In a review of literature on second language learning, an opinion is put forth that certain assumptions underlying the theory and the research have influenced researchers' attitudes about second language development and diminished the objectivity of the research. Furthermore, the content of the research must then be examined within its sociocultural, historical, and political context, and that it may be necessary to question some of these assumptions, which are based, philosophically, on a modern rationalist, positivist perspective. A postmodern view that second language education is political, and that all knowledge is socially and historically constructed is proposed. These issues are examined: the concept of "natural language" traditional in applied linguistics; artificial distinction made between the language learner and the social context of language learning; Eurocentrism in theorizing about language and language systems; the value of statistics in determining generalizability of research findings; the concept of normalization; and the nature of metalinguistic awareness. It is suggested that the social, cultural, and political nature of research is fragile, and that to understand it, it is necessary to examine it in relation to existing practices and conditions. Contains 39 references. (MSE)
Examining assumptions in second language research: a postmodern view

Diana Masny

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Examining assumptions in second language research: a postmodern view

by

Diana Masny

0 Introduction

In scientific circles today there is an ongoing debate about science as a method of finding objective truth. Some scientists say that there is no such thing as scientific fact, only realities socially and historically constructed by those in power, who happen to be mostly privileged, white, Eurocentric males seeking to remain in positions of power. In response to this, other (mainstream) scientists claim that science as an objective enterprise cannot be subjected to cultural and political critique. In a similar manner, there is the general view that "second language research, for the large part is related to ways of thinking and acting that are natural, neutral and beneficial" (Pennycook 1994). On the other hand, there is the less widely held view that second language research should be concerned with the socio-historical and political implications of its impact on language education. According to Latour (1991), "for each concept/idea we must look at content in terms of context: sociocultural, historical and political". My concern is with this latter view.

In other words, I want to focus on some familiar assumptions in second language research and examine how some concepts get taken up that have influenced researchers' ways of looking at second language development. I will do this by providing examples from applied linguistics and psycholinguistics that influence second language teaching and learning. Finally, I want to consider the fragile social, cultural, and political nature of research.

In examining these positions, I am guided by the following questions: what assumptions are being made about language and language theory? More importantly, what are the implications of those assumptions for language learning and language teaching? Moreover, whose
interests are being served by promoting theories about language that impact significantly on language education.

I believe that, as in all my work, I must do my own socio-historical and political memory work as a researcher; that is, I must trace the personal development that has brought me to ask the questions I am seeking to answer. My background has been in psycholinguistics, an area heavily weighted in quantitative experimentation. My research in first and second language development is related to linguistic awareness, literacy and academic achievement. I continue to do these types of studies. However, statistical methods of means/median, standard deviations, individual differences, and outliers mask a lot of the issues I am thinking about. Let me explain. My subject population has been children, adolescents and adults in a second language context, a minority-ethnic background, or in a language-minority setting. Interpretations of my results could not proceed if they precluded any socio-cultural variables. They were there as an added-on component. Psycholinguistic models I am familiar with marginalize socio-cultural contributions to the mind. I was growing dissatisfied with my perceptions and interpretations of language and literacy. With standardized tests, norms are imposed. With individual differences, group means, it is established who is in and who is out, who has the knowledge and who doesn’t, who is included, who is excluded. Who is marginalized in this process? The disenfranchised.

I am reflecting on these issues at a time when many refugees are coming to Canada, because of civil war, drought, famine, and from cultures with beliefs and values not part of Western ways. Moreover, I am doing research in the Franco-Ontarian community, a vibrant community that historically has been subjected to assimilation through legislation by the dominant majority group. It became increasingly difficult for me to look at issues of language and literacy unless I also examined socio-historical and political issues. This process led me to see social inequalities and to understand that the relation between power and knowledge is linked to institutions. Institutions, positioned as vehicles of power, regulate knowledge. My question then became: how do I link these concerns of mine in studying language and cognition?

