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Professor Anthony Mollica
Editor, **Mosaic,** P.O. Box 847, Welland, Ontario L3B 5Y5.
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The language graduate who never reads a professional journal and participates only minimally, if at all, in professional meetings, will stagnate. There is an onus on the profession in all areas to upgrade and keep abreast of current developments in the field.

– **Peter Heffernan**

Marcel Danesi

Second Language Learning: A Semiotic Note

Semiotics has rarely been used as a framework for assessing and theorizing about both second language learning and second language teaching, although there has been considerable work in the applications of semiotics to the field of education generally in recent years. This paper looks at the specific implications that semiotics has for understanding how second language learning unfolds. Semiotics sees any learning process as a sign-based one and, thus, as a process that is part of how the mind comes to form new signs – those of the target language.

Introduction

The field of Second Language Learning (SLL) is populated with a plethora of research findings, theories, constructs, notions, and the likes attempting to explain, or at least assess, how SLL unfolds in a formal classroom environment. The overall aim of the discipline, whose origins can be traced back to the so-called Reformers in the late nineteenth century (Titone and Danesi, 1985), has always been to extract insights from research on both language and the language learner so as to be able to provide meaningful pedagogical suggestions for how to impart native-like fluency effectively and efficiently in the classroom (and in other contexts). The underlying assumption in this overall plan of attack has been, since the outset, that the degree of success of classroom SLL correlates with the fidelity with which the pedagogy reflects the implications inherent in the research findings and relevant theories. This basic epistemological model has produced many positive results, but, by and large SLL still has not tackled successfully what is perhaps the most important problem of all, how to integrate language and culture in the classroom and thus produce overall conceptual fluency, or the ability to manage SL (Second Language) concepts in a linguistically-appropriate way (Danesi and Mollica, 1998; Danesi, 2003; Holme, 2009; Danesi and Grieve, 2010). The approach to culture has always been to consider it as complementary to, and illustrative of, language forms and structures. But this has not solved the problem of how to integrate, not illustrate, culture in the classroom. So, the question continues to perplex SL researchers and practitioners (see, for example, Musumeci and Aski, 2010; Ryan-Scheutz and Nuessel, 2010).

There are, of course, many pedagogical techniques that integrate culture and language implicitly, such as the many fun ones introduced into classroom practice by Anthony Mollica (2010) over four decades. In a phrase, the role of culture in the SL classroom has been discussed, debated, and researched almost ad nauseam since Robert Lado's classic 1957 study of languages and cultures in contact in the classroom. Nevertheless, there has really never been a concrete attempt to show how language and culture form two sides of the coin, so to speak, and thus should be considered as extensive, not discrete, aspects of SLL.

Relating the two is, admittedly, a difficult task. And SLL, to its credit, has sought insights from anthropology and cultural studies in order to extract principles that may be useful for understanding the SLL process. But rarely has SLL looked to the science of semiotics (see Danesi, 2000), which is probably the most appropriate discipline for studying and understanding the language-culture nexus. The main exception to this pattern is the school of thought within SLL based on the work and ideas of the Russian psychologist and semiotician Lev S. Vygotsky (1961, 1978; see for example, Krashen,1985; Lantolf and Appel, 1998; Lantolf, 2000; Johnson, 2004; Byrnes, 2006). However, even this modest flirtation with semiotic theory has never really penetrated the mainstream of SLL research, except for, maybe, the incorporation of Krashen's i + 1 hypothesis, which is a SLL reformulation of Vygotsky's idea of zone of proximal development which asserts that learning is, in effect, one small step ahead of exposure to information or input and that instructions should take this directly into account.

The purpose of this paper is to put forward a general case, not a strictly Vygotskyan one, for the use of semiotic theory in the theoretical and empirical investigation of SLL. The reason for this is a straightforward one – semiotics approaches the study of language as a sign system that is interconnected with other sign systems (gesture, facial expression, art, music, etc.). In other words, the semiotic purview envisions language learning as an integrated phenomenon, involving all systems as interacting in the production of cultural concepts. This means that in learning a language one is simultaneously learning culture. The focus is on meaning, not on structure or communication in isolation from these systems. The notion of conceptual fluency grew out of this consideration. I believe that the whole field of SLL will benefit enormously from reorienting its approach in a rudimentary semiotic way. My goal here, however, is not to present an overall semiotic agenda for research – that would take an in-depth treatise in itself (although I gave some idea of what shape such an agenda might have in a previous work (Danesi, 2000)). My objective is simply to make a plea to SLL researchers and practitioners for developing such an agenda once and for all, so that the problem of imparting conceptual fluency can be addressed concretely.

A Semiotic Perspective of Language Learning

No matter from what perspective one approaches the field, semiotics is fundamentally the science that attempts to answer a simple question: "What does X mean?" The "X" can be virtually anything, from a single word or hand sign, to an entire musical composition or movie. The "magnitude" of "X" may thus vary, but its basic use does not. It is something that stands for something other than itself in specific and culturally-defined ways. If we represent the meaning (or meanings) that "X" encodes with "Y", then the primary task of semiotic analysis can be abridged, basically, to assaying and investigating the nature of the relation "X" stands for "Y". Consider the meaning of "red". The "X" is an English color term. As it turns out, there is hardly just one answer to the question of what it stands for. At a basic level, known as denotative, it refers to a primary color located at the lower end of the light spectrum. But at various levels of usage, the same "X" can have a host of other meanings, called connotative:

- as a traffic signal, it means "stop";
- as an armband color worn by someone at a political rally it stands for a certain type of political ideology;
- as a flag color at a construction site, it is a signal of "danger";
- in an expression such as "turning red," it is a figure of speech that allows speakers to refer to emotional states without naming them precisely;
- and so on and so forth.

But, by and large SLL still has not tackled successfully what is perhaps the most important problem of all, how to integrate language and culture in the classroom and thus produce overall conceptual fluency, or the ability to manage SL concepts in a linguistically-appropriate way.

Semiotics seeks answers to the what, the how, and the why of meaning. But what is meaning? In their 1923 work, titled appropriately *The Meaning of Meaning*, Ogden and Richards uncovered 23 implicit meanings of the word *meaning*, showing how tricky a term it is. Compounding the situation is the fact that when we attempt to "define" the meaning of "X" at a literal level, we invariably end-up going around in circles. Consider the dictionary definition of *cat* as "a small carnivorous mammal domesticated since early times as a catcher of rats and mice and as a pet and existing in several distinctive breeds and varieties." The first problem with this definition is the use of mammal to define *cat*. This constitutes the unwarranted assumption that we are familiar with the meaning of this term. Of course, one can look up the definition of mammal. A mammal, the dictionary states, is "any of various warm-blooded vertebrate animals of the class Mammalia." But this also assumes that we already know the meaning of animal. Looking up animal in the same dictionary, we find it defined as an organism, which, in another entry it defines as an individual form of life, which it defines, in turn, as the property that distinguishes living organisms. Alas, at that point the dictionary has gone into a loop, since it has employed an already-used term, organism, to define life.

This looping pattern is characteristic of all definitions. It arises because words are used to define other words. So, like the axioms of arithmetic or geometry, the notion of meaning is best left undefined. It is something of which everyone has an intuitive understanding, but which virtually no one can really explain. To avoid a looping structure, the term signification is preferred in semiotics, even though meaning and signification are often used interchangeably by semioticians. Essentially, signification is what is elicited conceptually when we use or interpret a sign (such as the word *cat*). Signification is, thus, the relation "X" stands for "Y" itself. It unfolds in one of two ways, as already pointed out. Take, as an example, the word house. This "X" elicits a "Y" that can be characterized as a "structure for human habitation." This type of basic image is known as *denotative* (as mentioned). Denotation allows us to determine if a specific real or imaginary object ("Y") labeled house is a "structure for human habitation," no matter what its dimensions are, what specific shape it has, and so on.

Similarly, the word *square* denotes a figure consisting of "four equal straight lines that meet at right angles." It is irrelevant if the lines are thick, dotted, 8 meters long, or whatever. If the figure has "four equal straight lines meeting at right angles," it is identifiable denotatively as a *square*.

Now, consider the word *house* again in its extended uses for encompassing a whole range of other referents. Such uses are called *connotative*. Here are just three examples of these:

> The house is already in session ("legislative assembly, quorum").
>
> The whole house roared with laughter ("audience in a theater").
>
> That institute is housed by our university ("place contained in another place").

Note, however, that the basic image of "structure for human habitation" is either implied or suggested in all three uses – a legislative assembly, a theater audience, and an institute imply "structures" of certain kinds that "humans" do indeed "inhabit" in some way. *Connotation* allows us to expand the use of signification creatively. It is, in fact, the operative mode in the construction and interpretation of all kinds of cultural texts-poems, novels, musical compositions, art works, and the like. And, any interpretation of culture – specific concepts such as motherhood, masculinity, friendship, and justice, invariably involve connotation.

