case (my husband) asks me for the meanings, I prepare to do so (in my head), for example, how to explain in English]. (31) [When watching some (Japanese) TV scenes, (I cognitively process) in English immediately].	Conscious effort to think in the L2	Stimulus for thinking in the L2	

Based on the analysis of the interview responses here and with a positive answer to the first subquestion, the answer to the third question: "How does the L2 inner voice develop?" is that the L2 inner voice appears to develop once the target language proficiency improves and further develops with a diligent self-conscious attempt to utilize the L2.

Research Subquestion 4: Does the L2 Inner Voice lead to a Different Sense of Self?

After the development of K's L2 inner voice is analyzed, her perception of an L2 sense of identity will be examined.

K's online responses in regard to an L2 sense of identity are illustrated below:

Online Response 5

On February 22, K was at work and reported online her thinking in the L2 when communicating with the L2 speakers. As a result, K felt open-minded, and unlike speaking the L1, no need to be concerned about ages and other things of the interlocutors.

Date & Time	Language	Context	Experience
February 22, 12:56 p.m.	L2	At work	Feeling I can say anything without worrying sonority or relationship

Additionally,

Online Response 6

   K, on these days, reported online her thinking in the L2. K elaborated during the

interview below:

   K 39:   (I was thinking in English), probably, in the context of English. I was
                  reading (e-mails).

   As shown below, thinking in the L2 caused K to feel very comfortable and open-

minded, unlike speaking her L1.

Date & Time	Language	Context	Experience
March 6, 7:16 a.m.; March 14, 8:33 p.m.	L2	N/A	Feeling more open when thinking in the L2 because no need to use keigo

Furthermore,

Online Response 7

   On March 22 before ten at night, K interacted with the L2 speakers, which caused her

to think in the target language; as a result, K felt no confusion. K, during the interview,

elaborated further as below:

   K 40:   I'm thinking based on (my English language) sense or something . . . .

This excerpt indicates K's natural and smooth flow of thinking in the L2, which, as a result, caused her to perceive no confusion in so doing.

Date & Time	Language	Context	Experience
March 22, 9:45 p.m.	L2	Interacting with the L2 native-speakers	No confusion; a lot easier

Interview Responses as Unrelated to Online Data

Because of the sociolinguistic difference between her L1 and the L2, K finds it much easier speaking the target language, as shown below:

K 41:   I communicate with my friends [in English very easily]. Right, I [don't have to think anything], and respond to what I'm asked. Unlike the Japanese language, I [don't have to be concerned about honorific or polite expressions (in English)].

K 42:   [No matter how many years apart (with interlocutors, I can speak the L2 easily)].

K 43:   Very easy to utter the English language ['cause no needs to think in the Japanese language].

These excerpts point out the complexities in the Japanese culture embedded in the Japanese language, in which a social hierarchy is significantly valued, and, as a result, Japanese phrases should be carefully chosen to show respect, depending upon who the interlocutors are. In the L2 culture, on the other hand, such psychological obstacles are not necessary, which thus, makes K feel at ease when speaking the L2. In so feeling, K speaks the L2 in an open-minded manner, unlike speaking the L1 in a roundabout or non-straightforward manner, so as not to hurt the feelings of the interlocutors, as shown below:

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K 44:   For example, Japanese wives, who have been living in Las Vegas for 40, 50 years [to them (I) express myself openly, which is norm (here)], and they accept my points of view.

K 45:   [Correct, (when talking with the L2 native speakers, unlike speaking the L1, I communicate openly and naturally)].

These excerpts indicate that the L2 culture interconnected to the L2 is a stimulus that causes K to speak the target language the way the L2 culture expects. Furthermore, K expressed her joy when meeting Japanese customers who say things the same way K does at her workplace, as shown below:

K 46:   [Feeling very comfortable (when meeting Japanese people who say things the way the L2 speakers do)]. There's one customer who comes to the store a lot, and who, too, is like me, says explicitly what she wants to say. She says she wouldn't mind even if she's disliked, and she told me that [I really say things very straightforwardly without thinking]. I do think, but uh, speak English immediately. . . [feeling normal].

Based on this excerpt, K appears to be mediated to the L2 culture in a seemingly natural, yet automatic manner, when speaking the target language. Also, this mediated act, or saying things very straightforwardly when speaking the L2, seems to be beyond K's conscious mind. As a result of this mediated act, K further added:

K 47:   After (I) came to the U.S, let me see when it was . . . depending upon the person, for instance, working in Japan for several years, and coming to (the U.S) for marriage or something. [If I say something to these Japanese people as if I were talking to (theL2 native-speakers), that'd be a big problem]. Like ["What in the world are you talking about?"] and [(they) back off]. 'Cause I say things too straightforwardly.

This excerpt points out that those who have just come to the U.S, apparently, have not yet developed the L2 different self. Once it is developed, on the other hand, it affects the L2 learners negatively, as shown below:

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K 48:   I bet [Japanese people who have lived (in the U.S) for a long time,
           experience difficulties (adjusting) when returning to Japan].

Furthermore, K acknowledged the cross-cultural differences, as shown below:

K 49:   I [feel awkward when trying to explain the meanings of Japanese TV
           shows (to my husband) in English]. (I) [don't know how to explain . . .
           especially, about gestures]. (My husband) should learn it by watching the
           shows (laughing) . . . Please watch and learn it (laughing). There are
           [many scenes for which I cannot explain (in English)].

K 50:   Since I speak English very fluently, [(the L2 native-speakers) ask me if
           I'm from Hawaii] (laughing). They think I'm Japanese second generation.
           I asked (some of my customers) why they thought that way, and
           responded that [the way I speak English is different from the way other
           Japanese people do]. Also, (they) said that [my gestures and expressions
           are like (the L2 native-speakers')].

These excerpts indicate: (1) pragmatics of K's L1, which can be very challenging to

convey exactly the same meanings in the L2; and (2) K's L2 different sense of identity.

Table 8 illustrates K's responses in regard to her L2 sense of identity:

Table 8: A Different Sense of Identity

Statement [Meaning Units]	Central Theme	General Theme	General Structure
(41) I communicate with my friends in English very easily. [Right, I don't have to think anything], and respond to what I'm asked. [Unlike the Japanese language, I don't have to be concerned about honorific or polite expressions (in English)].			
(42) [No matter how many years apart (with interlocutors)].			
(43) Very easy to utter the English language ['cause no needs to think in the Japanese language]. (44)	Getting in touch with feelings when uttering in	Process feelings	To better know self when thinking and/or speaking in the

For example, Japanese wives, who have been living in Las Vegas for 40, 50 years . . . to them (I) express myself openly, which is norm (here), and they accept my points of view.	the L2		L2
(45) [Correct, (when talking with the L2 native speakers, unlike speaking the L1,I communicate openly and naturally)].			
(46) [Feeling very comfortable (when meeting Japanese people who say things the way the L2 speakers do)]. There's one customer who comes to the store a lot, and who, too, is like me, says explicitly what she wants to say. She says she wouldn't mind even if she's disliked, and she told me that [I really say things very straightforwardly without thinking]. I do think, but uh, speak English immediately.			

Based on all of these excerpts, the answer to the question: "Does the L2 inner voice lead to a different sense of self?" is an affirmative.

Research Subquestion 5: How Does the L2 Inner Voice Lead to a Different Sense of Self?

The online response below was illustrated earlier, and other interview responses unrelated to online data are shown below:

Online Response 7

K 40: Yes, like (I have the English language sense based on which I utter immediately).

Interview Responses as Unrelated to Online Data

K 51: [I don't think (in the target language) completely].

Both the excerpts, 40, illustrated earlier, and 51 indicate K's prompt L2 utterances that are based on her so-called L2 sense, or identity. More specifically, K does not think

in the L2 before speaking the target language, but rather, speaks it in a spontaneous

fashion, or unconsciously, relying on her L2 sense.

When thinking in the L2, on the other hand, K responded her perception:

K 52:   [Not really, (I don't perceive anything when thinking in the L2)] . . .
           [feeling normal].

This excerpt shows that K does not experience a different sense of identity when

thinking in the L2. However, earlier in the online data, K's feelings, such as open-

mindedness and comfort, were considered when thinking in the L2.

In addition, K expressed her feelings about comedies and TV shows in the L2:

K 53:   [Yeah, (I like dramas)]. [('cause there're story lines)] . . . I [don't like
           American comedies]. [If (they're) funny, then I might watch them]. [If I
           go to stand-up comedies, I'd think it's boring] . . . [Points for laughing is
           different] and [I'd wonder why this is funny] . . . .

This excerpt points out K's utilization of the L2 inner voice when watching comedies

and/or TV shows (dramas) in the target language. More specifically, when watching

comedies or TV shows in the L2, K appears to unconsciously utilize the L2 inner voice,

which results in feeling bored and wondering why [jokes] in the comedies are so funny,

apparently, because of her lack of understanding the "authentic" L2 culture, or its

pragmatics, deeply embedded in the L2. Therefore, this excerpt shows the adverse way

the L2 can affect a sense of identity when one does not understand the L2 pragmatics, or

the culture.

Based on the analysis of all the excerpts illustrated above, as well as the previous

ones, the answer to the question: "How does the L2 inner voice lead to a different sense

of self?" is that the L2 inner voice seems to lead to a different sense of identity

spontaneously and automatically, when speaking the target language; so does it unconsciously when thinking in the L2, only if one naturally understands the contextual meanings in the L2.

<div align="center">Participant H</div>

My third participant, whom I will call "H" for the purposes of this research, is a male between the age of 51 and 55, and from Japan. He is a licensed real estate agent and realtor in the southwest. He also graduated from a university in the Northeast before moving to where he resides now. Like my second participant, K (her data was shown earlier), H married a native speaker of the English language, and the medium for communication at home is English, or his L2. H showed his reserve at first, but assessed his L2 proficiency level as advanced; at the time of the study he had been living in the U.S for over twenty years. H began to study English as the requirement in middle school in Japan; however, he disliked the classes, as illustrated below:

H: Well . . . I didn't like (the English classes). I studied for an entrance exam for high school.

H: In high school, I too studied for an entrance exam for university.

However, western movies intrigued H all of sudden when he was a junior in high school, as shown below:

H: But . . . when I was a junior (in high school), it <u>was interesting</u> to watch western movies. Of course, I had to read the captions though . . . .

H: Action movies, War-based ones, documentaries . . . I <u>became interested in the English language</u> not as a subject in school, but <u>as a tool for communication</u>. As a matter of fact, I'd been watching western movies since I was small.

<div align="center">130</div>

Despite his great interest in English as a tool for communication, H did not pursue his interest in a university; he disliked the grammar-based curriculum and stopped learning even the grammar, as depicted below:

H: Well, after I was admitted to a university, I <u>stopped (studying the language</u>). I was not interested in it at all.

After graduating from a university in Japan, H came to Michigan to study business administration at a university in 1977.

Research Subquestion 1: Does an L2 Inner Voice Develop?

H's online data were collected between February 5 and April 2. He responded on a daily basis, and total of 49 responses were collected, among these, 13 were responded to when H was thinking in English. H responded online either at work, where English is the medium for communication, or when reading e-mails at either home or work.

The followings are his first two responses:

Online Response 1

On these days, February 7 and 9, in the mid-afternoon H reported online his thinking in the L2 when reading e-mails written in the target language. During the face-to-face interview, H elaborated his experience:

H 1:   (I naturally understand) when reading and typing e-mail texts. I don't translate it into Japanese consciously.

This excerpt shows H's natural thinking in the L2, or the L2 inner voice, when reading and typing e-mail texts in the target language, as he responded no need to utilize the L2 inner speech.

His first online response is shown below:

Date & Time	Language	Context	Experience
February 7, 2:48 p.m.; February 9, 3:07 p.m.	L2	Reading e-mails	Focusing more on e-mails

Interview Responses as Unrelated to Online Data

After his graduation from a university in Michigan, H returned to Japan for work. Given that many L2 learners claim that they tend to lose much of their so-called L2 stimuli after leaving the L2 speech countries, and in response to my spontaneous interview question: "Did you lose your improved L2 proficiency after returning to Japan?" H surprisingly responded positively, as illustrated below:

H 2:   On the contrary, (my English language skills) were improved.

This excerpt shows H's strong perception that his L2 proficiency instead improved after returning to Japan. Also, it shows H's unconsciousness of his L2 improvement in the U.S rather than after returning to Japan; H happened to realize his abilities to speak the L2 more naturally than before.

H's further responses show that unlike many other L2 learners, he was put into circumstances where he had to use the L2 for business purposes on a daily basis:

H 3:   Well, uh, [the company (I worked for in Tokyo) was a foreign-capital one].

H 4:   Then, uh, [the common language was the English language (in the company)]. Of course, (I) used Japanese though [In meeting, you know, (we used) English]. Then, uh, talking about [English for business purposes], you know, it's serious one, serious.

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These excerpts show the L2 as a common medium for communication for meetings and other duties within H's company. Additionally, H seemed to have had to learn technical terms in the L2 for better communication. As a result, this enforced context apparently helped H improve much of his L2 proficiency, as shown in the following excerpt:

H 5: In the business world, (we) were forced to use [the English language] . . . uh, [because of that, my English language skills were improved, I suppose].

Furthermore, H added:

H 6: [(Even documents in conferences were not written in Japanese (but in English)].