Some of my mentors in this process have been:

• Vygotsky (1978), who led me to Bakhtin (1981). Vygotsky was concerned with the socio-historical processes that underlie cognition. Bakhtin was interested in the socio-historical process in the ap-
propriation of words and symbols;

- Scribner and Cole (1981), whose work among the Vai have led me to re-think the concept of literacy as one embedded in a socio-cultural context;
- S. B. Heath’s (1983) ethnographic study on language and literacy in an American mill town;
- Gee’s (1991) view of discourse as ways of being in the world, and his development of primary and secondary discourses through an apprenticeship model;
- Freire’s (1972) and McLaren and Lankshear’s (1993) concept of critical literacy with its socio-political underpinnings;

How have they influenced my way of asking questions in research? In this paper, I originally started out wanting to look at certain assumptions in second language research in applied linguistics and psycholinguistics. I began working with the latter, being more familiar with that knowledge base. As the paper began to unfold, I found myself reflecting on psychological, linguistic and semiotic theories that are rooted in structuralism, neo-structuralism, behaviourism, cognitivism, positivism, and contemporary linguistic theory. These “isms” are grounded in 17th-century thought. My intention is to concentrate on how some psycholinguistic concepts, socio-historically constructed, have informed second language teaching and second language learning. I am referring to the Affective Filter Theory, the Comprehensible Input Hypothesis, and metalinguistic awareness. They have been influential in developing language policy both in Canada and in the United States, for instance, and require closer scrutiny.

I will argue that it is necessary to question assumptions about these theories and hypotheses. Philosophically, they are based in a modern rationalist, positivist perspective. I want to propose the postmodern view that allows for other forms of knowledge to be validated. Within the postmodern perspective, researchers position themselves ideologically by the type of questions they ask, and how they ask them. The postmodernists would argue that second language education is political. Others, who deny its political nature, take up an ideological position in favour of the status quo, where certain forms of knowledge are privileged over others and dominate the research agenda. This is known as interested/situated knowledge. All knowledge is
interested/situated. Knowledge is socially, historically constructed and represents particular ways of seeing, understanding and explaining the world. It therefore reflects the interests of certain individuals or groups and is tied to power (Pennycook 1994). The assumptions I will bring forward from second language research are socio-historically and politically constituted. My intention is to problematize some of these assumptions.²

The research traditions I am familiar with are moulded in modernism. The key terms I would use here are: foundation of knowledge, universality, biologically necessary, rationalism, positivism, observable performance, and normalization. I want to take up the postmodern view that proposes that cognitive representations of the world are socio-historically and linguistically mediated. Key terms are: multiplicity, plurality, differences, and identity formation. Accordingly, the postmodern view abandons the rational subject postulated by modern theory in favour of a socially and linguistically diverse “hybrid” subject.

1 Informing second language teaching

Applied linguistics and psycholinguistics are viewed as disciplines in their own right. Pennycook (1994, p.120), adopting a Foucauldian perspective, suggests that “it is the process of discipline formation that is crucial in determining which forms of knowledge are to be valued and upheld and which are to be devalued and discarded”. Pennycook goes on to say that, at a time when applied linguistics is solidifying its canon of disciplinary knowledge, there is the danger that applied linguistics will increasingly come to define the questions that can be asked about language. In a similar manner, psycholinguistics, as disciplinary knowledge, can come to define the type of questions one can ask about language and cognition/mind. If applied linguistics, or psycholinguistics for that matter, has come to set the agenda, what are the questions being asked? How do they impact on second language teaching? Why are they being asked at this time? What are the implications? My purpose here is not so much to find new solutions, “to reinvent the wheel”, but to examine assumptions and open up conditions of possibility for second language research.

1.1 The tradition in applied linguistics

In this century, the structuralist framework of the 1920s was critical to linguistics, anthropology and sociology, to name a few. In
the 1950s structuralism got taken up as neo-structuralism, which had its roots in the semiotic theory of Saussure. Arguing that language can be analysed in terms of the present without referring to its historical properties and evolution, Saussure interpreted the linguistic sign in two related parts: the signified and the signifier. Saussure emphasized that the linguistic sign was arbitrary. There is no natural link between the signifier and the signified. Moreover, parole, or particular uses of language by individual subjects, was determined by langue, the system of language itself.