There is much more to sign theory than this, needless to say. But for our present concerns, the distinction between denotative and connotation will suffice. As the above examples show, *connotation* is literally where the "conceptual action" is in language, since it connects language form to the broader network of meanings present in a culture. Thus, a fundamental principle of semiotics is that connotation is the core of linguistic meaning, with denotation (literal) meaning constituting simply a descriptive verbal strategy, that is, a way of referring concretely to the world. *Connotation* allows people to refer to the larger domain of abstractions that are encoded by a specific culture. The definition of *cat,* above, reveals how denotative meaning works – as a looping structure. Connotative meaning, on the other hand, has an associative structure. Given its broader interconnectedness with meaning systems, even this simple analysis of signification suggests, by implication, a general SLL principle – connotation reveals more about what language is than does the usual focus on literal language. If one looks at the input of native speakers, one will find a high degree of connotation present in it; this is generally not so in the kind of input provided to SL learners at least in the early stages of learning. From the early Direct Method onwards, the assumption has been that denotative meaning must precede connotative meaning in the input to which the learner is exposed. The role of connotation in discourse and its interconnectedness to the other networks and circuits of culture has only occasionally been contemplated by the mainstream approaches to SLL. As the work in conceptual fluency has shown, however, this need not necessarily be the case (Danesi, 2003) and pedagogical models based on connotative input can be applied fruitfully from the very outset of leaning.

The application of semiotic theory to the domain of SL education has rarely been contemplated.

To get a firmer grasp of how productive connotation is in language, take, for instance, the word *drop.* The denotative (literal) meaning of this word, when used as a verb, is "to let or make (something) fall," as in

> "He dropped the glass on the floor."

Now, this very same word can be applied to abstract referents or referential domains that are felt, by extension, to involve imaginary "dropping":

> The prices dropped considerably last year.
>
> The soldiers were dropped by parachute.
>
> Sooner or later she is going to drop dead from exhaustion.
>
> He has already dropped off to sleep.
>
> Why don't you let the matter drop?
>
> Let me drop a hint for you.
>
> You should drop that word from your sentence.
>
> Try not to drop behind.

Such common uses of just one verb show that language begets its expressive power from the unconscious fact that it is largely a connotative referential system, permitting human beings to encompass increasingly larger and more abstract domains of meaning with a finite number of forms. It is this inbuilt feature of language that makes SLL a particularly difficult and intricate process. The conceptual reorganization involved in acquiring connotative competence is highly complex and time-consuming. Moreover, in the domain of discourse, navigating through connotative networks in an appropriate manner constitutes developing the ability to relate language forms with knowledge of culture, tradition, history, and what can be called simply "communal thought and feeling states."

The above example of connotative referentiality can be analyzed more formally as follows. The concept of "physical dropping," allows users to determine if a specific real or imaginary referent in some other domain can be connected to it through association – by inference. The concept of *dropping* can be connected, for example, to prices because these are understandable as going from higher to lower in numerical terms. This imaginary *dropping* schema is, in fact, the conceptual image that undergirds the use of *drop* in all the above examples: the position of an airplane is higher than that of the ground, so that troops can be imagined as being *dropped* to the ground; standing is perceivable as referring to a higher position of the body than it is when it is lying down, so that exhaustion can be imagined as a form of *dropping* from a standing position to a lying down one; and so on.

Semiotic analyses of conversations show that discourse is structured largely by connotative linkages. This can be called connotative chaining (Danesi, 2000). For instance, once a word such as *drop* is used connotatively by a speaker in a certain discourse situation, then it may unconsciously trigger a chain of associated connotative concepts such as *pick up, let go,* etc. Here is an example of a conversational excerpt that I recorded at the University of Toronto, during which a speaker (a university student) used the word *drop* as just described (see Danesi 2000):

> Yeah, I dropped that course yesterday… No, I won't pick it up next year… The main reason for letting it go was the prof. He was awful… Believe me, I haven't lost anything…

In this sample of discourse, the connotative meaning of *drop* initiated an unconscious associative process that included *pick up, let go,* and *lose* in close proximity to each other. In effect, the image of *dropping* is distributed in the "discourse circuit," as it may be called, surfacing in various lexical forms. The construction of the circuit is a subjective act, of course. This is what makes discourse interesting in actual reality, but understandable, and even predictable, conceptually. Once connotative circuits have been introduced into discourse they tend to guide the flow of conversation. In the above circuit, for instance, the term *pick up* led a little later in the conversation to the use of *take*, which, in turn, generated its own circuitry with the terms *carry* and *heavy*:

> I really can't *take* any more subjects… I'm already *carrying* the maximum… I've got quite a *heavy* load…

In many theories of language design, denotation is considered to be the primary shaper of the cognitive flow of meaning during discourse, and connotation a secondary, context-dependent option within this flow. But this view is not supported by the plethora of findings on discourse in general. Michel Foucault (1972) characterized signification in language appropriately as an endless "interrelated fabric" in which the boundaries of individual meanings are never clear-cut. Every sign in this fabric (or *circuitry,* as we have termed it here) is caught up in a system of references to other signs, to codes, and to texts. As soon as one questions that unity, Foucault emphasized, it loses its self-evidence; it indicates itself.

There are various kinds of connotative processes that characterize discourse flow. Some of these generate circuitry based on narrative traditions. Calling someone a *Casanova* or a *Don Juan*, rather than a *lady-killer,* evokes an array of culturally-specific connotations that these narrative characters exemplify. Referring to a place as *Eden* or *Hell* elicits connotations that have a basis in mythic and religious narratives.

A research project I conducted with students at the University of Lugano several years ago revealed that narrative circuits can be found in many connotative discourse circuits. The students – all native speakers of Italian – were asked to write down the ideas that specific concepts evoked (cited in Danesi, 2000). For example, the word *bianco* "white," was defined by only one student as indicating a specific kind of color; most of the others pointed out that it elicited meanings such as:

> *divinità* "divinity"
> *spirito* "spirit"
> *anima* "soul"
> *purezza* "purity"
> *candore* "candor"
> *neve* "snow"
> *freddo* "cold"
> *castità* "chastity"
> *leggerezza* "light"
> *volo* "flight"
> *cielo* "sky"
> *nuvole* "clouds"
> *luce* "light"
> *Madonna* "the Madonna"
> *colore* "color"
> among others.

The experiment showed, overall, that the students instinctively analyzed the color term *connotatively,* not *denotatively.* The experiment also showed that there is much crisscrossing and looping in connotative circuits, corroborating, indirectly, what the scholar Vladimir Propp (1928) suggested; namely, that ordinary discourses are built upon an entangled associative connotative structure based in large part on narrative traditions. This line of inquiry would explain, in effect, why narrative is the medium through which children come to learn abstractions of various kinds. Stories of imaginary beings and events allow children to make sense of the world of reference, providing the connotative circuits through which they can navigate mentally, thus learning from association-by-inference.

From the Lugano experiment several other interesting findings emerged. For example, although there was much variation in the number of circuits, crisscrosses and loops used, the conceptual content of the student explanations was remarkably unitary. Of the 238 students that took part in the project, the following connotative meanings were chosen by most (229) in the order of frequency shown:

Connotative Concept Frequency

luce "light" 97%
purezza "purity" 91%
pulito "clean" 87%
neve "snow" 85%
candore "candor" 85%
colore "color" 84%
sposa "bride" 80%
latte "milk" 79%
anima "soul" 77%
verginità "virginity" 76%
freddo "cold" 70%
Dio "God" *divinità* "divinity" 63%
paradiso "paradise" 62%
illuminato "enlightened" 58%
eternità "eternity" 47%

This finding suggests that connotative circuits are highly regular and predictable, and that some connotations are more productive culturally than others. Similar sets of statistics were found for other concepts such as:

cuore "heart,"
persona "person,"
oro "gold," etc.

Implications

This whole line of inquiry suggests two key psychological principles that are especially important when it comes to SLL research:

- Abstract concepts are understood primarily in terms of connotative circuitry.
- The organization of abstract culture-specific concepts in memory is connotative.

The specific implication that these hold for SLL, clearly, is that the aim of SLL research and theory should be on how we develop connotative competence, not on how we develop linguistic and/or communicative competence. In this semiotic frame it is obvious that linguistic competence is tied to the connotative system of a culture and, similarly, that communicating in a native-like fashion is a derivative of this competence. It is not the purpose here to show how grammar and lexicon are tied to connotative competence (for which, see Danesi, 2000). Suffice it to say that if the growing body of research on discourse showing the role of non-literal meaning in conversation is accurate, then the concept of connotative competence can no longer be put into a secondary status.

There are several related pedagogical issues with regard to the development of connotative competence that need to be investigated with specific kinds of methodological research:

- Since connotative competence is an intrinsic characteristic of discourse flow, it is obvious that much more pedagogical effort will have to be devoted to developing instructional techniques designed to impart this kind of knowledge to students.
- Differences between NL (native language) and SL connotative systems should be examined much more closely in order to derive appropriate pedagogical insights. In this framework, contrastive analysis would focus more on connotative differences than on other kinds.
- Since connotation is the operative mode in the construction of discourse texts it is obvious that the emphasis in SL teaching will have to be redirected away from the tradition of starting with literal, concrete denotative teaching to a more subtle form of connotative teaching. Denotative concepts are formed on the basis of the perceived features that are shared by the members of a referential domain – for example, "catness." In a discourse situation such meanings do indeed surface in a host of situations: talking about one's cat to someone, describing a cat seen in a pet store, etc. The traditional methods and approaches have provided plenty of opportunities for students to decipher and employ denotation in acquiring new input. But they have provided very few opportunities for students to develop the ability to navigate through the connotative circuitry that undergirds most of discourse.