Consequently, as the above excerpt shows, the L2 use in all the materials appeared to raise H's awareness of the L2 requirement at his workplace and thus, helped his L2 proficiency improve.

Table 9 lists the meaning units in brackets, central theme, general theme and general structure:

Table 9: Development of the L2 Inner Voice

Statement [Meaning Units]	Central Theme	General Theme	General Structure
(3) Well, uh, [the company (I worked for in Tokyo) was a foreign-capital one]. (4) Then, uh, [the common language was the English language (in the company)]. Of course, (I) used Japanese though. In meetings, you know, (we used) English. Then, uh, talking about English for business	L2 contexts	Stimuli for L2 utterances	Under forced nature of the L2 use, which resulted in L2

purposes, you know, it's serious one, serious (5) In the business world, (we) were forced to use [the English language] . . . uh, [because of that, my English language skills were improved, I suppose]. (6) [(Even documents in conferences were not written in Japanese (but in English)].			improvement

Furthermore, the following responses show: (1) H's natural, or spontaneous L2 utterances in the L2 contexts; (2) he seemed to have had little time to "think" in the L2 before speaking in his workplace, that apparently helped him develop the L2 inner voice:

H 7:   Well . . . (thinking). [I didn't think (in my head) before speaking].

H 8:   I don't know what to say. But, uh, recalling then now, and uh, when speaking in conferences, uh, translating what I heard into Japanese and uh, vice versa, uh, [I didn't do this], I believe.

These are his responses to the question: "Do you think you improved your natural thinking abilities in the English language?" which shows H's non-utilization of the L2 inner speech, but the L2 inner voice instead.

Also,

H 9:   Probably, uh, I [listened (to the L2)] and [responded in the same language], I believe.

This excerpt shows the L2 stimulus – the target language contexts – that caused H to think and speak the same language in a prompt manner. Also, H was cognitively able to do so because of his apparently improved L2 proficiency. Otherwise, he may have

instead utilized the L2 inner speech – to do mental translation between the L1 and L2.

Interestingly, H acknowledged such an L2 stimulus:

> H 10: Uh, from a non-scholastic point of view, [probably, I became passive in the English language and naturally uttered . . .].

These responses are shown in table 10:

Table 10: Development of the L2 Inner Voice

Statement [Meaning Units]	Central Theme	General Theme	General Structure
(7) Well . . .(thinking). [I didn't think (in my head) before speaking]. (8) I don't know what to say. But, uh, recalling then now, and uh, when speaking in conferences, uh, translating what I heard into Japanese and uh, vice versa, uh, [I didn't do this], I believe. (9) Probably, uh, I [listened (to the L2)] and [responded in the same language], I believe. (10) Uh, from a non-scholastic point of view, [probably, I became passive in the English language and naturally uttered . . .].	Exposure to L2	Natural responses in L2	When exposed to the L2, with L2 high Proficiency respond un-consciously

Based on these data analysis, the answer to the question: "Does theL2 inner voice really develop?" seems to be a positive one for H.

Research Subquestion 2: What is the Function of the L2 Inner Voice?

When the development of H's L2 inner voice was analyzed, the function of the L2 inner voice, too, was evident. However, in this section, H's further responses will be analyzed.

Online Response 1

H 10:   When reading and typing e-mail texts, (I naturally read and understand). I don't translate it into Japanese consciously (when thinking in the L2).

Interview Responses as Unrelated to Online Data

H 11:   [Maybe, you know, uh, I understand the English language when listening to it, I guess].

The excerpts, 1, which was illustrated earlier, and 11, show his awareness of his "natural" thinking in the L2 when decoding the meanings of e-mails and listening to the target language.

H 12:   [um . . . . (thinking)]. [I barely remember (doing so)]. [Actually, I don't understand what I'm doing in my head]. Saying again, [I've never thought about it].

This is H's response to the question: "Did you consciously think in your head (in English when you were in Tokyo)?" and which shows difficulties in examining his thinking in the L2, in retrospect. As shown above, even now he has no idea about what is going on in his mind in the L2. Yet H responded:

H 13:   [No, not at all (I am thinking in my head now)].

These two excerpts clearly show one thing: H spontaneously and unconsciously engages in thinking in the L2.

Table 11: Function of the L2 Inner Voice

Statement [Meaning Units]	Central Theme	General Theme	General Structure
(11) [Maybe, you know, uh, I understand the English language when listening to it, I guess]. (12) [um . . . (thinking)]. [I barely remember (doing so)]. [Actually, I don't understand what I'm doing in my head]. Saying again, [I've never thought about it]. (13) [No, not at all (I am thinking in my head now)].	Exposure to L2	Spontaneous responses in L2	When exposed to the L2, with L2 high proficiency respond un-consciously

Based on the analysis of all these excerpts, the answer to the question: "What is the function of L2 inner voice?" seems to be that L2 inner voice helps or guides H to natural thinking – L2 inner voice – and speaking the target language.

Research Subquestion 3: How does the L2 Inner Voice Develop?

Based on the data analysis for the first and second research sub-questions thus far, one thing was evident: Although he did not realize his L2 improvement while staying in the U.S., the forced L2 usage contexts at his work place in Japan helped H realize his natural thinking and speaking the target language. More specifically, H was able to utilize the L2 inner voice, rather than the L2 inner speech, when spontaneously thinking and speaking the target language, because of his L2 improvement in the U.S. Otherwise, H could not seemingly have done so in his work place. Therefore, the answer to the question: "How does the L2 inner voice develop?" seems to be that the L2 inner voice

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emerges in an unconscious manner when the target language proficiency improves and that L2 stimuli help it develop further.

Research Subquestion 4: Does the L2 Inner Voice Lead to a Different Sense of Self?

When it comes to perceptions of a different sense of identity when both thinking and speaking the L2, H's feelings are more complex, as illustrated below:

Online Data

On February 6 at a little after 10:00 a.m., H reported online at work his thinking in the L2. During the face-to-face interview, H elaborated upon his feelings of stress:

Online Response 2

H 14:   (I was thinking about my work and uh, lots of documents and uh, lots of things to do . . . that caused me feel stressed). Because of the English language . . . (thinking).

H 15:   probably 30% (is the English language), I believe. And, uh, if the sum is 100%, and uh, majority of it is about my work, things to do (for my clients), that is the main cause of my stress.

H 16:   Then, uh, over the course of my work, all (my) documents are in the English language. But, uh, if they are in Japanese, (I)'d feel 30% less stressed out, I suppose.

H 17:   Right, (I'd feel stressed out even the documents are written in Japanese). I mean, uh, 70% about my work and responsibilities weigh in my stress level.

These excerpts, as H acknowledged, point out to the cause of his stressed feelings when thinking in the L2. More specifically, his stress is not caused by the L2 but rather his work responsibilities, total of 70 percent; only 30 percent tended to affect his feelings when utilizing the L2, which seems to be his L2 inner speech, while decoding meanings of the documents. Consequently, because of the complexities of the documents and of

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the L2 use, H felt stressed out. Also, H, as seen above, responded that his stress level

decreases by 30 percents instead when reading business documents and e-mails in

Japanese, his L1.

    Here is his online response:

Date & Time	Language	Context	Experience
February 6, 10:14 a.m.	L2	At work	Thinking about work; felt stressed

    Next,

Online Response 3

    On these days, H was thinking in the L2 when reading e-mails in the L2; did not

perceive a different sense of identity. The following online responses also show his lack

of feelings when utilizing the L2, but illustrates his perception otherwise:

Date & Time	Language	Context	Experience
February 7, 2:48 p.m.; February 9, 3:07 p.m.; February 17, 6:23 p.m.; February 18, 7:15 a.m.; February 22, 7:59 a.m.; March 3, 7:41 a.m.; March 5, 6:47 a.m.; and March 8, 8:31 a.m.	L2	Reading e-mails	Feeling no difference

Also,

Online Response 4

On February 11 at around 5:00 p.m., H was still at work but not experiencing a

different sense of self in the target language. During the interview, H elaborated his

experience:

H 18:   I become result-oriented a little faster when thinking in the English
          language. (The English language is a lot) easier to write . . . because I
          only focus on points. You know, in Japan, in the Japanese language, uh,
          polite expressions, or uh, formal expressions . . . .

H 19:   You know, (when writing in the Japanese language) feeling unaccepted if
          (we) write straightforwardly, and uh, you know, (we) embellish (our)
          sentences . . . .

H 20:   But, uh, in the English language, I think (it's) a logical language. In the
          flows of (conversation), it's quite OK as long as (it's done) logically. I
          can write (in English) with merely logic. Feeling nothing . . . Saying again,
          I've never thought about it.

As evidenced in these excerpts, being aware of sociolinguistic differences between

his L1 and the L2, H interchangeably employs appropriate pragmatics when using the

languages. As a result, H feels a lot easier to use the L2 than the L1, for the

straightforward nature in the L2 culture, which enables H to write in the target language

with only logic.

Date & Time	Language	Context	Experience
February 11, 5:03 p.m.	L2	At work	Feeling no difference; can be more purposeful and result-oriented

H responded, unlike when he speaks Japanese, there is no need to show his reserve to his boss when speaking the L2, as shown below:

H 21:   I don't feel reserved when talking to my boss. ['Cause I don't need to show my reserved and polite attitude (to my boss)].

This excerpt shows the L2 culture, in which there is no need to show his reserve to his boss. More specifically, speaking the L2 does not require a consideration of the social position of interlocutors. Therefore, H speaks the L2 as the way that the L2 culture is embedded in it; his boss too expects that:

H 22:   Even I show my reserve to show my respect to my boss, [he doesn't take it in a positive way].

Further:

H 23:   At the end of sentences in the L2, I [say "Sir" (to my boss) as a joke]. [(My boss), too, knows that].

This excerpt points out H's humor when speaking to his boss in the L2 as acceptable in the L2 culture. Yet, H showed his concern, as shown below:

H 24:   [Well, you know, I try not to be disrespectful (to my boss)].

This response shows the negative effect of his L1 culture on the L2. Unlike the L2 culture, in the Japanese culture H would be stigmatized for his disrespectful behavior should he speak the L1 to his Japanese boss in the same way as he does the L2.

Table 12 shows his responses:

Table 12: A Different Sense of Identity

Statement [Meaning Units]	Central Theme	General Theme	General Structure
(21) I don't feel reserved when talking to my boss. ['Cause I don't need to show my reserved and polite attitude (to my boss)]. (22) Even I show my reserve to show my respect to him, [he doesn't take it in a positive way]. (23) At the end of sentences in the L2, [I say "Sir" (to my boss) as a joke]. [(My boss), too, knows that].	Language and culture are inter-connected	Language-culture	Culture is indispensible when learning languages, and when the target language proficiency is improved, its culture is acquired naturally

Based on the analysis of all these excerpts, the answer to the question: "Does the L2 inner voice lead to a different sense of self?" seems to be that it does.

Research Subquestion 5: How Does the L2 Inner Voice Lead to a Different Sense of Self?

Evidence of a different sense of identity when thinking in and speaking the L2 was already seen. In this section, H's further responses seem to offer valuable insight into a question: How does the L2 inner voice lead to a different L2 identity?

Being aware of the cross-cultural differences, H pointed out the negative effects of the L2 different sense of identity in the non-English language communities:

H 25:   [(Japanese wait people in Japanese restaurants), who cannot speak Japanese in a context appropriate manner] . . . [can't use polite expressions (to Japanese customers)]. [They are speaking Japanese, but uh, you know, uh, similar to the way that the native speakers (of the English language) do]. [Disrespectful]. [Like those (waiting people) at T.G.I.F.]. ['Cause that's a mixture of the culture, I believe]. (They're) sometimes confused to switch back and force (their culture)]. [They don't realize that consciously].

This excerpt shows that the younger L2 learners' unawareness of the negative impact of the L2 different self in the non-L2 speech community. Also, it shows the effects of the L2 inner voice over the L1. In other words, a different self led by the L2 inner voice dominates the L2 learner's mind, which results in acting in a disrespectful manner in the L1 culture.

Based on these data analysis, the answer to the question: "How does the L2 inner voice lead to a different sense of self?" is seemingly that the L2 inner voice leads to such an identity in a natural and unconscious fashion.

<center>Participant D</center>

My fourth participant, whom I will call "D" for the purposes of this research, is a male between the age of 36 and 40 and originally from the Northeast. D now resides in the Southwest and teaches ESL at a college. D is a native speaker of the English language and a learner of the Japanese language, in addition to the Chinese and Korean languages – which he is able to speak fluently because he lived in both Korea and China. In this research, however, I will focus on his Japanese language skills, his L2. Additionally, D obtained a master's degree in Applied Linguistics from a university in Australia through an online degree program. He also married a native Japanese speaking

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woman, who is an English language learner. D self-assessed his current L2 proficiency

as intermediate, and at the time of the study he had been learning it for eight years, since

2001. Moreover, D went to Japan for the first time in 2001, and he recalled his L2

proficiency level then was beginner; he taught English there for three years, as illustrated

below:

> D: In Japan, uh, when I moved to Japan in 2001 for taking an assignment,
>   when I began to formally, uh, well, correctly informally, uh, not with
>   teachers, just bought textbooks and began to study, self-study, as well as
>   immersion gave me the influence of [Japanese].

> D: Yes. I had a lot of difficulties . . . plenty of difficulties . . . it was a hard
>   time for me . . . .