As mentioned, there are many more sides to semiotic theory than this simple dichotomy of denotative-versus-connotative. The objective here has not been to delve comprehensively into the theoretical domain, but simply to extract one of the areas within it to show how powerful semiotics is for understanding how meaning and the interconnectedness between language and culture can be approached within SLL. As Henry Schogt (1988: 38) has perceptively remarked, all languages

> have meaningful units that articulate human experience into discrete elements.

The study of the interconnection between such elements and human experience is the goal of semiotics.

The last 150 years have produced some rather interesting hypotheses, constructs, and suggestions for modeling SLL teaching practices and curricula. The idea of incorporating semiotics into these practices and curricula is not new, as mentioned. But the application of semiotic theory to the domain of SL education has rarely been contemplated. Much work remains to be done on expanding the notions of semiotic competence and conceptual fluency, even though, with or without semiotics, modern instructional techniques have been rather successful in training language learners to gain a firm control over grammar and communication. So, the issue of whether grammatical syllabi and formalistic instructional styles are more or less productive than communicative or functional ones is, in my view, a moot one. The basic goal of semiotics in language education is to put the teacher and the learner in a position to see that different languages encode reality in ways that are at times identical, at others similar or complementary, and at others still, quite different. My final thought is, however, a caveat. No matter how scientific or theoretically sound a particular account of language might appear to be, it is always susceptible to the vagaries of its human congener. The present account is no different.

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Marcel Danesi is professor of Linguistic Anthropology at the University of Toronto. He was Director of the Program in Semiotics and Communication for 30 years. He is currently Editor-in-Chief of *Semiotica.* Among his various works in the field of semiotic education are *Semiotics in Education* (Thelem, 2002) and *Semiotics in Language Education* (Mouton de Gruyter, 2000). With Anthony Mollica he has co-authored a series of studies on bimodality and conceptual fluency theory, both of which have become well known as models within second language teaching theory.

Mariana Bockarova

A Note on Second Language Teaching from the Standpoint of Semiotics

Semiotics has occasionally been used in education as a framework to provide insights into how students learn sign systems. However, with few exceptions, semiotics has rarely been applied to second language teaching. Given that second language teaching (SLT) is basically a process of imparting new verbal signs, semiotics can provide very valuable insights into how to translate sign theory into pedagogical practice. This paper will look at the ways in which semiotics can be used for future work in SLT.

As the discipline investigating the nature, evolution, and use of signs, semiotics is an ideal tool for conducting research in various pedagogical fields, and especially in the field dealing with how the signs in a SL (second language) are learned. As currently practiced, semiotics allows us to study sign-based phenomena such as body language, visual communication, media, advertising, narratives, material culture (clothing, cuisine, etc.) and rituals, in a systematic interconnected way. One of its modern-day founders, the Swiss linguist Ferdinand de Saussure (1857-1913), defined it as the discipline aiming to investigate "the role of signs as part of social life" (Saussure 1916: 15). From this basic epistemological platform, semioticians started shortly thereafter to study all aspects of the interconnectedness of sign systems in the constitution of a culture in earnest. Until recently, however, the idea of using semiotics in SL pedagogy to guide the student's propensity to envisage new input in sign-based ways, has rarely been considered (see, for instance, Danesi, 2000). Attempts such as those by Semetsky (2010) to apply semiotics to the development of classroom learning theory and education generally, are exceptions, even though it was the great Russian psychologist Lev Vygotsky who had remarked already in the 1930s that the

> very essence of human memory is that human beings actively remember with the help of signs (1978: 51).

In these words can be detected the *raison d'être* for establishing a connection between semiotics, the science of signs, *second learning theory*, the science of how the signs of the second language are learned, and *pedagogy*, the science of teaching individuals how to control signs.

Needless to say, much important work on the viability of using semiotics in education has been conducted throughout the twentieth century. Some have attempted to bring semiotics and education closer together, providing valuable insights for sculpting a veritable "applied semiotics" for pedagogical theories. But what is lacking, in my view, from the relevant literature is a practical framework for synthesizing the many, yet still scattered, semiotic ideas into how human meaning systems are learned and how these can be used to construct appropriate instructional materials and methods.

This brief note will provide a general frame for initiating future work in this area. It is based on several educational experiments conducted by Danesi (2000, 2008) at the University of Toronto.

The pedagogical principles, techniques, and ideas making up what can be called a "semiotic pedagogy" in SL teaching do not comprise something radically new in language education. The ideas of Mollica through the years on recreational problem solving (analyzed comprehensively in Mollica, 2010) have, essentially, been implicitly semiotic, in the sense that they have treated language input as creative and highly associative of meanings. The significations are not specified as such, they are implicit in the ludic material itself. But such teaching has rarely (if ever) been fashioned into a consistent framework for conducting classroom teaching in a holistic fashion. So, the techniques have tended to be used in sporadic ways, disconnected from any overall framework for building SL competence. It is the framework itself that, in my view, will improve learning outcomes considerably and, potentially, build such competence. The implicit claim is that an appropriate pedagogical framework for teaching a SL should activate a flow of learning that goes from an experiential mode of understanding to an abstract one. The former mode is best set in motion with the use of what semioticians call iconic techniques (diagrams, schemata, annotations, contextualization, etc.), and the latter mode with more formal techniques (analysis, generalization, etc.). For the sake of convenience, this can be called the *natural semiotic learning flow* (NSLF). It is analogous to the flow theory discussed by Mollica and Danesi (1995).

Several studies substantiating, or at least supporting, the NSLF principle exist throughout educational literature. The gist of the studies is that learners taught according to this principle tend to do better on tests of proficiency than do matched control groups (Danesi, 2008). The principle does not, however, constitute an all-embracing theory of SL learning. It simply offers a semiotic perspective on how to view typical classroom behaviors and how to maximize on an innate learning pattern. As such, it does not exclude using other pedagogical ideas or frameworks. The NSLF posits that novel learning is based in the experiential realm of the senses. The early stages of learning can be called *cognizing* stages, while the stage when the sensory units are transformed into more abstract formal modes can be called the *recognizing* stage. The NSLF can thus be seen to be a general principle of learning applicable at the earliest stages of learning, since it sees novel learning tasks *(cognizing events)* as being more comprehensible if they are presented iconically (through visualization, ludic materials, etc.), whereas practice of already-acquired knowledge and skill *(recognizing events)* require a more conventionalized form of presentation and practice. The key to successful SL learning lies, therefore, in determining at what point the student's cognizing mode is ready to become a recognizing mode.

Thus, well-known pedagogical techniques involving concretization, annotation, contextualization, generalization, and exemplification, amongst others, can be connected cohesively to this principle, since their overall objective is to get the student to grasp the structure of new concepts and the correlative signs used to deliver them through iconicity. Iconicity is considered by most semioticians to be the default mode for learning new ideas. Iconicity is the semiotician's way of saying simulation, or learning by imitating creatively. Using all the senses, from vision to touch invariably leads to iconic understanding. Iconicity is evidence that human perception is highly sensitive to recurrent patterns of color, shape, dimension, movement, sound, taste, etc. It is also characteristic of childhood development. The relevant scientific literature makes it rather apparent that children invariably move through an initial stage of gesticulation and vocal sound imitation before they develop full language.

A key study by Yancey, Thompson, and Yancey (1989) has shown rather convincingly that training students how to use pictures (diagrams, charts, etc.) to solve math problems results in improved performance, corroborating a veritable tradition in language education (and education generally) on the use of visual techniques (for example, Mollica, 1981). As Musser, Burger, and Peterson (2006: 20) have aptly put it:

> All students should represent, analyze, and generalize a variety of patterns with tables, graphs, words, and, when possible, symbolic rules.

The NSLF also emphasizes that formalization must not be excluded from the pedagogical process, since it is the point of arrival in the learning flow. Thus grammatical training is to be included in s semiotic pedagogy, but only as par of activating the *recognizing* mode, not the *cognizing* one. The task of semiotic pedagogy is to create learning conditions that activate this flow. If it is not activated, or if only the experiential *cognizing* mode is stressed, effective global learning rarely occurs. A significant study by Ambrose (2002) suggests, in fact, that arithmetic students who are taught appropriately with concrete strategies, but not allowed to develop their own abstract representational grasp of the arithmetical code, are less likely to develop arithmetical fluency. The same conclusion has been reached constantly in the area of SL learning.

A simple model of what semiotic pedagogy entails in terms of the NSLF is the one below. This takes into account *cognizing* versus *recognizing modes* of learning (see Figure 1, on p. 11).

In line with the basic supposition of semiotic pedagogy that one cannot assume that students already have the know-how required to represent novel information, a significant study in the cognate area of mathematics conducted by Clement, Lochhead, and Monk (1981) found that it must be taught explicitly:

> The modeling process is far more complex than is generally imagined and is not simply an immediate aid to learning mathematics (1981: 287).