These excerpts show both D's effort to learn the target language for better

communication and the L2 context on a daily basis; which went together well and helped

him "assimilated" into the target language use and its culture.

Furthermore,

> D: I had some knowledge, uh, though . . . it was, it's been more over ten years
>   ago, I did take one semester of college-level of Japanese and probably in
>   1992, and uh, at that time, I did have intention of possibly going to Japan,
>   but I didn't.

As shown above, D took one Japanese course in 1992, nine years before his arrival in

Japan, and apparently he did not attempt to maintain what he had learned since then.

After spending in Japan for three years, D returned to the U.S., and the medium for

communication with his wife at home is his L1, the English language.

Research Subquestion 1: Does an L2 Inner Voice Develop?

Because D successfully learned both Chinese and Korean earlier in his life and

experienced both negative and positive aspects of learning foreign languages, he was well

aware of "thinking" in an L2, which resulted in his smooth responses throughout the online and interview.

Online Data

D's online data were collected between February 6 and March 25; his total online responses were 24, among which 5 were responded to when D was thinking in Japanese, his L2. D was thinking in the L2 when being stimulated by the L2 medium, such as Japanese songs, TV shows and texts written in the L2. In addition, when looking at artifacts, such as photos taken in Japan, he was stimulated, which resulted in D's thinking in the L2.

From these 5 responses, D's first online response is shown below:

Online Response 1

On February 6 in the mid-morning, D reported online his thinking in the target language while watching a Japanese Anime, or cartoon, film with his Japanese-speaking wife. D elaborated further during the face-to-face interview:

D 1: Sure, (frustrated 'cause what I was hearing does not go together with the subtitles). It was kind of easier for short phrases (to go together though).

This excerpt shows D's natural flows of or spontaneous thinking in the L2 – which reflects the L2 inner voice – for short phrases in the target language, while for longer ones, was successfully unable to decode the meanings through the L2 inner speech, and which resulted in D's frustrated feelings. Further,

D 2: Yeah, (my Japanese words or phrases flashed back in my head) . . . when watching the film). Right, anything I've learned before. If I hear that again, would come back to me very quickly.

This excerpt too shows his L2 inner voice, in the form of visual characteristics of the written L2 which D had learned before in his mind.

Nonetheless, D understood the Anime film, in general, because of the visual clues in it, as shown below:

D 3:   Right, (I understood pretty much because of the visual . . .). Only general part of the story (I understood).

Here is his 1ˢᵗ online response:

Date & Time	Language	Context	Experience
February 6, 10:31 p.m.	L2	Watching an Anime film	What I'm hearing and am trying to understand does not match with the subtitles in the film

Next,

Online Response 2

D, on this particular day, February 23, was thinking in the L2 while deciphering lyrics from Japanese songs. During the interview, D elaborated:

D 4:   Yeah, a little bit both (the L2 inner voice and L2 inner speech). Within the (L2) inner speech, I do . . . it is sort of, uh, language, so, a lot of music and sound good, I like to do home-alone to it, and maybe mimics some words when sounds right regardless of the meanings, uh, another time, I'm trying to negotiate the language in my head, I heard this before, understand this word, I get the context, you know . . . .

This excerpt shows his both the L2 inner voice and the L2 inner speech. More specifically, when D. was deciphering lyrics from the L2 songs, his L2 inner voice appeared to help him recognize the sounds and some words, while the L2 inner speech helped decode the meanings of the words.

Date & Time	Language	Context	Experience
February 23, 9:26 p.m.	L2	Deciphering lyrics from Japanese songs	Not frustrating when thinking in the L2 alone

Also,

Online Response 3

On February 23 at 9:26 p.m., D was looking at a Japanese web site and thinking in the

L2. D explained:

D 5: Yeah, I was spelling out (the L2 characters) in mind, Katakana, Hiragana. Uh, I voiced it myself, uh, to just, uh, to try to read it. This excerpt too shows not only his L2 inner voice, but also L2 inner speech. When spelling out the L2 characters in his mind, D seemingly engaged in the L2 inner speech in a conscious manner, which caused him to feel frustrated. When voicing the characters out, on the other hand, D appeared to utilize the L2 inner voice, or the natural sounds and pronunciation that seemingly assisted him in vocalizing the L2.

Date & Time	Language	Context	Experience
February 23, 9:26 p.m.	L2	Looking at a Japanese Web site	Very tedious and frustrating task

Finally,

Online Response 4

During the interview, D explained about his thinking in the L2 on this day, March 14,

early in the afternoon:

D 6: (I was thinking in the L2) while working on computer programs in Japanese Windows. The computer was from Japan. I felt frustrated because of the needs to decode the meanings (of the programs in the L2).

This excerpt shows D's conscious engagement in the L2 inner speech when trying to understand the programs in the target language. As a result, because of the arduous task to decode the meanings of lots of the Japanese characters, D felt very frustrated.

The online response is shown below:

Date & Time	Language	Context	Experience
March 14, 1:22 p.m.	L2	Working on a new computer	Very frustrated

Interview Responses as Unrelated to Online Data

The following response shows D's awareness of the L2 inner voice:

D 7:   Yeah, uh, (when my Japanese language skills were improved, I experienced my Japanese inner voice) because I struggled with (the L2) a lot . . . so, I felt unsuccessful, really, uh, so, lots of . . . my time was merely thinking in the language.

This excerpt explicitly shows his both the L2 inner voice and L2 inner speech interchangeably. More specifically, when he struggled learning the L2, or his L2 proficiency was still low, D appeared to utilize the L2 inner speech, whereas he did the L2 inner voice once his L2 proficiency improved. Further,

D 8:   [To think about (Japanese language) before I can say it and quite frustrating to me, so, did lots of thinking] . . . uh, [whether it was accurate or not].

This excerpt points out to his conscious engagement of the L2 inner speech right before speaking the target language; it shows his utilization of the L2 inner speech in assessing the correct use of his L2 grammar and/or its phrases before speaking the target language.

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D responded the significance of "thinking" in the L2, in retrospect:

D 9:   [(Depend on the situation I was in, I thought about Japanese expressions in my head before speaking) I knew it was necessary].

Also,

D 10:   [Yeah, short phrases] . . . [plenty of times], uh, when I want to say immediately [what I wouldn't be able to formulate the word in Japanese], as fast I want to say it, so, and that the moment of . . . uh, hesitation, uh, is enough for me to just . . . not to say anything at all sometimes.

This excerpt shows D's smooth flows of thinking in the L2 for short phrases in the target language. Otherwise, he felt unwarranted to try further in the L2. Furthermore, D knows, through his earlier foreign language learning experiences, that "thinking" in an L2 is the very first step to successfully acquiring an L2:

D 11:   [Uh, I think, uh, trying to think of the word for what you do, sort of direct translation in your mind for you before you] . . . it's one of the stages of, of, uh, acquisition, basically, where you sort of making the, uh, sort of trying to do, like direct translation, and [just in your head] . . . [you know your thought in English, you're trying to put words together in Japanese].

D 12:   Thinking twice in your head before you're actually speaking].

These excerpts indicate D's dependence on the L2 inner speech before improving his L2 proficiency. Once his L2 proficiency improved, D realized the "different" phase of thinking in the L2:

D 13:   [When you get more advanced, it just comes, you know, in that very natural with it].

This excerpt shows the emergence of the L2 inner voice, or natural thinking, in the target language when D becomes much more fluent with the L2.

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Evidence of D's awareness of 'thinking' in the L2 was seen in the excerpts shown above. In addition, his frustration, as a result of his lower L2 proficiency, caused him to consciously engage in the L2 inner speech. These responses are illustrated in Table 13 below, which shows the meaning units in brackets, central theme, general theme and general structure:

Table 13: Development of the L2 Inner Voice

Statement [Meaning Units]	Central Theme	General Theme	General Structure
(8) [To think about (Japanese language) before I can say it and quite frustrating to me, so, did lots of thinking] . . . uh, [whether it was accurate or not]. (9) [(Depend on the situation I was in, I thought about Japanese expressions in my head before speaking) I knew it was necessary]. (10) [Yeah, short phrases] . . . [plenty of times], uh, when I want to say immediately what I wouldn't be able to formulate the word in Japanese, as fast I want to say it, so, and that the moment of . . . uh, hesitation, uh, is enough for me to just . . . not to say anything at all sometimes. (11) [Uh, I think, uh, trying to think of the word for what you do, sort of direct translation in your mind for you before you] . . . it's one of the stages of, of, uh, acquisition, basically, where you sort of making the, uh, sort of trying to do, like direct translation, and [just in your	Thinking in my head	Stimuli for thinking in the L2	Mental assessment of L2 expressions/ phrases or rehearsal before speaking

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head] . . . [you know your thought in English, you're trying to put words together in Japanese]. (12) [Thinking twice in your head before you're actually speaking]. (13) [When you get more advanced, it just comes, you know, in that very natural with it].			

Based on these data analysis, the answer to the question: "Does the L2 inner voice really develop?" seems to be that it positively does.

Research Subquestion 2: What is the Function of the L2 Inner Voice?

For analysis of the function of an L2 inner voice, some of D's online responses, which were illustrated earlier, will be reiterated here, because which too appear to offer valuable insight into the function of the L2 inner voice.

Online Response 1

D 1:   Sure, (frustrated 'cause what I was hearing does not match with the subtitles of the Japanese Anime). It was kind of easier for short phrases (to match).

This excerpt seemingly shows two things: (1) the L2 inner speech in the form of the Japanese characters which he had previously learned; (2) the L2 inner voice, or the authentic sounds in his mind that he heard on TV. As a result, the Japanese characters in his mind did not go together with the L2 sounds or authentic pronunciation on TV, which caused his frustrated feelings.

D 2:   Yeah, (my Japanese words or phrases flashed back in my head) . . . when watching the film. Right, anything I've learned before. If I hear that again, would come back to me very quickly.

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This excerpt too shows the L2 inner voice in the form of the words or phrases which D had learned before in the natural flows of thinking. In addition, the L2 film seemed to be a stimulus that caused what D had learned to flash back in his mind, as depicted below:

Online Response 2

D 4: Yeah, a little bit both (the L2 inner voice and L2 inner speech). Within the (L2) inner speech, I do . . . it is sort of, uh, language, so, a lot of music and sound good, I like to do home-alone to it, and maybe mimics some words when sounds right regardless of the meanings, uh, another time, I'm trying to negotiate the language in my head, I heard this before, understand this word, I get the context, you know. . . .

This excerpt shows the significant role of the L2 inner voice. When trying to mimic the words in the L2 songs, D appeared to have spontaneously utilized his L2 inner voice in an effort to assess and match his L2 syntax to the seemingly correct L2 sounds, even without knowing the meanings of the words. Also, the L2 inner voice seemed to have led him to the contexts where he had learned the particular L2 words.

Online Response 3

D 5: I was spelling out Katakana, Hiragana in my head when looking at a Japanese web site. I voiced it myself, uh, to just, uh, to try to read it.

This response shows both the L2 inner voice and L2 inner speech. When trying to spell out the Japanese characters in mind, D consciously engaged in the L2 inner speech; when attempting to vocalize them, on the other hand, he then appeared to unconsciously utilize the L2 inner voice.

Interview Responses as Unrelated to Online Data

D 14:   Yeah, I [was thinking in Japanese when watching a Japanese Anime (cartoon)].

D 15:   [Yeah, (I was thinking when deciphering lyrics of Japanese songs and browsing through a Japanese Web site)].

D 16: [Yeah, (I thought in Japanese when working on computer programs which were in Japanese windows)].

These excerpts point out to the L2 stimuli, such as TV shows, songs, and software, which caused D to think unconsciously in the L2.

In addition,

D 17:   When looking at the photos taken in Japan, for example, with my family-in-laws, My Japanese friends, [(those moments flashed back in my head)]. [Yeah, (I remember the conversation I had with my friends)] . . . [general mood]. [Certain conversation, of course].

D 18:   [Uh, I would probably, the resurrection of, probably, first resurrecting English]. [If I were really specific, really thought about it, and something stood out, as far as, uh, conversation in Japanese I, I could remember just of it].

These excerpts show D's autobiographical memories in the L2. When looking at artifacts from Japan, such as photos taken on particular occasions, the L2 inner voice – such as the conversation with his Japanese friends, his family-in-laws, for example – seemingly caused such memorable moment to flash back in the stream of his thoughts, and that as a result, took D back to the particular contexts.

Table 14 shows his interview responses:

Table 14: Function of the L2 Inner Voice

Statement [Meaning Units]	Central Theme	General Theme	General Structure
(14) Yeah, I [was thinking in Japanese when watching a Japanese Anime (cartoon)]. (15) [Yeah, (I was thinking when deciphering lyrics of Japanese songs and browsing through a Japanese Web site)]. (16) [Yeah, (I thought in Japanese when working on computer programs which were in Japanese windows)]. (17) When looking at the photos taken in Japan, for example, with my family-in-laws, my Japanese friends, [(those moments flashed back in my head)]. [Yeah, (I remember the conversation I had with my friends)] . . . [general mood]. [Certain conversation, of course]. (18) [Uh, I would probably, the resurrection of, probably, first resurrecting English]. [If I were really specific, really thought about it, and something stood out, as far as, uh, conversation in Japanese I, I could remember just of it].	Spontaneous utilization of L2	L2 Stimuli for thinking in the target language	Mental assessment of L2 expressions/phrases or rehearsal before speaking

Based on these data analysis, the answer to the question: "What is the function of L2 inner voice?" is that the L2 inner voice is a natural and non self-regulatory stream of thinking in the target language and that guides D in thinking and speaking the L2 in a spontaneous manner.

Research Subquestion 3: How does the L2 Inner Voice Develop?

As evident in the excerpts above, the natural stream of thinking in the L2, or the L2 inner voice, appeared to emerge once D's L2 proficiency improved. To further analyze

how L2 inner voice develops, D's online response, which was cited earlier, will be listed again here:

Online Response 1

D2:   Yeah, my Japanese words or phrases flashed back in my head when watching a Japanese Anime. Anything I've learned before . . . If I hear that again, would come back to me very quickly.

This excerpt shows an L2 stimulus, such as the L2 TV show, that promptly activated D's L2 inner voice. Without his improved L2 proficiency, however, such the stimulus appeared not to have helped D utilize his L2 inner voice, or the natural L2 utterances spontaneously.

Based on this data analysis, the answer to the question: "How does the L2 inner voice develop?" is that it seems to develop once the L2 proficiency improves, as well as with exposure to the target language, or the L2 stimuli, concurrently.

Research Subquestion 4: Does the L2 Inner Voice Lead to a Different Sense of Self?

In this section, D's perception of a different self when using the L2 will be analyzed. His online responses are shown below:

Online Data

On this day, March 5, in the mid-morning, D reported online thinking in the L2 when looking at artifacts, photos taken in Japan. He elaborated during the interview:

Online Response 5

D 19:   I felt kind of nostalgic (when looking at those photos). Particular moments flashed back in my mind.

This excerpt points out D's slightly sad feelings brought back by his memories reflected in the photos. More specifically, in addition to his missing feelings of Japan –

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and his Japanese friends – the L2 inner voice seemed to naturally bring back in his mind

what was reflected in the photos, such as the conversations that he had with his Japanese

friends, the particular occasions, or moments in Japan, for example.

This online response is shown below:

Date & Time	Language	Context	Experience
March 5, 10:38 a.m.	L2	Looking at photos taken in Japan	Feeling nostalgic

Interview Responses as Unrelated to Online Data

Evidence of D's awareness of the L2 culture tied to the songs, which resulted in his

particular feelings, was seen in the followings:

D 20:   (When deciphering lyrics of Japanese songs) [Ties to the context of
          (Japanese) song which ties in, realistically, ties into the context to some
          cultural context of Japan. Uh, I do get that feeling when I, when I'm
          listening]. Particular [cultural (context)] . . . Yeah, cultural contexts (just
          pops up)].

D 21:   Yeah, [just Japanese culture pops up when listening to Japanese songs].

These excerpts indicate interconnectedness between the L2 and the culture, as seen in

the L2 songs. When listening to the songs, D appeared to be naturally guided to

particular cultural contexts tied to the songs, which caused him to feel the L2 culturally-

led feelings.

Furthermore, D acknowledged that the L2 songs are tied to not only the culture, but

also to the emotions of the singers:

D 22:   [Even ties into, uh, the emotion of the singer, really, takes me to, to the
          place where they're from, basically, in Japan]. I can, [I can sort of sense,
          maybe, what age group with interested in, you know, what, where I expect

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him to like, uh, show up and advertising in TV shows] and things like that. Uh, kindda, [what their places and uh, role models in society would be], so, that [ties me up, uh, to . . . cultural reference in Japan].

As was evidenced above, when listening to the L2 songs, D. appeared to be unconsciously led to both the L2 culture and the singers' emotional feelings. In addition, D perceives who the L2 songs particularly appeal to because of the different compositions in Japanese songs, which he refers to as an L2 cultural reference.

Additionally:

D 23:   [Yeah, I don't know if I thought of it (the way of different perception between the languages)].

This is D's response to the question: "Do you experience any shift of cultural perception when thinking in both languages?" This excerpt shows no difference in his perceiving a different sense of self when thinking in either language.

Also, what intrigued me were changes in his tone of voice when speaking the L2:

D 24:   Yeah, I [don't know if I thought of (cultural mental shift when thinking both languages)], but yes, yes, uh, when I, uh, [my voice changes slightly]. [This is actually of, hard for me to, uh, (explain)]. [Yeah, my voice (tone) changes]. [I noticed my voice would lower quite a bit when I spoke in second languages], and [I think it, it became lower and slower]. I think, just because I wanted to be correct. I wanted to be correct and clear when I spoke, so I would not be misunderstood.

D 25:   [I'm not exactly sure, but I think it is because I made adjustments in speaking other languages].

D 26:   [I don't know, it, it might've been, uh, going naturally change anyway, but it's quite a bit lower than anyone remembers]. [Just slow down and uh, and speak a little deeper, more clearly, um, I'm not sure why].

These excerpts show D's conscious efforts to use the L2 correctly, which resulted in speaking the target language more slowly in a lower tone of voice. Furthermore, D

emphasized the importance of producing the L2 sounds in the same way as the L2 native speakers do:

D 27:   Yeah. Uh, I'm not sure those all the reasons, I just know when I started learning second languages, I [may have to do with], you do that, not all the sound of, uh, [produce the same way in, in these languages], so, [making some of the adjustment] I need to make to, [to formulate (the same) sound].

D 28:   [I think when I realize that I started making more, more adjustments to be clear, so, instead of sounding really up, you know, like one moment here, one moment there, try to keep up, uh, regular flow in that scene to, to down language, uh, I just try to mediate it and, and, make it clear].

These excerpts point out the important role of the L2 inner voice. The L2 inner voice appeared to be the authentic L2 sounds, or pronunciation, in his mind, and that seemingly helped D speak the L2 by imitating the sounds in his mind concurrently.

Therefore,

D 29:   [Yes, slightly (I perceive a different sense of self when speaking the L2)].

This excerpt shows D's positive perception of the L2 different self when speaking the target language.

Table 15 lists his responses:

Table 15: A Different Sense of Identity

Statement [Meaning Units]	Central Theme	General Theme	General Structure
(20) (When deciphering lyrics of Japanese songs) [Ties to the context of (Japanese) song which ties in, realistically, ties into the			

context to some cultural context of Japan. Uh, I do get that feeling when I, when I'm listening]. Particular [cultural (context)] . . . [Yeah, cultural contexts (just pops up)]. (21) Yeah, [just Japanese culture pops up when listening to Japanese songs]. (22) [Even ties into, uh, the emotion of the singer, really, takes me to, to the place where they're from, basically, in Japan]. I can, [I can sort of sense, maybe, what age group with interested in, you know, what, where I expect him to like, uh, show up and advertising in TV shows] and things like that. Uh, kindda, [what their places and uh, role models in society would be], so, that [ties me up, uh, to cultural reference in Japan]. (23) [Yeah, I don't know if I thought of it (the way of different perception between the languages)]. (24) Yeah, I [don't know if I thought of (cultural mental shift when thinking both languages)], but yes, yes, uh, when I, uh, [my voice changes slightly]. [This is actually of, hard for me to, uh, (explain)]. [Yeah, my voice (tone) changes]. [I noticed my voice would lower quite a bit when I spoke in second languages], and [I think it, it became lower and slower]. I think, just because I wanted to be correct. I wanted to be	Songs and culture Conscious imitation of L2 pronunciation	Self-discovery of L2 inner voice Conscious assessment of his L2 use	L2 inner voice leads to its culture Utilization of L2 inner voice and inner speech

correct and clear when I spoke, so I would not be misunderstood. (25) [I'm not exactly sure, but I think it is because I made adjustments in speaking other languages]. (26) [I don't know, it, it might've been, uh, going naturally change anyway, but it, it's quite a bit lower than anyone remembers]. [Just slow down and uh, and speak a little deeper, more clearly, um, I'm not sure why].			

Based on all these data analysis, the answer to the question: "Does the L2 inner voice lead to a different sense of self?" is, regardless of the degree of such an identity, that it does.

Research Subquestion 5: How does the L2 Inner Voice Lead to a Different Sense of Self?

As seen above, the L2 inner voice apparently led D to the L2 culture in both a perceivable and an unperceivable fashion. More specifically, with concrete L2 stimuli, such as music and photos, D was seemingly able to access his emotions, which was not the case when thinking in the L2. Based on these data analysis, the answer to the question: "How does the L2 inner voice lead to a different sense of self?" is that the L2 inner voice appears to lead to such a sense of self: (1) with the aid of the L2 stimuli when thinking in the target language; and (2) otherwise, naturally and unconsciously.

<center>Participant B</center>

My last participant, whom I will call "B" for the purposes of this research, is a male between the age of 36 and 40, and from the Southwest. At the time of the study, B was an operations manager at a company. He is a native speaker of the English language and

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a learner of the Japanese language, his L2. Like the previous participant, B married a native Japanese speaking woman, who was my second participant, K. B obtained a bachelor's degree in business management from a university in the Southwest, and he self-assessed his Japanese language proficiency as a novice and has been learning the target language, on and off, for about three years, since 2006. The medium for communication with his wife at home is his L1, the English language. Unfortunately, because of his busy work schedule, B has not been taking any Japanese courses, as illustrated below:

Researcher: You're saying that, uh, you are not an active Japanese learner.

B: No. At this time, unfortunately, because of my travels, being unable to take any classes.

B: Last [class] was . . . is now . . . spring . . . I attempted [to take a class] last fall, but   dropped out.

Yet B makes an effort diligently to maintain his L2 knowledge and learn new vocabulary by watching TV shows in the target language, as shown below:

B: Just repeat [the L2 words] in my head, even in . . . I was watching some of Japanese [TV] shows, tried to listen to it, for the words I recognize.

B: Yeah, I try, I try to keep [the L2] phrases in my head and uh, as I watch the programs, that's why I'm trying to keep up with.

Research Subquestion 1: Does an L2 Inner Voice Develop?

Online Data

B's online data were collected between February 8 and March 12; his total online responses were 22, among which 8 were responded to when B was thinking in Japanese,

his L2. B was thinking in the L2 in such contexts where there were L2 stimuli, such as

Japanese TV shows and games. Most of B's online responses are shown below:

Online Response 1

On these days, mostly in February, B reported online his thinking in the L2, while

watching a Japanese film. During the interview, B elaborated about his thinking in the

L2:

> B 1: (When watching a Japanese Anime), I was trying to catch some words
> here and there, something I had learned before.

This excerpt shows B's conscious efforts to assess his knowledge of the L2

vocabulary by catching the L2 words that he knew when watching TV. More

specifically, it seems that the authentic L2 words on TV, therefore, undoubtedly echoed

in B's mind as the L2 inner voice in the form of the authentic L2 pronunciation; when

watching an Anime in the target language, his thinking in retrieving the L2 words that he

knew appeared to be both the L2 inner voice – that helped the words he knew flash back

mentally – and the L2 inner speech – that helped him assess his L2 words.

His online responses are below:

Date & Time	Language	Context	Experience
February 9, 8:26 p.m.; February 15, 3:16 p.m.; February 20, 9:22 p.m.; February 22, 7:12 p.m.; February 24, 11:09 p.m.; March 1, 3:44 p.m.; and March 6, 9:46 p.m.	L2	Watching a Japanese movie	Un-consciously repeating what I want to say in mind several times

Interview Responses as Unrelated to Online Data

When taking Japanese courses of levels 1 and 2 at a college, B experienced his

thinking in the L2. The excerpts below show that in his effort to answer questions asked

by his teacher in the target language, B consciously engaged in thinking in the L2:

> B 2:   When taking level one and two of Japanese classes, yeah, [(I remember of thinking in Japanese in class)]. [In my head].

> B 3:   [Is more to . . . what I want to say, probably, kept thinking how I want to say these in Japanese] . . . [something else I wanted to say in Japanese]. [(Finding expressions) to say].

These excerpts show B's utilization of the L2 inner speech when trying to formulate

sentences in the target language. More specifically, he consciously engaged in his L2

inner speech for the self-assessment of his L2 grammar use and utterances, as well as

seemingly for retrieving what he had previously learned.

Furthermore,

> B 4:   [(I thought about questions the teacher asked me in my head) from English to Japanese]. [Yeah, I translated from English to Japanese]. [Each student was asked something in Japanese, and answered in Japanese].

This excerpt points out to the language requirement to all the students in class. More

specifically, students were asked questions in the L2 and had to answer in the same

language, which resulted in B's mental repetition of what was asked in the L2 and

utilized his both L1 inner speech and the L2 inner speech for a direct translation between

the languages.

Also, there was a 9-month gap before taking level 2 of the Japanese course. Being

aware of the significance of maintaining his L2 proficiency, or, at least, what he had

learned in the level 1 course, during this period, B attempted to recognize the L2 sounds

to help remember the target language phrases or expressions when watching Japanese TV shows:

B 5:   [Yeah, (I repeated in my head expressions I learned previously)].

B 6:   [Just repeated in my head, even in . . . I was watching some Japanese programs, tried to listen for it, for the words I recognize].

B 7:   [Yeah, I try, try to keep phrases in my head] and uh, [as I watch the (TV) programs, that's how I'm trying to keep up with].

These excerpts point out to his L2 inner speech which B consciously engaged in when watching TV in the target language. With the aid of the authentic L2 on TV programs, B was able to mentally retrieve what he had learned in the class and match them with those on the TV shows, which caused him to mentally repeat the L2 phrases simultaneously.