As Dolan and Williamson (1983: ix) have aptly observed,

> we must do more than simply assign problems to students.

The same can be said in the area of SL teaching.

Semiotics is ultimately a form of investigation into how humans shape raw sensory information into sign-based categories. Signs are selections from the flux of experiences and various forms of information that are taken in by our senses, allowing us to encode what we perceive as meaningful and, thus, to remember it. We are born into a system of signs, called the *semiosphere* by the late Estonian semiotician Juri Lotman (1922-1993), that will largely determine how we come to understand the world around us (Lotman 1991). The semiosphere, like the biosphere, regulates human behavior and shapes learning. As Charles Peirce often wrote in his correspondence, it would seem that as a species we are inclined to "think only in signs."

During the Cognizing Mode Stage

Input ↓	→	Should be devised in creative ways to allow students to grasp the nature of the meaning systems creatively (puzzles and games have proved to be useful in this regard).
Concretization ↓	→	Students should be taught how to represent language content iconically (with diagrams, schemata, charts, figures, etc.).
Annotation ↓	→	Appropriate commentary on the steps used in the process should be used.
Contextualization ↓	→	Real-life examples should always be used to reinforce the learning process because these provide appropriate contexts in which learning unfolds.
Exemplification ↓	→	Closed and open activities can then be devised to exemplify the structural properties of given inputs.
Exploration	→	After basic structures have been acquired, heuristic problems should be used so that students can explore the structural principles presented and expand upon them on their own.

During the Recognizing Mode Stage

Formalization ↓	→	Students should be shown how to generalize grammatically from previously-processed input.
Decoding	→	Students should be introduced to basic linguistic analysis to help them formalize their developing knowledge.

Figure 1

The difference, but intrinsic interconnection, between signs and learning can be seen in early childhood behaviors. When an infant comes into contact with an object, his or her initial reaction is to explore it with the sensory apparatus, that is, to touch it, taste it, smell it, listen to any sounds it might make, and visually observe its features. This exploratory phase of knowing, or of *cognizing*, an object has been called *sensory cognizing* by Sebeok and Danesi (2000). At that early stage of development, the child is using an innate sensory mode of learning to "cognize" the object in terms of how it feels, tastes, smells, etc. The resulting form of knowledge, as Sebeok and Danesi point out, allows the child to *recognize* the same object later, without a reutilization of the sensory apparatus. As the child grows, he or she starts to engage more and more in semiosic (sign-based) behavior that clearly surpasses the sensory cognizing stage; that is, he or she starts imitating the sounds an object makes with the vocal cords, indicating its location with the index finger, and so on. At that point, the object starts to assume a new status cognitively; it has, in effect, been transferred to the physical sign itself used by the child to imitate its sounds or point out its location. This strategy produces the most basic type of sign which, as Charles Morris (1946) suggested, allows children from that point onwards to replace the sign for the object. As children grow, they become increasingly more adept at using signs to represent the world in a semiosic manner.

Culture, context, and experience reshape the inbuilt learning system for the developing human being into a semiosic filter that allows him or her to reorganize the raw information that is processed by the senses into meaningful wholes. As a consequence, understanding of the world is not a direct one. It is filtered by signs and, thus, by the referential domains that they elicit. In effect, learning is a semiotic process. SL teaching research and practices have hardly ever been seriously shaped by semiotic theories or insights, at least until the last decade or so. SL teachers have traditionally turned to psychologists to help them devise pedagogy into a *learning compatible* activity. Semiotics can easily be added to this partnership. The idea of incorporating semiotics into educational practices and curricula is not new, but it needs to be stressed and repeatedly illustrated in various of ways. The cross-fertilization will benefit both semiotics and SL pedagogy. As Davydov and Radzikhovskii (1985: 59) observed over 15 years ago, the time has come for educators to seriously take into account the "sign mediated nature of mental functions."

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Mariana Bockarova is currently pursuing graduate studies at Harvard University. In 2009, she completed her undergraduate degree at the University of Toronto, earning a B.Sc. (Hons). Upon graduating, at nineteen years old, Mariana became a finalist for Canada's 'Top 20 Under Twenty'. Most recently, Mariana will be co-chairing a conference at the Fields Institute for Research in Mathematical Sciences in March of 2011, and is developing new market research tools for various advertising agencies.

Nooshin Shakiba

The Influence of Age on Accent for Adult L2 Learners: An Annotated Bibliography

This annotated bibliography is intended to provide those who are interested in the field of adult second language acquisition and accent with an overview of the debate which exists in this field.

Introduction

It is a common belief that, compared to children, adults are not successful second language learners, especially in acquiring second language accent. This subject has attracted the attention of educators, teachers, curriculum developers, administers, and government officials. They are all looking for more efficient and cost-effective ways to improve students' second language accents. This motivates much research in the field and many different theories have been examined to find solutions for helping to nurture a more native-like accent.

The first person to publicize the idea that the time constraints identified by ethologists for animals might lead us to consider neurological constraints on language learning in humans was the great Canadian neurologist, Wilder Penfield (Scovel, 1988, p. 53).

Further, Lenneberg (1967) was the first one to suggest that after the age of puberty the ability to acquire language successfully would end. He supports his idea with a biological and neurological basis. However, he is not precise about what aspects of foreign language acquisition might be affected by this critical period and is more concerned with the development of the mother tongue.

Scovel (1969) posits that it is impossible to learn a foreign language without an accent after puberty. This statement would later be used as a strong version of the Critical Period Hypothesis (CPH). However, the presence of a few adults who can speak a second language like native speakers, despite acquiring it after their puberty, severely challenges the strong version of the CPH. Scovel (1988) also mentions that there is a critical period for the acquisition of the pronunciation of a second language. However, the research of Bongaerts *et al.* (1997) shows that even post-pubertal foreign language learners can attain native-like levels of phonetic proficiency.

This annotated bibliography will provide the readers with

- a sense of the theoretical issues,
- the type of research that has been done on this topic, and
- what the researchers' suggestions are for pedagogy.
- how the approaches in teaching pronunciation have changed, and
- what the most recent trends are in this field.

Theoretical Issues

There is discrepancy ragarding the acceptance of the fundamental theoretical issues among researchers and I have tried to select literature to show the debate which exists in this field.

Hyltenstam, K. and Abrahansson, N. (2001). "Age and L2 Learning: The Hazards of Matching Practical "Implications" With Theoretical "Facts"." *TESOL Quarterly,* 35, 1: 151-170.

The article comments on Marinova, Marshal, and Snow (2000), also reviewed in this paper. The authors believe that Marinova et al. (2000) ignore the great success which has been achieved so far in the field of second language learning and age and that their attitude towards the relationship of L2 and age is an "oversimplified and one-dimensional picture" (p. 152). The authors deciding

> when to start teaching foreign and second languages must be based on different theoretical, ideological and practical considerations" (p. 154),

which they believe have been ignored in Marinova et al. (2000). The authors, unlike Marinova et al. (2000), believe that the CPH does not address the issue of learning rate; however, their article discusses the inability to acquire native like proficiency after a certain age. Moreover, they believe there has not been emphasis on unsuccessful adult L2 learners in the literature; on the contrary, many researchers such as

> Birdsong (1992, 1999), Bongaerts et al. (2000) etc. based their research on the CPH and maturational constraints, and they have addressed the very successful adult L2 learners (p. 158).

I would recommend reading Marinova *et al.* (2000) prior to this article. My purpose is to show that there is ample debate among the researchers in this field and that there is no consensus among them. I also concur with this article's authors that there has not been misemphasis about age and L2 learning. However, many researchers have tried to show that the strong position of the CPH which asserts that adults are not able to achieve a native-like accent is not true.

Marinova-Todd, S., Marshall, D., and Snow, C. (2000). "Three misconceptions about age and L2 learning." *TESOL Quarterly,* 34, 1: 9-34.

The authors provide a comprehensive overview of CPH theories and research which has been done. They try to focus on the hypothesis that young children can achieve native-like proficiency while adults cannot. The authors try to explain three misconceptions which they believe exist among researchers who study the relationship between age and L2 learning.

- They believe there is misinterpretation of the data and they support their idea by providing different examples of successful late adult learners.
- They believe the linguistic field is using neuroscience to explain different neurological activations that happen when adults or young children are learning an L2. Although researchers can find activation differences between the left and right hemisphere of the brain, it cannot be directly correlated to whether or not it produces better language learning.
- The authors identified misconception is misemphasis.
- They believe that there is a tendency to ignore successful adult learners who achieve native like proficiency and researchers place emphasis on adults who are faced with problems in L2 learning.
- Moreover, the authors claim that the effects of environment and motivation are additional factors which have crucial effects on age and L2 learning.

I agree with the authors that understanding age as a variable in language acquisition and considering its correlation with social, psychological, and educational factors can help educators, teachers, and researchers examine the issue of L2 learning and age in a more reasonable way. I also believe that we have to continue placing an emphasis on adult learning too.