Furthermore, B used the authentic L2 pronunciation and expressions that he heard on TV as the benchmark when mentally assessing his L2 use prior to speaking the target language:

B 8:   [Yeah, I try to make sure . . . I'm trying to use (correct) expressions].

Another interesting finding was B's response, depicted below:

B 9:   [So, I think, lots of times, some, if I try to communicate something here (pointing to his head) is not coming out, sometimes, I try to communicate in hand gestures, what it is I'm trying to say].

This excerpt illustrates B's struggles in conveying what he wants to say in the L2, which results in his use of hand gestures to close the L2 proficiency gap.

His interview responses are below:

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Table 16: Development of the L2 Inner Voice

Statement [Meaning Units]	Central Theme	General Theme	General Structure
(2) When taking level one and two of Japanese classes, yeah, [(I remember of thinking in Japanese in classes)]. [In my head]. (3) [Is more to . . . what I want to say, probably, kept thinking how I want to say these in Japanese] . . . [something else I wanted to say in Japanese]. [(Finding expressions) to say]. (4) [(I thought about questions the teacher asked me in my head) from English to Japanese]. [Yeah, I translated from English to Japanese].[Each student was asked something in Japanese, and answered in Japanese]. (5) [Yeah, (I repeated in my head expressions I learned previously)]. (6) [Just repeated in my head, even in . . . I was watching some Japanese programs, tried to listen for it, for the words I recognize]. (7) [Yeah, I try, try to keep phrases in my head] and uh, [as I watch the (TV) programs, that's how I'm trying to keep up with]. (8) [Yeah, I try to make sure . . . I'm trying to use (correct) expressions]. (9) [So, I think, lots of times, some, if I try to communicate something here	Thinking in the L2	Higher psychological skills	Mental reviewing, repeating, and assessing what was learned

(pointing to his head) is not coming out, sometimes, I try to communicate in hand gestures, what it is I'm trying to say].			

Based on these data analysis, the answer to the question: "Does the L2 inner voice really develop?" seems to be a positive one.

Research Subquestion 2: What is the Function of the L2 Inner Voice?

The emergence of B's L2 inner voice was evidenced above. Next, the function of an L2 inner voice will be analyzed. His interview responses are shown below:

Interview Responses as Unrelated to Online Data

B expressed his concerns about his correct L2 use due to his low L2 proficiency when speaking the L2:

B 10:   [I was feeling more doubt because I was worried about the correctness of my Japanese phrases] when watching a Japanese film.

B 11:   Yeah, worried if I got (Japanese phrases) correctly, if I remembered (them) correctly (when watching a Japanese cartoon)].

These excerpts show his mental comparison of his L2 use with the benchmark – the authentic L2 on TV; which thus caused him to be very concerned about his correct use of the L2. Also, it appears that B was able to juxtapose mentally because of his unconscious utilization of his L2 inner voice. In other words, without the existence of the L2 inner voice – the L2 pronunciation and vocabulary that he heard on TV – in his mind, B was seemingly unable to recall what he had heard on TV for mental comparison.

In addition, B responded his different L2 use in different contexts:

B 12:   ['Cause now, some of these (phrases) were said differently on TV].

This excerpt points out the authenticity of the L2 use, or L2 pragmatics, depending upon the genre. For example, being interested in Japanese Anime, B knows the different L2 use in the Animes which usually appeal to younger children, and consequently, the L2 use is very simple. In contrast, TV dramas are usually produced appealing to adults, which thus employ more complex L2 use. Therefore, this excerpt shows that in his mental effort to recall what he heard in the L2 Animes on TV, he appeared to utilize his L2 inner voice in a spontaneous manner. More specifically, while recalling the L2 in Animes, what B heard on TV is believed to echo in his mind as the L2 inner voice – the natural, authentic L2 words.

Furthermore, the following is B's response to the spontaneous questions: "How are you doing nowadays?" and "Are you still repeating some (L2) phrases in your mind?"

B 13:   Yeah, I try, I [try to keep phrases in my mind], and uh, as I [watch (TV) programs], that's why [I'm trying to keep up with]. Unfortunately, we speak less Japanese, try to . . . but, uh, yeah, when I [get practice watching the Japanese (TV) programs].

This excerpt points out his conscious and diligent efforts to actively utilize his both the L2 inner voice – in the form of the authentic L2 heard in his mind as the benchmark, which seems to help him juxtapose, assess and correct his L2 use – and the L2 inner speech for self-regulation in repeating the L2 words in his mind.

In addition, B actively engages in his L2 inner speech when speaking to his in-laws in the target language:

B 14:   Yes, (I [mentally assess whether my L2 expressions are correct before speaking out]). I try to make sure . . . .

His interview responses follow:

Table 17: Function of the L2 Inner Voice

Statement [Meaning Units]	Central Theme	General Theme	General Structure
(10) [I was feeling more doubt because I was worried about the correctness of my Japanese phrases] when watching a Japanese film. (11) [Yeah, worried if I got (Japanese phrases) correctly, if I remembered (them) correctly (when watching a Japanese cartoon)]. (12) ['Cause now, some of these (phrases) were said differently on TV]. (13) Yeah, I try, I [try to keep phrases in my mind], and uh, as I [watch (TV) programs], that's why [I'm trying to keep up with]. Unfortunately, we speak less Japanese, try to . . . but, uh, yeah, when I [get practice watching the Japanese (TV) programs]. (14) Yes, (I [mentally assess whether my L2 expressions are correct before speaking out]).	Getting in touch with feelings when thinking in the L2 Mental assessment of L2 use	Process feelings Utilization of L1/L2 inner speech and L2 inner voice	To better know oneself when speaking in the L2 L2 inner voice helps to retrieve correct L2 use and use it as bench mark

Based on these data analysis, the answer to the question: "What is the function of L2 inner voice?" is that the function of the L2 inner voice appears to be the natural mental guidance to its authentic L2 use for self-assessment and correction when thinking and speaking the target language.

Research Subquestion 3: How does the L2 Inner Voice Develop?

Since both the emergence of and the function of the L2 inner voice have been

analyzed, in the next section, how the L2 inner voice develops will be examined. Some

of B's interview responses will be used for this purpose. As seen below, the L2 stimuli

appeared to play a significant role in B's thinking in the L2:

Interview Responses as Unrelated to Online Data

B 15:   [I was thinking in the L2 when watching a Japanese Anime].

B 16:   [Yeah, (I was thinking when watching Japanese TV programs)].

These excerpts show explicitly that TV shows in the L2 are a stimulus that caused B

to think in the target language.

In addition, B added Japanese games to his responses:

B 17:   [Yes, (when playing a Japanese game)]. ['Cause sometimes it'll have
          parts on the game that have, uh, Japanese moment]. Uh, like [having
          Japanese writings on the wall sometimes]. It was something they
          implemented in the game [to follow the characteristics of the game].

This excerpt too indicates the L2 stimulus – the games in the L2. The instructions

written in the Japanese characters in the games help stimulate B to mentally decode the

meanings that results in utilizing both his L1 inner speech and the L2 inner speech to

figure out how to play the games.

Also, the following excerpt shows B's natural or spontaneous thinking in the L2 when

stimulated by TV shows and games in the L2:

B 18:   [Yeah, pretty much when I have medium, like uh, TV shows or games (I
          think in the L2)].

Table 18 lists his responses:

Table 18: How to Develop the L2 Inner Voice

Statement [Meaning Units]	Central Theme	General Theme	General Structure
(15) [I was thinking in the L2 when watching a Japanese Anime]. (16) [Yeah, (I was thinking when watching Japanese TV programs)]. (17) [Yes, (when playing a Japanese game)]. ['Cause sometimes it'll have parts on the game that have, uh, Japanese moment]. Uh, like [having Japanese writings on the wall sometimes]. It was something they implemented in the game [to follow the characteristics of the game]. (18) [Yeah, pretty much when I have medium, like uh, TV shows or games (I think in the L2)].	Thinking in the L2	Stimuli for thinking in the L2	Visual prompt in the L2 causes B to be actively engaged in the L2

Based on all of these data analysis, the answer to the question: "How does L2 inner voice develop?" seems to be that the L2 inner voice begins to develop once the target language proficiency improves and continues to do so when stimulated by the L2.

Research Subquestion 4: Does the L2 Inner Voice Lead to a Different Sense of Self?

In his interview responses about a different sense of identity when using an L2, what intrigued me was B's awareness of body languages, such as gestures, tied to languages.

Interview Responses as Unrelated to Online Data

Unlike the other participants, B pays closer attention to the body language in the L2, when watching TV and talking with the L2 native speaking friends. For example:

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B 19: [I've always known, always read body language (of Japanese people). Because I've always been around friends who . . . spoke different languages].

B 20: [lots of times I didn't understand the conversation, but I could tell the conversation was going well or not, going well by reading (body languages) . . . how each of   them was talking to each other].

These excerpts are his responses to spontaneous questions: "Do you understand the meanings when watching Japanese TV shows?" and "How much do you understand them?" As seen above, despite his inability to understand most of the meanings in the L2 on TV, B acknowledges the role of the body language of Japanese people – which reflects the culture embedded in the language; this, in turn, helps him get sense of what's going on in the contexts.

Even for comedy shows in the L2, B responded the important role of his understanding about the body language:

B 21: [I get the same thing when I watch (Japanese) comedy shows, I can tell when the funny part is coming, because I can see the way they're acting].

B 22: [I'll understand the gestures of it, understand the context of the story they're trying to do].

Additionally, he compared the body language of the L2 with that of his L1:

B 23: [Um . . . Yeah, I see a lot of, uh, sometimes lots of Americans still do slap-sticks]. [Slap-stick means basically it's funny to hit your head]. [Hurting yourself is funny, lots of that still]. Where I see lots of Japanese (comedies), [they don't do a lot of slap-stick], but yeah, uh, [some of the differences I see]. [Yeah, slap-stick has to do with American culture].

B 24: [It's mannerisms that do it, or what it is . . . is to it. Uh, an example, if you want to watch a great person who does slap-stick no longer with us, uh, Chris Farley].

Based on these excerpts, B appeared to effectively learn the L2 mannerism on TV,

which seemingly resulted in developing the L2 inner voice in the form of the natural L2

utterances and words associated with the mannerism.

As a result of learning the L2 mannerism, B unconsciously implemented it into his L2

utterances:

B 25:   [Yes, I bow when talking to my Japanese friends or my wife's]. [Yeah,
          it's only when, I mean, in Japanese environment or Japanese language that
          I have tendency, I have noticed only bowing].

However, interestingly he claims his unawareness of his bowing when talking on the

phone:

B 26:   [(I don't bow) on the phone]. [I haven't experienced bowing on the phone
          yet]. I think most of the times, [I'm trying to retain what (my mother-in-
          law) is asking me and answer the question back]. [(I'm busy trying to
          understand)].

These excerpts show the role of the visual body language of the L2. More

specifically, the body language in the L2 is invisible on the phone. Thus, B. is unable to

analyze the contexts or the conversation effectively, that results in utilizing his L1 and the

L2 inner speech to self-regulate the flows of the L2 conversation.

Also, the following is a depiction of B's perception when speaking the L2:

B 27:   [Yeah, (I feel reserved when speaking Japanese)]. I have noticed that here
          in (the U.S) culture, you have tendency to speak out more because you . . .
          it's just how everybody is here, speak out loudly what we want to say.

This excerpt indicates his awareness of the cross-cultural difference between the L2

and his L1. As explained earlier, when speaking the Japanese language, Japanese

speakers are expected to use polite expressions to show respect to interlocutors, who are

older or whom they are conversing with or meeting for the first time. Therefore, B

appears to unknowingly or spontaneously show his politeness as he does in the L2

culture, embedded in the target language, when speaking the L2. In so doing, he

perceives in the L2 different sense of identity.

His responses are shown in Table 19 below:

Table 19: A Different Sense of Identity

Statement [Meaning Units]	Central Theme	General Theme	General Structure
(19) [I've always known, always read body language (of Japanese people). Because I've always been around friends who . . . spoke different languages]. (20) [lots of times I didn't understand the conversation, but I could tell the conversation was going well or not, going well by reading (body languages). . . how each of them was talking to each other]. (21) [I get the same thing when I watch (Japanese) comedy shows, I can tell when the funny part is coming, because I can see the way they're acting]. (22) [I'll understand the gestures of it, understand the context of the story they're trying to do]. (23) [Um . . . Yeah, I see a lot of, uh, sometimes lots of Americans still do slap-sticks]. [Slap-stick means basically it's funny to hit your head]. [Hurting yourself is funny, lots of that	Language and culture are inter-woven	Language-culture	Awareness of the inter-connection between language and culture; awareness of body languages embedded in language-culture

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still]. Where I see lots of Japanese (comedies), [they don't do a lot of slap-stick], but yeah, uh, [some of the differences I see]. [Yeah, slap-stick has to do with American culture]. (24) [It's mannerism that do it, or what it is. is to it. Uh, an example, if you want to watch a great person who does slap-stick no longer with us, uh, Chris Farley]. (25) [Yes, I bow when talking to my Japanese friends or my wife's]. [Yeah, it's only when, I mean, in Japanese environment or Japanese language that I have tendency, I have noticed only bowing]. (26) [(I don't bow) on the phone]. [I haven't experienced bowing on the phone yet]. I think most of the times, [I'm trying to retain what (my mother-in-law) is asking me and answer the question back]. [(I'm busy trying to understand)]. (27) [Yeah, (I feel reserved when speaking Japanese)]. I have noticed that here in (the U.S) culture, you have tendency to speak out more because you . . . it's just how everybody is here, speak out loudly what we want to say.			

Based on all of these data analysis, the answer to the question: "Does the L2 inner voice lead to a different sense of self?" seems to be a positive one.

Research Subquestion 5: How Does the L2 Inner Voice Lead to a Different Sense of Self?

For a question about how the L2 inner voice leads to a different identity when using the target language, below are B's interview responses which were illustrated above, because they seemingly offer some valuable insight into this subquestion.

B 25:   [Yeah, it's only when, I mean, in Japanese environment or Japanese language that I have tendency, I have noticed only bowing].

B 27:   [Yeah, (I feel reserved when speaking Japanese)].

These excerpts show the important role of the L2 stimuli in leading him to the L2 different sense of identity. That is, the L2 stimuli, such as the L2 on TV, the L2 speech community, or interaction with L2 speaking friends, cause B to feel reserved when speaking the target language.

Based on these data analysis, the answer to the question: "How does L2 inner voice lead to a different sense of self?" is that as for B it appears to lead him to the L2 different self in a spontaneous, yet unconscious fashion when speaking the target language. When thinking in the L2, on the other hand, it is seemingly not easily perceivable.

Findings Across Participants

With analysis of each participant's verbal accounts, each research sub-question has been answered. In this section all the participants' responses will be cross-analyzed for each question.

Research Subquestion 1: Does an L2 Inner Voice Develop?

First of all, it is apparent in the study that it was difficult for participants to detect their own use of inner forms of speech and language use, but that the first form of data collection, randomly contacting participants on line about what language they were

thinking in at the time they received the e-mail, proved to be a stimulus for them to consider their inner language processes, helping to speak more extensively about his or her language learning in relation to inner voice when each participated in the interviews as well.

Central and general themes as well as general structure for each participant are shown in Table 20 below:

Table 20: Central and General Theme

Participants	Central Theme	General Theme	General Structure
S	Uttering in the L2 naturally Examining thinking before uttering in the L2	L2 proficiency improvement	Improved L2 proficiency plays a crucial role in natural L2 speaking, which helps not to heavily rely on L2 inner speech
K	Exposure to authentic L2, which resulted in the L2 improvement Uttering in the L2 naturally	L2 proficiency improvement	The more improved the L2, the better and more natural L2 utterances become
H	L2 contexts	Stimuli for the L2 utterances	Under forced nature of the L2 use, which resulted in L2 improvement
D	Thinking in my head	Stimuli for thinking in the L2	Mental assessment of L2expressions/phrases or rehearsal before speaking
B	Thinking in the L2	Higher psychological skills	Mental reviewing, repeating, and assessing what was learned

Overall, the above data provide strong evidence that an L2 inner voice is something that the participants found they developed with increasing proficiency, the more advanced participants showing greater awareness of this phenomenon than those of lesser L2 proficiency.

Research Subquestion 2: What is the Function of the L2 Inner Voice?

Table 21 below shows central, general theme, and general structure for each participant.

Table 21: Central and General Theme

Participants	Central Theme	General Theme	General Structure
S	Spontaneous L2 use	L2 inner voice	Stimulus, such as simple syntax, books, and contexts stimulate thinking in the L2
K	Thinking in the L2	Stimulus for thinking in the L2	Upon the L2 improvement, the L2 stimuli cause one to use the target language naturally
H	Exposure to the L2	Spontaneous responses in the L2	When exposed to the L2 with its high proficiency, respond unconsciously
D	Spontaneous utilization of L2	L2 Stimuli for thinking in the target language	Mental assessment of L2 expressions/phrases or rehearsal before speaking
B	Mental assessment of L2 use	Utilization of L1/L2 inner speech and L2 inner voice	L2 inner voice helps to retrieve correct L2 use and use it as bench mark

Based on the above data, L2 inner voice, unlike L2 inner speech, seems to be associated with a natural (native-like) flow of thinking in and producing the target language. The data also bring out the importance of the role of L2 stimuli in relation to

the development of this function. When the participants were involved in watching TV

shows, listening to L2 songs, or involved in other L2 contexts, they consistently

mentioned a relationship to L2 inner voice functions, overall suggesting that they became

aware of an increased ability to recognize and produce correct sounding or "natural" use

of the L2. Indeed, exposure to authentic L2 contexts also appears to "activate" or

"stimulate" the ability to recall what was heard before, as well, and operates as a

benchmark for self-assessment of L2 use and proficiency. Furthermore, this function of

inner voice was found related to the pragmatic use of language. Several of the

participants noted that their L2 inner voice guided them towards producing spontaneous

and natural utterances with respect to use of the L2 in conversation with native-speakers

of different ages or in different social positions (this will be more fully discussed below

under Research Subquestion 5).

Research Subquestion 3: How Does the L2 Inner Voice Develop?

Though the data does not unveil evidence of exactly how the L2 inner voice develops,

the correlation between L2 inner voice development and improvement in target language

proficiency has been noted. More specifically, the participants evidence a greater

awareness of inner voice and its role in L2 development with increasing levels of

proficiency, suggesting that it is an important aspect of the development of L2 fluency

and proficiency as a whole. Moreover, it is also clear that the development of the L2

inner voice is tied to exposure to naturalistic communicative settings that include the L2

culture beyond simply being exposed to the language through text books or other

decontextualized treatments of the language typically found in foreign language

classrooms in many countries around the world. Indeed, inner voice was mainly talked

about in relation to being stimulated by L2 contexts, whether talking with native speakers, watching TV, listening to music, sounding "correct" (that is remembering how native speakers sound), and so on.

Research Subquestion 4: Does the L2 Inner Voice Lead to a Different Sense of Self?

When it comes to a different sense of identity in an L2, all of the participants became aware of cross-cultural differences between their L1 and the target language/culture, which resulted for most in perceiving a different identity when using an L2. Moreover, the participants expressed experiencing such an identity shift specifically when interacting and speaking an L2 as opposed to when simply thinking in the target language (the use of inner speech as opposed to inner voice). Central, general theme, and general structure for each participant are illustrated below:

Table 22: Themes and Structures

Participants	Central Theme	General Theme	General Structure
S	Getting in touch with feelings when thinking in the L2	Process feelings	Culture is indispensible when learning the L2; when the L2 proficiency was improved, the culture was acquired naturally through the L2 inner voice
K	Getting in touch with feelings when uttering in the L2	Process feelings	To better know self when thinking and/or speaking in the L2
H	Language and culture are inter-connected	Language and culture are inter-connected	Culture is indispensible when learning languages, and when the target language proficiency is improved, its culture is acquired naturally

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D	Songs and culture Conscious imitation of L2 pronunciation	Self-discovery of L2 inner voice Conscious assessment of his L2 use	L2 inner voice leads to its culture Utilization of L2 inner voice and inner speech
B	Language and culture are inter-woven	Language-culture	Awareness of the inter-connection between language and culture; awareness of body language embedded in language-culture

Research Subquestion 5: How Does the L2 Inner Voice Lead to a Different Sense of Self?

For the answer to this question, unlike for the previous subquestions, the data did not offer many insights. However, overall participants suggested a different sense of identity as appropriate given differences in cultural norms. Some were able to rely on their inner voice as a way to help them bridge the cultural gap between interacting with Americans and Japanese to a high degree. Both participants S and K spoke of how interacting in the L2 was quite different than in their L1 owing to pragmatic differences in relation to honoring and showing respect to elders or those in a position of relative power over themselves. Moreover, participant K mentioned that this had changed the way she felt about herself, that she had become a more "direct" person, that is, not worrying so much about how others would be affected by the way she addressed them in the L2. She also felt "comfortable" with this new sense of identity in regard to interacting with native speakers, but not with fellow Japanese, with whom she was unable to retreat from her L1 sensibilities, even when asked to do so explicitly by an older friend. However, for the most part this seems to be more of an unconscious than conscious process, and is

associated with the desire to become someone who is able to accommodate the social use of language and not just use of the proper structural form. Thus, it can be said that the L2 inner voice can lead to a different sense of identity in the sense of performing personhood/identity. This does not, however, necessarily suggest any permanent or fundamental changes in identity taking place as none of the participants suggested this to be the case.

Research Central Question: What is the Genesis of the L2 Inner Voice and Does it Also Lead to a Different Identity?

The data, overall, suggest that the genesis of inner voice is associated with gaining a sense of how the target language is utilized by native speakers in relation to contexts. This is demonstrated by B, who although at a relatively low level of proficiency, was determined to gain a sense of the use of the L2 in context – an endeavor that led him to watch Japanese TV and gain exposure through other means to that would allow him to appreciate how the language is used in contexts by native speakers. He focused his efforts, in other words, on attaining an inner voice in the L2 to help him meld together his understanding of the language together with its use in contexts. Even at his level of proficiency, B was able to talk about moving into a different cultural and linguistic space through gaining an inner voice in the L2. For example, he mentioned his efforts to bow in a Japanese manner when addressing native speakers of Japanese, particularly his relatives. This shows his efforts to link language and culture in the presentation of meaning, which is perhaps the overall function of inner voice as compared to inner speech.

The more advanced participants, on the other hand, had managed to gain considerable sense of how the L2 language and culture were experienced differently than their first language and culture. This led them to be able to speak about this difference at length, especially with regard to how "natural" their interactions in the L2 had become, and that they didn't need to "think" in the L1 (inner speech) in order to produce the L2, that they had transitioned to the extent that grammatical and pragmatic differences had been breached through gaining a strong inner voice in the L2.

Thus, again, it would appear that the genesis of inner voice lies in the desire to overcome differences that would lead to both structural and social problems in speaking the L2 for communicative purposes with native speakers of the L2. This entails a strong level of affective motivation on the part of learners, and most likely would not occur without a good deal of exposure to the L2 in naturalistic circumstances of exposure – something all of the participants in the study had experienced, regardless of their relative levels of proficiency.

Evidently, exposure of this sort also leads to a different sense of identity as associated with the different language/culture. Sometimes this can lead to a radical departure from the presentation of self, as was found to be the case for those participants in the study who had accepted and were able to act upon the large gap between Japanese and American sociolinguistic issues related to directness, the Japanese participants having overcome the need to address others with deference to age or a higher position of power within the work place.   As such, we can see that inner voice plays a crucial role in transforming speakers of one language and culture into those who can effectively express

themselves within another language and culture, which apparently, also requires a shift in

identity.

CHAPTER 5

DISCUSSION AND CONCLUSION

Through analyzing the online and interview data in totality, this study first of all reveals how difficult it was for the participants to detect their own use of inner forms of speech. Despite this, data for the study reveals how and when L2 inner voice appears to be utilized, as well as how and when an L2 inner voice can lead to a different sense of identity in relation to the target languaculture. In addition, the data analysis distinguishes the functions of L2 inner voice apart from those of L2 inner speech, although they co-exist and at times function interchangeably. The L2 inner voice and L2 inner speech do not come into co-existence simultaneously, however. The emergence of L2 inner speech seems to precede the development of L2 inner voice. In other words, L2 inner speech seems to be a mandate for the L2 inner voice development. First, L2 inner speech is developed by learners' conscious efforts to use the target language as an aspect of mental work on the language in mind. For example, all the participants engaged in their L2 inner speech – as well as their L1 inner speech – to assess their L2 grammar and/or vocabulary use in a conscious manner. As their proficiency level in the L2 begins to improve, L2 inner voice emerged. Unlike L2 inner speech, L2 inner voice development seems to occur in an unrecognizable way to the individual, suggesting its development is largely unconscious. As such, this study does not provide a clear picture of exactly at what point in time the L2 inner voice emerged for the participants; rather, it reveals that in general, increasing L2 proficiency in the L2 context seems the most likely cause of the emergence of the L2 inner voice. The more L2 proficiency increases, the more fluently the participants speak the target language.

Additionally, after the L2 inner voice begins to emerge, the participants report experiencing a different sense of identity when using the target language with native speakers of the L2. The analysis of the data suggested that some participants rely on their L2 inner voice as a way to help them bridge the cultural gap when interacting with L2 native speakers. For example, participant B revealed changes in his mannerism when interacting with his Japanese-speaking friends, which resulted in unconscious bowing and a feeling of being reserved. Moreover, pragmatic differences between the participants' L1 and an L2 in relation to cultural norms changes the way they perceive themselves when interacting in the target culture. For example, participants S and K reported that they became more direct and open-minded people in the L2, and K said that unlike in Japanese, she did not worry about how others would be affected by the way she addressed them in the L2 with regard to social positioning.

Inner Speech vs. Inner Voice

Inner Speech

Inner speech is internalized speech aimed at oneself. As a result, it is difficult for other people to detect, but it is readily detected by all of us when we stop and examine our thought processes. The data provide evidence that the participants actively at first actively began *consciously* engaging in mental activities through inner speech, such as mental translation from their L1 to an L2 or vice versa to decode meanings of complex L2 sentences, prepare, or assess the target language for use. This practice is supported by the Vygotskyan (1934/1986) theoretical framework – that inner speech serves *mental orientation*, *conscious understanding* and *help in overcoming difficulties*, such as problem solving.