Moskovsky, C. (2000). "The critical Period Hypothesis Revised." *Proceedings of the 2001 Conference of the Australian Linguistic Society.*

An overview and a comprehensive review of the existing debate about the Critical Period for L2 acquisition of the most recent ideas about this issue are provided in this article. The existence of a Critical Period for first language learning made researchers wonder whether or not it also exists for second language learners. The focus of the debate in this article is on those views opposing the Critical Period. For example, the existence of successful adult L2 learners brings into question the fundamentals of the Critical Period Hypothesis. Moreover, according to the Critical Period,

> after a certain age Universal Grammar (UG) is no longer available for the learners (p. 1).

However, in practice, the results reject this idea as well. Subsequewntly, based on the Fundamental Difference Hypothesis (FDH) which is posed by Bley-Vroman in 1989, the author explains that first language acquisition relies on UG as a linguistic source. However, second language acquisition relies on first language as a linguistic source. The author believes that by accepting FDH, the debates against the Critical Period existence would be solved!

Readers interested in adult L2 acquisition and its relation to the Critical Period could benefit from reading this article because it examines the FDH to which the literature refers. I believe it is necessary for those interested in this field to have a strong grasp of all existing hypotheses about adult second language learners' accent.

Singleton, D. (2005). "The Critical Period Hypothesis: A coat of many colours." *International Review of Applied Linguistics in Language Teaching,* 43, 4: 269-285.

Singleton attempts to provide sufficient evidence so as to reject the CPH by inferring from existing examples from the literature. He maintains that there is no agreement about the age of puberty or the ultimate age of acquiring a second language. Moreover, there is no consensus about its application: whether it affects only pronunciation or as well as other skills of the learners too. The author implies that many researchers have attempted to find an explanation for the CPH by connecting it to the human biological system, Piaget's work, motivational factors, permeability of ego boundaries, the acculturation model, and the pidginization hypothesis. However, he believes that the CPH is like

> the mythical hydra, whose multiplicity of heads and capacity to produce new heads rendered it impossible to deal with (p. 280).

The author believes that there is just as little consensus even about the interpretation of the CPH and its relationship to language educational policy; as a consequence, he provides diverse ideas about its implication for L2 instruction. He claims to "speak in terms of CPH is misleading" (p. 269).

Given that this article attempts to prove something against Moskovsky (2001), it is clear that this annotated bibliography can show that much discrepancy exists in this field. According to Scovel (2000),

> few topics in applied linguistics have continued to captivate the interests of researchers and practitioners so intensively and for such a long period of time as the CPH (p. 213).

I also believe that looking at the CPH with different lenses can help to clarify the issue of adult second language learners' accent problem. As a result, this will provide more thoughts for implication in pedagogy.

Scovel, T. (1969). "Foreign Accents, Language Acquisition, and Cerebral Dominance." *Language Learning,* 19: 245-253.

In "Foreign Accents, Language Acquisition, and Cerebral Dominance.", the author provides the dominant belief that exists about L2 learners acquiring native like accents; namely, that children are superior in acquiring L2 native-like accents while adults are doomed to fail. He believes that adults have the ability to surpass children in learning vocabulary items, syntactic rules, and stylistic variations. However, adults

> never seem able to rid themselves of a foreign accent" (p. 245).

The author discusses other beliefs about this issue and poses the ideas of conscious or unconscious learning and nature or nurture, which are based on the environmental differences between adults' and children's learning. He also discusses the inferences theory, which pertains to the inference from L1 background and provides contour evidence for these beliefs. The author claims that if these hypotheses were true, they make accent acquisition impossible but the factors would not affect the acquisition of other skills of adult L2 learners like syntax or vocabulary items. He explains that the reason for this is that after puberty, lateralization of cognitive, linguistic, and perceptual functions seems to be completed in the human brain. In fact, lateralization has become permanent in adults and at the same time neuroplasticity of the brain terminates; this is the reason for which adults are unsuccessful in the mastery of native like L2 accents.

I chose this article because it is impossible to read about the CPH or adult L2 accent without encountering Scovel's name and especially his thoughts in this article. He has contributed greatly to the field and his ideas encourage many researchers. I agree with Scovel (2000) that "adult learners can, should, and do improve their pronunciation and intelligibility in a second language" (p. 217).

Issues in Research

The research seems to be focused on assessing the existence of the Critical Period Hypothesis for adult L2 pronunciation acquisition. In most articles, author/s have based their research on the debate surrounding this issue; aiming to find out whether it is correct to take a stance and state that those who have started learning an L2 after puberty lack the possibility of acquiring native-like L2 pronunciation.

It seems that the new direction in research is towards acquiring intelligibility rather than native-like pronunciation. These articles present the idea that there is no consensus among researchers pertaining to this topic and that more research is needed. There should be more longitudinal research with larger sample populations and with L2 learners from diverse L1 backgrounds.

Bongaerts, T., Planken, B. and Schils, E. (1995). "Can Late Learners Attain a Native Accent in a Foreign Language? A Test of the Critical Period Hypothesis." In D. Singleton and Z. Lengyel, eds., *The Age Factor in Second Language Acquisition* (pp. 30-50). Clevedon: Multilingual Matters.

In this article the authors attempt to

> test the claim that there is a critical period for accentless speech" (p. 36).

Three groups of subjects participated in this study. Group One, the control group, consisted of five native speakers of English (both sexes, mean age 30). In Group Two there were 10 native speakers of Dutch (both sexes, mean age 37). Group Three consisted of 12 native speakers of Dutch (both sexes, mean age 29). Participants in Groups Two and Three were all late learners and were asked to talk for three minutes about their recent holiday abroad. They were also asked to read aloud a short English text, 10 short sentences and 25 English words. This study shows that among adult late start learners in group two, there were individuals whose pronunciation as claimed by their judges was indistinguishable from native speakers. This result is in contradiction with Scovel's claim (1988) that it is

> impossible for learners to acquire such a good pronunciation in non-native language that they can pass themselves off as native speakers (p. 185).

I think it would be beneficial to do this type of research with a larger sample population. Moreover, I do not think a three-minute interview provides sufficient criteria for judging spontaneous speech. I completely agree with Derwing, Munro and Thomson (2006) that

> many short daily interactions are highly repetitive requiring only a few formulaic sequences rather that drawing on any creative process (pp. 186-187).

Thus, as they suggested, ten minutes or more of talking can better represent spontaneous speech.

Flege, J., Munro, M. and Mackay, I. (1995). "Factors Affecting Degree of Perceived Foreign Accent in a Second Language." *Journal of the Acoustical Society of America*, 97: 3125-3134.

The authors attempt to evaluate

> the relation between non-native speakers' age of learning English and the overall degree of perceived foreign accent in their production of English sentences (p. 3125).

The sample population consisted of 240 native Italian men and women, who had arrived in Canada between the ages of 2 and 23 years (M=13 year) and had lived in Canada for 15 to 44 years (M=32 year). Each participant was asked to fill out a language background questionnaire, a self report on how well they pronounced English. The results demonstrated that the earlier they began learning English and the longer they had spoken English, the more accurate their L2 pronunciation. However, the results do not fully support the claim that the degree of foreign accent will increase if the learners have started learning an L2 after puberty. In fact, there were participants who had a foreign accent despite having started to learn L2 long before puberty. There appear to be factors which influence foreign accent in addition to the age factor. The results support Scovel's idea (1988) that there exist very few individuals who will manage to speak an L2 without having a foreign accent.

I like the idea of considering other sociolinguistic variables, like gender and age, and their effects on the acquisition of second language accent. I believe that the results of Thompson (1991) and this article play a significant role in guiding

further research in the field of second language acquisition and accent. It is no wonder that, in later research, Derwing and Munro (2003) and Derwing, Murray, and Thomson (2007) try to control these variables.

Seliger, H., Krashen, S., and Ladefoged, P. (1975). "Maturational Constraints in the Acquisition of Second Language." *Language Sciences*. 38: 20-22.

Seliger, Krashen and Ladefoged assess the validity of the maturational constraint argument and want to uncover whether the mastery of a second language is related to the amount of exposure that a learner has had to the target language. Moreover, they explore whether mastery of second language is related to the length of residency in the target country. This study was a class assignment in linguistics classes at Bar Ilan University, Queens College Tel Aviv University, and UCLA. Each student is asked to interview three adult immigrants, one who had arrived in the target country before puberty, one who had arrived around the age of puberty, and a third one who had arrived after puberty. A total of 394 adult subjects were interviewed. The questionnaire consists of questions regarding their age of arrival to the target language country, the participant's present age, and what they think about their accent (*i.e.*, is it native-like or not?). The results show that

> puberty may be an important turning point in language learning ability (p. 21).

This idea supports Lenneberg's (1967) idea that because of the existence of a critical period, adults' acquisition of native-like accents in a second language results in failure. In fact, in this study, the vast majority of participants who arrived before the age of puberty felt that they were considered (by others) as native speakers.

The findings of this survey support Penfield's (1963), Lenneberg's (1967) and Scovel's (1969) idea about maturational constraint which asserts that mastery of a language without a foreign accent after puberty is something unattainable. However the research results are in contradiction with Bongaerts *et al.* (1995) which in my mind rings truer the results are based on self-assessment which are nit reliable or valid characteristics.

Snow, C. and Hoefnagel-Hohle, M. (1977). "Age Differences in the Pronunciation of Foreign Sounds." *Language and Speech,* 20: 357-365.