Inner Voice

Like inner speech, inner voice is internalized, or inner form of speech, aimed at oneself, too, but apparently very difficult to detect at first, unlike inner speech. For example, participant S did not recognize having an L2 inner voice until her friends indicated to her that her speech had begun to sound more "natural" in the L2. Overall, the data draw a clear picture that the L2 inner voice is associated with a native-like, natural flow of thinking in and producing the target language. Most of the participants first realized that they were producing more natural utterances in the L2 after being exposed to authentic L2 contexts, that is, use of the L2 in naturalistic L2 learning environments. More specifically, once their proficiency level increased, the participants experienced an L2 inner voice through association of the use of the language in contexts. This shows the correlation between L2 inner voice development in relation to cultural contexts and improvement in the target language proficiency. The fact that the participants experienced inner voice so naturally is supportive of Wertsch's (2005) argument concerning the so-called "transparency" of inner forms of speech. Moreover, the more advanced the participants' L2 proficiency level became, the greater their awareness of L2 inner voice became.

More specifically, the data point to the important role of L2 stimuli in relation to the development of an L2 inner voice functions. For example, the data show explicitly that L2 inner voice operated when the participants interacted in the target language with the native speakers or in other L2 contexts, for example, when involved in watching TV shows, or listening to songs. For example, both participants D and B experienced increased abilities to recognize and produce correct pronunciation or authentic use of the

target language as a result of such exposure. Moreover, exposure to the L2 in naturalistic contexts seems to "stimulate" or "activate" the ability to recall what was heard before and to operate as a benchmark for self-assessment of L2 use and proficiency.

These important roles of L2 inner voice in the development of L2 proficiency is supportive of Vygotsky's (1934/1986) concept of the mediated mind (as cited in Wertsch, 2005). According to Wertsch, Vygotsky claimed two types of mediation: explicit and implicit. Hence, L2 stimuli in relation to L2 inner voice development can be said to be explicit mediation. More specifically, L2 stimuli serve to mediate or "stimulate" the development of L2 inner voice, which in turn operates to increase the natural or native-like flow of thinking in and producing the target language. Second, implicit mediation has no visibility, yet it plays a crucial role in mental development (Wertsch, 2005). Therefore, L2 inner voice in relation to the development of culturally appropriate use of the L2 can be said to be an implicit process (mediation). In other words, when involved with L2 stimuli, that is, explicit mediation, L2 inner voice develops implicitly. The analysis of the data suggested several phases that appear to occur. When beginning to learn an L2, inner speech in both the learner's L1 and the target language develop (phase 1). With very limited proficiency in the target language, learners consciously engage in mental translation to assess their L2 use or to decode meanings. In so doing, learners *consciously* develop their L2 inner speech. Indeed, L2 inner speech is readily developed. As L2 proficiency increases, however, L2 inner voice *begins* to emerge with the target language culture embedded in it (phase 2) – Agar's languaculture. Yet the degree of the emergence of L2 inner voice may be slight, depending upon how much learners gain exposure to naturalistic contexts of the target language. With greater exposure, the L2

inner voice emerges to a greater degree (phase 3). For example, participant S realized her

slightly better L2 proficiency as a result of her exposure to the L2, English, in a

naturalistic learning contexts after six months (in New Zealand). At the same time, S

recognized her utterances and thinking in the target language were more natural than

before. Moreover, S, at the time of this study, was a college student and had been

exposed to L2 naturalistic learning contexts for more than a year. As a result, she

reported her utilization of the L2 inner voice as a natural aspect of her use of the language

on a daily basis. Another example is participant K, who also realized her slightly better

L2 usage after being exposed to the target language in a naturalistic learning context after

two weeks (in the U.S.). After moving to the U.S. and graduating from a university, K

experienced more natural and spontaneous thinking in and producing utterances in the

target language. This points to a higher degree of K's L2 inner voice development.

Another participant, D, on the other hand, did not experience his L2 Japanese inner voice

in relation to its development at all at first. In the beginning of his stay in Japan, he

actively engaged in his L1 and L2 inner speech to assess and practice his L2 utterances

before speaking in the target language. With no development of his L2 inner voice yet,

he remained reluctant to interact in public purposefully. However, as his exposure to the

L2 naturalistic contexts significantly increased, he realizes his improving utterances and

much more natural thinking in the target language. Unlike D, participant B, who was a

less advanced learner, appeared to recognize and was able to utilize his L2, Japanese,

inner voice spontaneously when involved in watching TV and interacting with native

speakers of the L2. In this phase, both the L2 inner voice and L2 inner speech function

interchangeably. Learners utilize the L2 inner voice spontaneously, or more naturally,

while engaging in L2 inner speech in a conscious manner. For example, participant S experienced her abilities to naturally understand the meaning of simple sentences written in the L2 in relation to L2 inner voice. This was not true for complex sentences, however. In other words, S engaged in mental activities such as mental translation from the L2 to her L1, Japanese, to decode the meaning of complex sentences, which resulted in utilizing L2 inner speech instead. Moreover, in this phase, L2 stimuli apparently play an important role in activating L2 inner voice as well. As in the case of S above, simple sentences in the L2 stimulated her L2 inner voice unconsciously, and the L2 inner voice helped her decode the meanings associated with the target language culture. Another example from the data comes from participant H, who, because of his constant exposure to L2 business contexts (meetings, interactions with his boss, colleagues, and clients), had his L2 inner voice early on in the acquisition process.

In phase 4, the L2 inner voice actively functions when engaged with L2 stimuli. As a result, the L2 inner voice guides the speaker to smooth, natural utterances and correct sounds in the target language with respect to idiomatic use of the L2 as found for native speakers. Moreover, the L2 inner voice helps learners recall what was heard before as a way for them to both assess and benchmark L2 development. In addition, in this phase, L2 learners' proficiency level is advanced, and their L2 inner voice becomes a stronger underlying factor of using the L2 within naturalistic contexts. In fact, the L2 inner voice at times moves into the realm of inner speech as well. For example, participant K, when engaged in her L1 context, such as when watching TV shows, is able to respond to her husband (B) who is a learner of Japanese and continuously asks K questions about meaning when watching Japanese TV with her. In these conditions, K reported mentally

preparing to explain what was going on. More specifically, K repeatedly engaged in her

L1 and L2 inner speech, consciously utilizing her L2 inner voice in relation to language

and culture while concurrently watching TV shows. Hence, the L2 inner voice can be

said to be a hybrid inner form of speech as associated with *culture,* which ultimately

combines with L2 inner speech as well. This hypothesis is supported by Shpet's (1996)

argument that inner forms of speech are primarily associated with culture as opposed to

only cognition (Wertsch, 2005). Shpet argued that a thought is a cultural act (Zinchenko,

2007). Based on Shpet's argument, language can be said to act as a meditational means,

true in the L2 as well as in the L1. Furthermore, this study found the different roles of L2

inner voice – in naturalistic learning contexts – than those theorized by Tomlinson (2001)

and de Guerrero (2004, 2005), who argued it as fragmented, incomplete sentences aimed

at communication for oneself, and by Centeno-Cortes and Jimenez (2004), who argued it

as private verbal thinking. More specifically, these scholars theorized L2 inner voice as

self-regulatory skills, or higher mental skills. However, as was evidenced in this study,

L2 inner voice is also associated with a native-like natural flow of thinking and producing

the target language. Moreover, at times the L2 inner voice functions interchangeably

with inner speech as needed.

L2 Inner Voice and Possible Changes in Identity

The data show an identity shift for all of the participants in the study, resulting from

an awareness of sociocultural differences between their L1 and the target language and

culture. For example, participant S used gestures unlike those she uses in her L1,

Japanese, when speaking the L2, which indicates her meta-awareness of her use of

gesture as being part of her L2 inner voice experience. Also, her experience of the L2

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inner voice helped mediate the L2 languaculture. Furthermore, as several participants

noted, the function of L2 inner voice was found to be related to L2 pragmatics. For

example, the data for participants S, K, H, and D all suggested that their L2 inner voices

guided them towards producing spontaneous and natural utterances with respect to the

use of the L2 in conversation with native speaking individuals of different ages or in

different social positions. In other words, the L2 inner voice apparently facilitates

language as an aspect of the target language culture in relation to identity as well as

language use. For example, participants S and K were able to rely on their inner voice as

a way to help them bridge the cultural gap between interacting with Americans and

Japanese. They explained how interacting in the L2 was quite different than interacting

in their L1, Japanese, due to pragmatic differences in relation to honoring and showing

respect to elders, or those in a position of relative power to themselves. Importantly, in

relation to identity, participant K mentioned that this had changed the way she felt about

herself; she had become more of a "direct" person, that is, not worrying so much about

how others would be affected by the way she addressed them. As a result, she felt

"comfortable" with this new sense of identity in regard to interacting in the L2, but

interestingly, she was no longer comfortable when interacting with her fellow Japanese,

with whom she was unable to retreat from her L1 sensibilities, even when asked to do so

explicitly by an older Japanese friend. This shift in identity is supported by Shpet's

(1996) theoretical framework, Agar's (2002) concept of languaculture, and by the Sapir-

Whorf's linguistic relativity hypothesis. Whorf argues that language, thought and culture

are deeply interlocked, and each language is thought to be associated with a distinct

world view. Moreover, according to Wertsch (1987), a central premise of Whorf's

argument is that language is composed not merely of forms but of meaningful forms, so that each language must be able to refer to an infinite variety of experience. From Whorf's arguments, language learning deeply involves not merely learning to speak, read, write and listen, but learning "ready-made" classification of experience in an L2, or pragmatics of the target language. Agar's (2002) term, languaculture, too draws on the inseparable connectedness between language and culture. Languaculture, according to Agar, represents the necessary tie between language and culture. Agar further argues that in spite of the mastery of a language's grammar, without the culture it is very difficult to communicate.

On the other hand, the data suggest that an identity shift is not perceivable simply because of thinking in the L2 per se, and instead, points to the necessity of having L2 inner voice for this to happen. The possibility of identity shift as an aspect of learning an L2 in naturalistic contexts is also supported by Norton's (2000), Pavlenko's (2005), Bourdieu's (1991), and Strauss and Cross's arguments. Norton (2000) argues that a language learner's motivation and position in the target language community is complex and cannot be understood without reference to the notion of power and the identity of language learners in the social world. In other words, identity construction is apparently related to power between language learners and target language native speakers. Indeed, the data analysis showed this complex relationship in relation to identity construction. As evident in the study, L2 inner voice development is apparently associated with exposure to naturalistic learning contexts. Thus, once L2 proficiency increases and the more such contexts to which the participants are exposed, the larger degree of L2 inner voice development they experience. As a result, the L2 inner voice mediates the participants

towards more native-like thinking and production of the target language, which helps them "secure" their social position in the target language community.

Also, Pavlenko (2005) argues in relation to the idea of an L2 different self that languages are used to represent emotional experiences and that language and emotions interconnect between the mental development in L2 acquisition and the emergence of a different sense of identity. This study found that the three Japanese participants in the study of English learners all experienced feeling "comfortable" or "open-minded" when using the target language. Hence, the participants' emotional experiences help them sense the development a different sense of identity when using the target language.

Moreover, Bourdieu (1991) argues for a theory of habitus, which is a set of dispositions that incline agents to act and react in certain ways, that dispositions generate practices, perceptions, and attitudes which are "regular" without being consciously coordinated or governed by any "rule." Using the term "capital" as social contexts, Bourdieu argues linguistic capital in relation to different accents, grammar, and vocabulary is determinant of the relation between power identity and social positions of speakers. The data analysis supports Bourdieu's argument. With a higher degree of L2 inner voice development, the participants appeared to be able to imitate the target language the way the native speakers produced it. More specifically, L2 inner voice helped them produce the native-like accent, pronunciation with appropriate grammar usage, which were "regular" without consciously doing so. As a result, the participants seemed to be able to secure their linguistic capital.

Furthermore, Strauss and Cross's (2005) theory of identity enactments points to a complex identity construction. For example, one of the strategies which Strauss and

Cross argue for is code switching. Code switching is said to operate effectively, smoothly, and competitively within the mainstream culture and to shift back and force between a L1 cultural and L2 circumstances. This study pointed to the important role of L2 stimuli in relation to code switching with L2 inner voice. For example, L2 inner voice helped the Japanese participants, S and K, code-switch spontaneously when interacting with the native speakers or watching TV. The other participant, D, experienced his abilities to recognize and produce correct pronunciation when listening to L2 songs. L2 songs, or L2 stimulus, too helped D code-switch effectively to the target languaculture through his natural L2 inner voice operation.

Conclusion

This study focuses primarily on the genesis of L2 inner voice and its functions as well as a possible shift of identity when using an L2. It points out the important relationship between exposure to naturalistic learning contexts and the development of an L2 inner voice. Exposure to naturalistic learning contexts is crucial because the genesis of the L2 inner voice appears to be associated with gaining a sense of how the target language is utilized by native speakers in relation to their contexts. Moreover, with L2 stimuli, the L2 inner voice spontaneously develops, which helps L2 learners experience a native-like natural flow of thinking and speaking in target language, as well as mediation of the new languaculture, which results in a shift of identity when being involved with living, doing, and being in the target language culture. In addition, once an L2 inner voice emerges, target language proficiency apparently increases as well.

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Limitations and Implications

This initial study of what I am calling inner voice is limited in a number of ways. First of all, the experience of inner voice and an identity shift are significantly influenced by individual perceptions of such phenomena. Second, because the data collected in this study consist of a relatively small number of participants and data were collected over the relatively short period— four weeks—this study cannot be thought representative of findings across the entire population of second language learners. Therefore, future studies of L2 inner voice might collect data from a larger number of participants and over a longer period of time, as well as include participants from other L1 backgrounds besides Japanese, and include other L2s besides English. Moreover, it might prove interesting to compare learners in naturalistic contexts with those in foreign language contexts or other contexts in which the learners have either indirect or no access to interaction in naturalistic contexts, to see what the differences there are in inner voice development, or if indeed there is any such development for those in more decontextualized contexts.

This study looks at the emergence of L2 inner voice and its functions in L2 naturalistic learning contexts, as well as a possible identity shift when using the target language. The data unveiled evidence of the unconscious developing process of L2 inner voice through gaining a sense of the authentic use of an L2 in relation to languaculture. The emergence of L2 inner voice was supportive of Shpet's (1996) argument concerning inner forms of speech associated with culture. Moreover, the emergence of L2 inner voice may not occur uniformly across all aspects of L2 learning and in all cognitive domains. Multiple factors may affect the emergence of L2 inner voice, for example,

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personal factors such as the degree of acculturation to the L2 community or personal preference, as well as contextual factors, such as whether an L2 is the dominant language in the environment.

There are some areas where further research seems worth pursuing: (1) aspects concerning the nature, development and use of L2 inner voice; (2) effects of pedagogical intervention; and (3) continued theorizing. Within the first area, it appears to be valuable to continue exploring L2 private *voice*. Within the Vygotskyan (1934/1986) theoretical framework, private speech is externalized speech, but is still aimed at oneself and is similar to inner speech in function, that is, mental orientation and conscious understandings of problem-solving, etc. With the application of the Vygotskyan inner speech, private L2 inner *voice* can be said to operate as L2 inner voice in the functions, but verbally mediating L2 languaculture development. The second area of further research concerns the impact of instruction on L2 inner voice. There is little research specifically focusing on how teaching affects inner forms of speech development in relation to the culture, what formal aspects of inner voice are implicated in certain classroom practices, and what pedagogies might best promote effective development of L2 inner voice and the use among learners. Finally, theoretical propositions about the nature of L2 inner voice should continuously be made, as further research may bring additional information and provide fresh new insights concerning the role of L2 inner voice in learning another language.

APPENDIX 1

INFORMED CONSENT

Informed Consent--Department of Curriculum and Instruction

Title of Study: Inner Speech and Bilingual Minds
Investigator(s): Dr. Steve McCafferty (Primary), Brandon Shigematsu Ph.D. Candidate
Contact Phone Number: xxx-xxx-xxxx (cellular)

Purpose of the Study
You are invited to participate in a research study. The purpose of this study is to investigate second language (L2) "inner speech," more specifically "thinking" in L2 that ESL users/learners experience consciously and/or subconsciously in academia and to examine their "different" selves perceived when speaking a different language (English language, L2).

Participants
You are being asked to participate in the study because you are an ESL user/learner and your answers may offer a great insight into this body of research.

Procedures
If you agree to participate in this study, you will be asked to do the following: (1) Answer questionnaires and (2) Answer interview questions. You may be asked for multiple interviews on a different date.

Benefits of Participation
There *may not* be direct benefits to you as a participant in this study. However, we hope to learn your knowledge of the L2 "inner speech" and your "bilingual" minds.

Risks of Participation
There are risks involved in all research studies. This study may include only minimal risks. You may become uncomfortable when answering some questions.

Cost /Compensation
There *will not* be financial cost to you to participate in this study. The study will take an hour or less of your time. You *will* be compensated for your time in the form of Starbucks Coffee gift card ($20). You *will not* be obligated to return this gift should you decide to withdraw from the study later.

Contact Information
If you have any questions or concerns about the study, you may contact me at xxx-xxx-xxxx. For questions regarding the rights of research subjects, any complaints or comments regarding the manner in which the study is being conducted you may contact the UNLV Office for the Protection of Research Subjects at 702-895-2794.

Voluntary Participation
Your participation in this study is voluntary. You may refuse to participate in this study
or in any part of this study. You may withdraw at any time without prejudice to your
relations with the university. You are encouraged to ask questions about this study at the
beginning or any time during the research study.

Confidentiality
All information gathered in this study will be kept completely confidential. No reference
will be made in written or oral materials that could link you to this study. All records will
be stored in a locked facility at UNLV for at least 3 years after completion of the study.
After the storage time the information gathered will be destroyed.

Participant Consent
I have read the above information and agree to participate in this study. I am at least 18
years of age. A copy of this form has been given to me.

_____   _____
Signature of participant   Date

_____
Signature for consent to audiotape

_____
Participant name (Please print)

Participant note: Please do not sign this document if the Approval Stamp is missing or is
expired.

APPENDIX 2

A QUESTIONNAIRE

FOR JAPANESE ENGLISH LANGAUGE LEARNERS

Section A

Please tell me about yourself.

Q1. Is English your second language?   YES   NO
Q2. What do you think is your level of language proficiency?
        Novice   Intermediate   Advanced
Q3. When did you begin to study English language?
Q4. How long have you been in the U.S.?
Q5. When did you come to the U.S.?
Q6. What was your purpose of coming to the U.S.?
Q7. Are you an active English language learner? In other words, do you make a
conscious effort to learn English language? If so, how often?
Q8. What is your occupation?
Q9. What language do you use actively at home?
Q10. Where is your birth place?
Q11. What is your age range?
        18-20   21-25   26-30   31-35   36-40   41-45   46-50
Q12. What is your highest educational degree?

Section B

Please tell me about your family.

Q1. How many family members are there in your family?
Q2. Where do they live?
Q3. What language(s) do you use to communicate with your family?
Q4. What language(s) do your family use to communicate with you?
Q5. Does anyone in your family speak English language? If so, who and what level of
their proficiency?

Section C

Please kindly describe your inner voice* in English.
        *Inner voice—the use of a second language to communicate internally or in "your
                head."
L2--second language: English

Q1. Have you ever experienced an L2 inner voice?
Q2. If so, when and how?
Q3. Can you describe what it was like?
Q4. Do you "use" your L2 inner voice?
Q5. If so, when and how often?
Q6. If you are a student, do you use the L2 inner voice in academic contexts?
Q7. Have you ever perceived or experienced your different sense of identity when speaking English language?
Q8. If so, when and how?
Q9. Do you still notice it?

Thank you so much for taking time to answer these questions. Your answers are very important to this research. Please ask any questions if you have them.

FOR JAPANESE LANGUAGE LEARNERS

Section A

Please tell me about yourself.

Q1. Is Japanese your second language?   YES   NO
Q2. What do you think is your level of language proficiency?
        Novice   Intermediate   Advanced
Q3. When did you begin to study English language?
Q4. How long have you been studying Japanese language?
Q5. Are you an active Japanese language learner? In other words, do you make a
conscious effort to learn Japanese language? If so, how often?
Q6. What language do you use at home?
Q7. What is your occupation?
Q8. Where is your birth place?
Q9. What is your age range?
        18-20   21-25   26-30   31-35   36-40   41-45   46-50
Q10. Where and why did you begin learning Japanese language?
Q11. What is your highest educational degree?

Section B

Please kindly tell me about your family.

Q1. How many family members are there in your family?
Q2. Where do they live?
Q3. What language(s) do you use to communicate with your family?
Q4. What language(s) do your family use to communicate with you?
Q5. Does anyone in your family speak Japanese language? If so, who and what level of
their proficiency?

Section C

Please kindly describe your inner voice* in Japanese.

        *Inner voice is the use of a second language to communicate internally or in
            "your head."

L2--second language: Japanese

Q1. Have you ever experienced your L2 inner voice?
Q2. If so, when, where and under what circumstances?
Q3. Can you describe what it was like?

Q4. Do you "use" your L2 inner voice in a daily life?
Q5. If so, when, where and for what?
Q6. If you are a student, do you use the L2 inner voice in academic contexts?
Q7. Have you ever perceived or experienced your different sense of identity when speaking Japanese language?
Q8. If so, when and how?
Q9. Do you still notice it now?

Thank you so much for taking time to answer these questions. Your answers are very important to this research. Please ask any questions if you have.

APPENDIX 3

INTERVIEW QUESTIONS

INTRODUCTION:

What you share in this interview will be kept confidential. You may be identified in the study report in a way that will not reveal your individual identity such as, "a student, M, said," or "a businessman, K, said," so please tell me what you really think and feel; this will be the most helpful in trying to investigate the phenomena—inner voice in a second language and a different-self. I will be tape-recording the interview to try to make sure that we have an accurate record of your views and I also will be taking a few notes for the same purpose.

Do you agree to allow me to tape-record this interview?

If NO: I will now turn off the audio recorder.

I will then ask for permission to take notes and continue with the interview protocol.

If YES: Thank you, I will proceed with the interview.

INTERVIEW INFORMATION

Date of interview: Time: from_____to_____
First Name: MI: Last Name:

L2 INNER VOICE AND A DIFFERENT IDENTITY

Q1. In Japan, students are mandated to take an English as a Foreign Language course from middle schools. Did you like the class?

    i)   If yes, do you explicitly remember experiencing a L2 inner voice?
    ii)   How did you notice such experience? When?
    iii)   Under what circumstances did you use such inner voice?
    iv)   How did you use it?
    v)   Any difference between within and outside the classroom?
    vi)   If no, proceed to Q.2.

Q2.   i) Any difference between then and now--after you came to the U.S.: before beginning to study ESL; after some progress made in the proficiency level?--for the participant who answered positively in the Q.1.
    ii) Any difference now?--for the participant who answered negatively above.

Q3. How do you use the L2 inner voice? Why?

Q4. Under what circumstances do you think the use of the L2 inner voice is more common? Why?

Q5. How often do you use the inner voice?

Q6. When communicating in the L2, is there any implicit difference between in the Japanese language community (L1) and in that of the target language?

For example, in the Japanese community, you meet with your L1 friend(s) for dinner, who have brought their L2 friends, who are the native speakers of the target language, in which language do you communicate? Why?

In contrast, you and your L1 friends go to the L2 community to see your mutual friend(s)-The target language native speakers, which language do you use to communicate with your L1 friend, when mingled with your L2 friend(s)?

* These questions are to measure the use of English language to utter pragmatically—in a context appropriate manner—in both speech communities; they also are to examine the possible effect on the L1 inner speech and/or the L2 inner voice with different interlocutors in a different speech community.

Have you perceived any difference in the language use between in these two contexts? If yes, why?

Q7. What do you think is the significance of an L2 inner voice?

Q8. Have you experienced a shift of your personality when speaking the English language? If yes, why?

Q9. Do you still perceive yourself when speaking an L2?

CLOSING THE INTERVIEW

THANK YOU VERY MUCH FOR YOUR PARTICIPATION. I will be transcribing this interview, and upon your request, I can provide you a summary of the interview, for further input. Would you prefer that I provide your copy:
     - via e-mail?
     - postal mail?
     - both.

If you have any questions or further thoughts before you receive the summary, please feel free to email me at brandonwcw@xxxxx.xxx or via phone at xxx-xxx-xxxx.

RESEAERCHER'S INTERVIEW NOTES

A. Comments about the conduct, tone, progression of the interview etc.
- was participant comfortable and forthcoming, reticent, hostile etc?
- were there interruptions or other events that changed the pace or effectiveness of the interview?
- what are my feelings and perceptions about the person I interviewed, and the interview conduct, tone, progression etc.?
- what else occurs/emerges as a result of this interview?

B. Comments on interview protocol
- problems encountered, any thing I would possibly change before I use this protocol again.

APPENDIX 4

DISSERTATION RESEARCH APPROVAL

Social/Behavioral IRB – Expedited Review
Modification Approved

NOTICE TO ALL RESEARCHERS:
Please be aware that a protocol violation (e.g., failure to submit a modification for any change) of an IRB approved protocol may result in mandatory remedial education, additional audits, re-consenting subjects, researcher probation suspension of any research protocol at issue, suspension of additional existing research protocols, invalidation of all research conducted under the research protocol at issue, and further appropriate consequences as determined by the IRB and the Institutional Officer.

DATE: October 10, 2008

TO: Dr. Steve McCafferty, Curriculum and Instruction

FROM: Office for the Protection of Research Subjects

RE: Notification of IRB Action by
               Protocol Title: Inner Speech and Bilingual Minds
               Protocol #: 0706-2386

The modification of the protocol named above has been reviewed and approved.

Modifications reviewed for this action include:
        Participants will now be recruited and interviewed via phone or email also.

This IRB action will not reset your expiration date for this protocol. The current expiration date for this protocol is September 10, 2009.

PLEASE NOTE:
Attached to this approval notice is the official Informed Consent/Assent (IC/IA) Form for this study. The IC/IA contains an official approval stamp. Only copies of this official IC/IA form may be used when obtaining consent. Please keep the original for your records.

Should there be *any* change to the protocol, it will be necessary to submit a Modification Form through OPRS. No changes may be made to the existing protocol until modifications have been approved by the IRB.

Should the use of human subjects described in this protocol continue beyond September 10, 2009, it would be necessary to submit a Continuing Review Request Form *60 days* before the expiration date.

If you have questions or require any assistance, please contact the Office for the Protection of Research Subjects at OPRSHumanSubjects@unlv.edu or call 895-2794.

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