The authors attempt to assess the hypothesis that the

> years up to age of puberty constitute a critical period for language acquisition (p. 357).

Two kinds of data are collected from two types of study for this research: a laboratory one and a naturalistic, second language acquisition study. In the former study, 136 speakers of British English aged 5-31 years are divided into eleven age groups. Each of the participants is asked to repeat 5 different Dutch words immediately after hearing them through earphones. Each is tested individually. The participants repeat each word twenty times. In the naturalistic study, the participants are 47 English speakers aged 3-60 years who are learning Dutch while living in Holland. The pronunciation test for this group consists of 80 words, and participants pronounce each word first after hearing it pronounced by a native speaker and for the second time after they see a picture of it. These procedures are repeated after 4- to 5-month intervals. The results show that, in the short term, adults are better learners than children, but not in the long term. The authors believe that the advantage of children who surpass adults in the long term is not related to maturational constraints for foreign pronunciation acquisition.

Rather, the authors support the existence of other factors, such as motivation and cultural/personal identity issues, which lead to successful pronunciation for some adults as opposoed to an age factor, and I am in agreement and I think this is the reason for which numerous authors cite this article repeatedly in their own research. However, this study contains methodological flaws, such as repetition of heard words as a criteria for judging pronunciation and the wide range of age groups among participants. As it is clear so far, there no consensus among research results.

Thompson, I. (1991). "Foreign Accents Revisited: the English Pronunciation of Russian Immigrants." *Language Learning,* 41, 177-204.

The author tries to identify the factors associated with the acquisition of L2 pronunciation and attempts to define methodological problems within the study of foreign accents. This article, along with those of Flege *et al.* (1995) and Scovel (1969), is among the most cited literature which I have read thus far. The experimental group consisted of 36 Russian speakers of both sexes, aged 4 to 42 years. They were asked to read 90 English sentences which consisted of sounds that are known to be difficult for Russian speakers to pronounce. As the spontaneous speech task, the participants were asked to talk for one minute. They were also asked to fill out a questionnaire about their

> age of arrival in the US, length of residency in the US, years of education in English and estimate the percent of time they use English during the day (p. 187).

Surprisingly, there were some young participants who were prepubescent when they arrived in the United States but had a foreign accent, which is a challenge for the Critical Period Hypothesis. Further, women in this study demonstrated better accents than men. Moreover, the ability to mimic seemed to facilitate the acquisition of accurate pronunciation. However, attitudinal and motivational variables seemingly had no effect on the quality of pronunciation.

I believe that reading aloud, talking for only one minute, and repeating heard words are not reliable ways to assess pronunciation; it does not check the natural or

spontaneous speech of the learners. However, I believe that the consideration of factors such as the importance of having a good accent, attitude, and mimicking ability will lead to further research in this field and are an inspiration for researchers

Practical Implications

It seems that there are two contradictory ideologies in teaching pronunciation. The traditional view was to teach native-like pronunciation and, in most pedagogical approaches, the emphasis was on teaching the complete phonetic system of the language. The other view is the

> intelligibility principle which only puts emphasis [on the fact] that learners need to be understandable (Levis, 2005, p. 370).

Canale and Swain (1980) also support this idea and mention that traditional pronunciation teaching procedures have focused on linguistic competence. However, current trends are moving toward practice as well as communicative competence, discourse competence, and strategic competence. The articles that I have chosen confirm this idea completely.

Moreover, it seems obvious that methodological issues in teaching are affected by the research trend. I have mentioned in the previous section, "Issues in Research", that the trend of research in recent studies leans toward improving intelligibility, while in teaching literature the trend has also changed from a focus on teaching native like accent to improving the intelligibility of the learners.

Acton, W. (1984). "Changing Fossilized Pronunciation." *TESOL Quarterly,* 18: 71- 85.

The article attempts to explain approaches that are useful for those advanced ESL learners whose pronunciation is considered to be fossilized. The author believes that in order to be successful in acquiring a native like accent, it is first required that the learners are encouraged and prepared for the changes. The students should be assisted in doing activities outside the class, which the author believes have more effect on their pronunciation improvement than class activities. Teachers should guide the students in such a way that they can continue improving their pronunciation even after the course is finished. The author believes that focus on suprasegmentals results in immediate improvement. He claims that this change in the learners' pronunciation, which is an overt behaviour, might be taken as a change in their personality by other people. Thus, the learners might receive such compliments as that they have become "more articulate and confident" (p. 75). The author also suggests that teachers provide some natural conversation for the students to practice and ask them to do oral readings of texts of about 200 to 300 words. He further proposes that students use dictionaries because he believes that the effects of visual images can help the learners solve their pronunciation problems faster.

I believe that informing students about their problems and assisting them in such a way that they can improve their pronunciation by themselves is a good idea. However this article, like most literature about teaching pronunciation, only prescribes and does not give any practical guidance to teachers in terms of how to do this. Although this article is less recent than others, reading it shows us how much the attitudes of teaching have changed and gives a basis for further research.

Celce-Murcia, M., Brinton, D., and Goodwin, J. (1996). *Teaching Pronunciation: A Reference for Teachers of English to Speakers of Other Languages*. New York: Cambridge University Press.

The book presents an overview of sound systems of North American English. The authors advise teachers to spend much time on consonant sounds and to explain to students how consonants might be pronounced differently in concatenations with other sounds. Also, they state that vowels are problematic since the difference among various dialects of native speakers is due to vowel pronunciation; teachers should provide sufficient opportunities such as listening to taped records or guest speakers. Teachers should direct students' attention to features of pronunciation that are sensitive to the discourse context and to speakers intentions; this is necessary even for elementary levels. The students should know that individual speakers may have a special way of using prosody to convey their intended meaning. Becoming familiar with these issues limits misinterpretation too. Teachers should instruct students regarding similarities or differences in intonation between their L1 and the L2. The authors, like Larsen-Freeman and Long (1991), believe that teachers should also consider socio-psychological aspects, such as the identities and ego boundaries of the learners. They also claim that teaching pronunciation should be prioritised according to the students' needs. Teachers should give students

> feedback evaluation, further classroom exercise should promote learners' cognitive abilities to correct both themselves and their peers (p. 359).

The book is an excellent reference for those teaching English pronunciation. I enjoyed every single minute of reading it. It has many great examples for teachers to use in their classes, it is difficult to assess how many pronunciation teachers have read this book or how many are trained enough to cope with the phonetic section.

Grant, L. (2000). "Teaching Pronunciation Communicatively: Merging Form and Meaning." *Speak Out!*, 25: 77-82.

The author believes that

> merging a focus on form and a focus on meaningful use of the language is a challenge in English language teaching, especially in the area of pronunciation (p. 77).

She also asks teachers to pay attention to factors such as motivation, native language, socio-cultural variables, and strategies used for teachiung prinunciation. Traditionally, this face of L2 learning was done through repeating sentences and words aloud, but now in communicative language classes the focus is on meaning. The author encourages teachers to arrange a time for the students to have presentations, debates, conversations, interviews, and discussions. She believes that, although meaningful interaction rendered the task more difficult, teaching pronunciation through context is very important. In these classes, teachers need to

> widen the lenses to map communicative activities onto pronunciation points and gradually increase the cognitive load (p. 79).

The author highlights important issues for pronunciation teachers to consider. I believe that, although there has been great change in the methods used to teach pronunciation and in the way this issue is addressed by both teachers and students, there is a need for practical guides to facilitate this learning. Most teachers are not trained in how to teach pronunciation and most books are very old. I completely agree with Breitkreutz, Derwing and Rossiter (2002) who conclude from their research that

> there is a continuing need for curriculum and materials developers to incorporate pronunciation instruction into communicative context (p. 59).

MacCarthy, P. (1978). *The Teaching of Pronunciation*. Cambrige, Cambrige University Press.

Mac Carthy wants pronunciation teachers to pay attention to the individual differences, motivation, self esteem, and personal pride of the students in their pronunciation classes, which he believes are crucial factors in their learning. The author invites teachers to create strong incentives for their students, as well as to interact with them individually to get to know their problems better. He mentions that

> inaudibility breeds frustration, then inattention, then boredom" (p. 3).

He suggests that teachers should address each student in the class and ask them to recite a section from a book or read it aloud. He believes this reduces all side-effects of being nervous (dry mouth, blushing, and being tongue tied) in pronunciation classes. The author also explains that the place and the manner of articulation of vowel system sould be taught like in phonetic classes. Moreover, students should be aware of other phenomena in language like aspiration, diphthong-isation, and velarisation for L2 pronunciation learning. In order to practice these aspects of a language, he suggests referring to a group of sentences at the end of the book, which all have phonetic transcriptions and where stress marked.

I chose this book because I wanted to know what methodology or strategies this book suggested for teachers at that time (1978). Prescribing repetition and imitation for pronunciation classes shows the governing idea of that time, which was Direct Method teaching. I know that teaching phonetics in detail in pronunciation classes is not favourable for many teachers and students. This is the reason for which the trend of today's pronunciation teaching is not linguistically working on phonetics and phonology, but communicatively working on it as mentioned in Grant (2000).

Morley, J. (1994). "A Multidimensional Curriculum Design for Speech Pronunciation Instruction." In J. Morley (Ed.), *Pronunciation Pedagogy and Theory: New Views, New Dimensions* (pp. 64-91). Alexandra, VA: TESOL.

Morley's article suggests that the 1990s the instructional framework was on a

> macro level, (discourse competence, sociolinguistic competence and strategic competence) and micro level which is contextualization of vowels and consonant sound (p. 73).

She believes that pronunciation teachers should act like a "speech coach not a drill master" (p. 68). Teachers should consider the fact that there is a reciprocal listening-speaking connection as Gilber (1984) believes,

> how you hear English is closely connected with how you speak English (cited in Morley, 1994, p. 73).

Teachers should focus on increasing self-confidence and lowering anxiety levels and should avoid students thinking they sound funny in the class. They should help learners become aware of how much they have improved and always be supportive regardless of whether or not they are successful. The students should consciously be aware and work through learning procedures with independent self-practice and rehearsal. Assessment in pronunciation classes should be based on the students' improvement and on self-comparison over time, not on student-student comparison. Teachers should give priority to those features that make each learner improve in both short and long term goals.

I believe most of the points that the author mentions are important and very useful for L2 teachers to know. In fact, they are not specifically for pronunciation teaching. What the author outlines in this article are fundamental issues of concern in any L2 teaching classes.

Conclusion

Among the literature about second language acquisition and adult accent, there has been a large amount of information which is often quoted in the literature. However, as I have mentioned earlier in this paper, this topic is controversial among second language researchers. There is discrepancy among researchers' results on the reason for the lack of adults' success in acquiring native-like accents. However, as Lightbown (1985: 431) mentions,

> second language acquisition research was one important source of information which would help

> teachers set appropriate expectations for themselves and their students.

In fact there is a need for more research to be done until

> teachers will be able to fully understand and teach the more subtle emotions and social functions signalled by accent (Celce-Murcia et al., 1996, p. 266).

Pronunciation teaching has changed its focus from teaching native-like accent to intelligibility. I agree with Breitkreutz et al. (2001) that the main concern when teaching pronunciation should be to help learners become more comprehensible, not to remove an accent, and that

> future research should focus on the identification of those aspects of learners' productions that are most likely to interfere with intelligibility (p. 59).

I also believe that using different teaching strategies improves adults' pronunciation to some degree. Thus, if more strategies, techniques and training were available for teachers to determine which strategies are appropriate when they are faced with a particular problem, they would be more comfortable in choosing techniques in their classrooms. In addition, there should be changes in the current curriculum on the basis of new findings, since one of the problems that exists now is that, despite improvements in this field, most teachers have to use old books which are based on previous governing methodologies. I also believe that teachers should consider individual differences, ages of learners, and communication needs and devote more time in their classrooms to teaching and practicing pronunciation, since it is clear that without intelligible and comprehensible pronunciation, communication is difficult.

By reviewing literature about the CPH, second language accent, and my experiences as a second language learner, I believe that socio-cultural factors and individual characteristics of a learner play crucial roles in adult second language learners' accent. A learner's self-confidence, cognitive style, and socioeconomic background are also other important factors. In addition, formal schooling in the first language, social distance of L1 and L2, L2 prestige, and maturational variables are other factors of great importance.

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Nooshin Shakiba holds a B.A. in English Translation, an M.A. in General Linguistics from Azad University (Tehran, Iran) and an M.A. in Applied Linguistics from York University. Her scholarly interests include Adult Second Language Learners' Accent and the role of marked dialect on immigrants's success and access to the job market.

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The 30th Anniversary

of the Canadian National Film Board's animated version of

"The Hockey Sweater"/ "Le chandail"

Tatiana Carapet

The Issue of the Non-Native Accent in Second Language

The article offers an overview of some of the theories on the topic of second language acquisition, particularly, the Critical Period Hypothesis, and the Ultimate Attainment in speaking a foreign or second language. The author discusses the factors that contribute to the emergence of a non-native accent in a L2, and the concept of achievement in language learning.

> "[...] nativelike attainment by late learners in the domain of pronunciation seems to be a fairly exceptional phenomenon"
>
> (Bongaerts, van Summeren, Planken and Schils, 1997: 462).

In multicultural societies such as Canada, ethnic diversity expresses itself in various ways, among which is the manner of speaking an L2. Most multilingual speakers (non-anglophones or non-francophones) speak English or French with a non-native or foreign accent. These L2 speakers are sometimes evaluated in society according to their accent, and not on their other competences in L2 or on the essential aspects of their professional life, a fact that can affect the process of their successful integration in society. However, as some researchers agree, the L2 native competence or "Ultimate Attainment" should be considered an exception rather than a rule because the phonologic competence is not, or should not be, generally, a condition of participation in a community. In other words

> Ultimate Attainment is for adult language learners an invalid measure against which their success in learning is judged (Marx, 2002: 277).

This is why this synthesis, far from being exhaustive, aims:

- to show what factors can contribute to the emergece of the non-native accent in an L2,
- to answer the question why the accent is not an indication of the linguistic competence of an L2 learner, and
- to explain achievement in language learning.

We will also explore the psychological and social implications of the existence of a non-native accent in an L2.

The research maintains that an important factor in determining the presence of a non-native accent in L2 speakers seems to be the age of the learner: one of the questions that are still to be answered is if we are predestined to learn perfectly a language only during childhood, in other words, if age is a real barrier in L2 acquisition. As per Scovel's Critical Period Hypothesis (1988) which maintains the existence of a certain period of time during childhood that would allow us to learn a foreign language under the best conditions, the native accent is the isolated ability to sound orally like a native speaker. The non-native accent is influenced by the age of the learner and appears if one begins learning an L2 after childhood:

> [...] among all the other things we learn when we pick up a new language after childhood, it remains encrusted as a symbol of our evolutionary past and is forever fossilized (Scovel, 1988: 104).

The biological changes that take place in the human body and brain during childhood have a decisive influence on language learning:

> [...] the coming of age for a language learner depends on the coming of age in body growth and in brain development" (Scovel, 1988: 48).

The appearance of the non-native accent has a biological constraint, which is the fact that the brain of children, characterized by neuroplasticity (the transfer of information between the two hemispheres) loses this characteristic around the age of puberty:

> [...] the same neuroplasticity that accounts for the ability of the child's brain to relocate speech to the non-dominant hemisphere accounts for the plasticity that must be evident in the neurophysiologic mechanisms underlying the production of the sound patterns of a second language (Scovel,1988: 61).

The left hemisphere is the centre of activities related to speech and language, and the lateralization is complete around the age of puberty:

> It seems to me that the ability to master a language without a foreign accent before the age of twelve is directly related to the fact that the lateralization has not yet become permanent" (Scovel, 1988: 56-61).

Scovel emphasizes the importance of sound for human interaction:

> [...] it is almost certain that the human brain is evolutionarily programmed with feature detectors (or some other perceptual system that specializes in acoustic processing) that are tuned to the kinds of acoustic information that are relevant to the processing of human speech and to the recognition of the human voice (1988: 77).

The appearance of accent and of the capacity to identify accent around the age of puberty is, according to Scovel,

> an adaptive feature of hominid evolution (1988: 80).

However, the biological constraints of language learning do not hinder success in linguistic abilities, with the exception of phonological fluency; on the contrary, the opportunity to practice an L2 before the age of puberty does not constitute a guarantee of attaining perfect competence in the target language pronunciation (Scovel, 1988 : 66). However, according to Flege and Liu (2001), previous research has concluded that, if the learners have a later exposure to the target language, then they will have a strong foreign accent; on the contrary, there are many individuals who speak an L2 with a detectable non-native accent, despite having started L2 learning during their childhood. At the same time, very competent L2 speakers can pass off as native speakers with regards to their abilities in word acquisition, phonological patterns, and grammar rules, since the syntax learning and the vocabulary acquisition do not seem to be limited by the age of the learners (Scovel, 1988: 168,185).

There are several extra linguistic factors that can lead to success in language learning.

The presence of a non-native accent in an L2 can also be explained, according to Bialystok and Hakuta (1994), by the degree of similarity between L1 and L2: the sounds from the L2 that are similar to those from the L1 are more difficult to acquire than the new sounds, and the difficulty arises when there are enough similarities to create "intrusion from the native representation"(1994: 77, 86). Obler and Gjerlow (1999) agree that the fact that if children can acquire an L2 or L3 without an accent is proof that the human brain is capable of developing two or more sets of instructions for the organ of articulation; they question if the adult learner with a foreign accent uses their L1 mental representation while speaking an L2 or L3, or if a second system is being developed:

> which is, however, not identical to the system developed by native speakers (Obler and Gjerlow, 1999: 4-5).

With regards to children's capability to learn an L2 well, I find the remark that Bialystok and Hakuta make very interesting:

> [...] one reason why children younger than five years old behave like native speakers is that they are native speakers [...] If the impressive acquisition of the second language is accompanied by a deterioration of competence in the first language, then the evidence speaks not to a critical period but to a replacement of one language for another in the child's language acquisition (1994: 79).

This process seems to be continuous, and constitutes an osmosis between L1 acquisition and that of L2:

> [...] someone who arrives in a new country at a very young age is not really learning a second language but, in fact, is continuing the process of first-language acquisition, but in a new language (Bialystok et Hakuta, 1994: 80).

An important condition of attaining success in an L2, and implicitly in its pronunciation without a foreign accent, seems to be the contact with native speakers of the L2. The amount of native input is responsible for L2 learning since:

> Early bilinguals may receive more native-speaker L2 input or less non-native L2 input than late bilinguals do (Flege and Liu, 2001: 528).

The immigrants' children are more in contact with L2 native speakers in school, whereas their parents are often more in contact with L1 speakers. It seems that the adults' performance in L2 can improve if they receive the L2 input of which their children benefit since

> the segmental phonetic perception can be influenced most by native speakers input (2001: 546-548),

and most importantly,

> [...] explicit learning processes are a necessary condition for achieving a high level of competence in a non-native language after childhood (DeKeyser, 2000: 520).

If children learn languages faster or easier than adults, it is not because they are better learners, according to Bialystok and Hakuta (1994) who explain this common belief:

> The first guess people make is that children's brains are designed to learn languages in a way that adult brains can no longer replicate. [...] if children are better language learners than adults, the reason may have nothing to do with their brains. It may just be that children have more opportunity to learn and practice the second language than do adults (1994: 52).

Nevertheless, Bongaerts et al. (1997) argue that, with regards to pronunciation, there are exceptional L2 learners who cannot be distinguished from native speakers, and the explanation seems to be the quantity of native input from which they have benefited during their language instruction (1997: 452, 462). The length of time for learners to have opportunities for L2 learning is extremely important:

> If people learn something early in life, they have their whole lives to use that knowledge; if people learn the same thing at a later age, they have less time to develop that skill (Bialystok and Hakuta, 1994: 65).

And yet, the opportunity to practice an L2 before puberty does not guarantee the perfect competence in this language:

> [...] biological constraints on language learning do not impede ultimate achievement in any linguistic skill except native-like phonological fluency. [...] early exposure is a necessary but insufficient condition for achieving nativelike pronunciation (Scovel, 1988: 66).

The most important condition of success in L2 learning, including native pronunciation, seems to be, according to Flege (in Birdsong, ed. 1999), a strong motivation to learn the target language: very motivated individuals, even if they begin the L2 learning after the critical period, can succeed in pronouncing without a foreign accent (1999: 104). Moreover, Bongaerts et al. (1997) show that:

> [...] some highly motivated individuals who began learning the L2 after the end of the putative critical period have been shown to speak the L2 without a detectable foreign accent.

Marx (2002) emphasizes the exceptionality of this phenomenon and argues that the disappearance of the accent, although not very common, could be explained by the presence of an extremely high motivation:

> Becoming a fully competent speaker of a foreign language, especially with regard to accent, is extremely difficult [...] The near-disappearance of an L1 accent is perhaps unusual and may be better understood when agency is taken into consideration: high motivation to acquire an L2 to a native degree assists progress towards appropriation of the L2.This is a major factor in the ability to cross linguistic borders as an adult" (2002: 276).

Indeed, according to Taylor (1974), the differences between the dimensions of success in children and adults could be explained such as:

> In view of these affective differences between children and adults and between successful and unsuccessful adult language learners, it seems that affective psychological variables may constitute the major reason why adults are not always as successful as children in language acquisition (1974: 33-34, in Scovel, 1988: 94).

I personally subscribe to this idea: as a lifelong language learner and an experienced L2 teacher, I consider that a very positive attitude towards L2 learning and the culture of the target language constitutes the essential condition of success, and the first step towards the development of higher linguistic skills.

The research maintains that an important factor in the presence of a non-native accent in L2 speakers seems to be the age of the learner, as one of the questions that are still to be answered is if we are predestined to learn perfectly a language only during childhood, in other words, if the age is a real barrier in L2 acquisition.

It is perhaps interesting to mention here three important hypotheses concerning the presence of an accent in an L2 mentioned by Flege (1999), and that we have previously recognized in this study:

1. The Exercise Hypothesis which suggests that the skill to produce and perceive the language remains intact throughout life with the condition that one persistently continues to learn how to speak;
2. The Unfolding Hypothesis which explains the appearance of accent as being the indirect effect of the former phonetic development, and not the result of the loss or attenuation of the linguistic skills;
3. The Interaction Hypothesis which affirms that reciprocal influence between L1 and L2 in the bilingual individual is inevitable. According to this last hypothesis, bilinguals are unable to separate L1 and L2 sounds which manage to interact (Flege, in Birdsong, ed. 1999: 105-106).

The existence of the non-native or foreign accent in L2 can have psychological and social implications among which is the issue of learner's identity. An interesting description of the transformation of one's identity comes from Marx (2002) who recounts her own experiences as an L2 learner of German while living a process of "self translation". This process consists of two stages, common in bilingual immigrants: the initial stage, of continual loss of linguistic identity, resulting in a loss of bonds with one's inner world and meanings: it is a loss of personal meaning of words; the learner cannot engage yet in the inner speech in L2 and moreover they lose their skill to do so in their L1. The second phase is that of re-establishment and rebuilding, and starts with the assimilation of the "voices" of others and continues with the appearance of one's own "voice" in L2, which allows the learner to start building significances and experiences in L2 (2002: 265-270). Marx confirms the loss of competence in L1, which can appear in the process of acquisition of L2 (2002: 273), and I agree with this observation based on my own experience as a language learner. The key of success in a L2 seems to be, according to Marx "the reconciliation of identities", unifying past and present in oneself (Wenger, 1998:17 in Marx, 2002: 277), because:

> identity is [...] not to be viewed as a fixed or stable characteristic of an individual, but rather as a process of continuous change and per-

mutation which is comprised of cultural identity, social role, and discursive voice. Because a person may affiliate himself with more than one culture or language, it is possible to hold multiple identities, and these dynamic identities must in some way be reconciled within one unified self in order to maintain this self across boundaries (Marx, 2002 : 266).

Conclusion

Even if a critical period for the acquisition of L2 exists with regards to phonology, this hypothesis must be taken into account alongside other important factors, according to Marinova-Todd, Marshall and Snow (2000):

> Age does influence language learning, but primarily because it is associated with social, psychological, educational, and other factors that can affect L2 proficiency, not because of any critical period that limits the possibility of language learning by adults (2000: 28).

Therefore, as Bialystok and Hakuta note:

> [...] the effects of age seem to be specific for certain linguistic structures. With regard to phonology, Flege's research indicates age effects for learning similar, but not novel, sounds. Likewise for syntax, age effects are found for some linguistic structures, although others are resistant to any effect of the learner's age. [...] The linguistic features that are more governed by universal grammar, such as tense and aspect, are more influenced by age-related differences in acquisition than are the more arbitrary features, such as vocabulary and word order (1994 : 80).

Nevertheless, according to Spolsky:

> [...] all or crucial parts of second language learning are dependent on some innate pre-programmed mechanism, identical or similar to the Language Acquisition Device proposed for first language learning. [...] This mechanism is differentially available, according to age (the Critical Period Hypothesis) or according to the nature of affect or input conditions (1989: 91).

Moreover, Moyer (1999) shows that the age of learning (the biological factor) has a real importance, however, the duration of the instruction and the exposure to L2 is in correlation with the degree of success in L2 (1999: 95). Indeed, we have already seen how the affect or input conditions can influence the L2 learning. Once again, with regards to the exceptional learner, Moyer advances that

> such learners elude thorough description and explanation, and challenge the notion that fundamental changes in cognition universally influence post pubertal learning (see Newport, 1991) (1999: 98).

In my opinion, there are several extra-linguistic factors that can lead to success in language learning: in the first place, a positive attitude and a strong motivation, then the influence of cognitive individual differences such as the aptitude for languages, the type of intelligence, the learner's style and strategies, and not in the least, an environment which is favourable to L2 learning.

With regards to the existence of an accent in an L2, it is the competence in other aspects of the language (such as the acquisition of vocabulary, morphology, syntax, the fluency with which one communicates their ideas and thoughts) that is more relevant as a measure of success in L2 learning than the presence of the non-native or foreign accent in the target language, just like Scovel also emphasizes:

> [...] Sounding like a native is certainly a trivial and unimportant skill for the average language learner compared to the acquisition of a rich vocabulary, a versatile syntactic system, and highly fluent and facile communicative competence (1988: 66).

As for the issue of identity, the solution to develop two (or several) identities, one for each spoken language, could help to survive in a new culture:

> [...] we become multicompetent but "imperfect" speakers of both the L1 and L2, displaying foreign accents in both languages which reflect the omnipresent foreign aspects of our selves and our identities (Marx, 2002: 278).

Indeed, some among us who are multilingual have perhaps noticed that we have an accent in all languages we speak. Our accents may represent a feature of our multiple identities. These multiple identities, along with conferring us flexibility and open-mindedness, also influence positively our attitudes and motivation for learning languages.

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Tatiana Carapet (Dipl. Philology University of Bucharest; B.Ed., University of Ottawa; M.A. in Études françaises, York University) is a teacher of French and an author of a book and several articles that focus on aspoects of cognitive individuakl diufferences and second language learning and teaching.

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