The 1950s was an interesting decade in many ways. First, structuralists applied structural-linguistic concepts to human sciences, which they attempted to re-establish on a more rigorous basis. Levi-Strauss, for instance, applied linguistic analysis to structural studies of mythology, kinship systems, and other anthropological phenomena (Best and Kellner 1991). Second, the growing influence of behaviourism in psychology was transposed to the field of language teaching and applied linguistics. Rooted in empiricism, behaviourism did not posit innate knowledge. Teaching a second language involved conditioning the learner to practise patterned language utterances. Then in the 1960s came the critique of behaviourism from developments in linguistic theory. The latter, widely attributed to Chomsky and influenced by Cartesian/Port-Royal grammar of the 17th century, set out to look at language as a set of underlying deep structures of a universal language system. The "biological" also played a crucial role: consider at the time the interest in the biological approach to language development and the rise of neurolinguistics (Lenneberg 1967).

The "natural", or nativism, was alive once more. This perspective led to different ways of looking at language development in psychology and in second language teaching: the "natural setting". Perhaps the logic ran this way: since children are born innately predisposed to acquire language, what is the context in which their language develops? Accordingly, "natural language development" became the way to study language acquisition. But as Bourne (1988) points out, in first language learning, a child has to "adapt to a specific social situation" which is socio-culturally and socio-historically constructed. Where does this insight lead? What is the context for learners developing a second language?
1.2 Psycholinguistic research and second language teaching

Second language research is concerned with observable manifestations of language in formal and informal settings, especially the formal. Why? Many applied linguists selected adult subjects they could study at language institutes where students were taking ESL courses. Consequently the research agenda was set, and for many years. The experiments undertaken informed the theoretical framework that dominated in applied linguistics (interlanguage, foreigner talk). Consider the major centers where this has been done (California: UCLA, USC; Michigan: English Language Institute; Hawaii: University of Manoa; the Ontario Institute for Studies in Education: the Modern Language Center’s focus on immersion has set the agenda for research in immersion). My intent is to “uncover the conditions of emergence of theories” that have become commonplace in our field. Applied linguists looked to psycholinguistic research that could inform second language teaching. Here is an example from Krashen, whose work has had a significant impact on language education. I am referring to Comprehensible Input and the Affective Filter Theory. There certainly has been some critique. For example, Peirce (1995), in her ethnographic study examining the relationship between the language learner and the social context, found that comprehensible input and affective filter could not account for the results in her data. She suggested that such second language theories draw “artificial distinctions between the language learner and the social context” (p.11). In bringing together language learning and social processes, such concepts as Comprehensible Input and Affective Filter are located in the individual rather than the social context. Other theories (e.g., social distance, motivation) concentrate on the social context. There is confusion around definitions. While Krashen views motivation as a variable independent of social context, Spolsky regards the two as inextricably linked. Peirce suggests that the “confusion” should not be dismissed as “superficial”. The relationship between the learner and social processes is “problematic”. There is a need to problematize the concepts of Comprehensible Input and the Affective Filter. Now, however, certain corners of research are proposing comprehensible output! Actually I should not say “corners”, because it sounds like the margins. On the contrary, those who take up Krashen’s work and who have extended it, represent centrist mainstream positions. I point this out at the moment because when I begin to look at the research that is developed based on the concepts of Comprehensible Input
and the Affective Filter, I think it is important to look at the claims being made and the basis for making these claims. The impact of such conceptualizing has been significant on language education. As I said earlier, there has been some critique of Comprehensible Input and the Affective Filter. While Krashen claims that his arguments are “grounded in empirical research”, Bourne (1988) refers to them as “commonsense explanations [...] wrapped in the trappings of ‘scientific research’ with labels that ensure certainty and objectivity”. In other words, Krashen appeals to positivism, la pensée scientifique. Positivism brings legitimacy to rational knowledge. A knowledge claim can be accepted to be true if it conforms to the norms of a science as defined by positivism, that is to say, by scientific standards themselves (Henriques 1984). Psycholinguistic studies are known to promote research that is quantitative in nature, and they are prevalent in the field of second language research. Whose interests are served? Asserting claims rooted in positivism is appealing since they conjure notions of objectivity and scientifically sound foundation of knowledge that has universal applicability. On that basis such knowledge is presented as apolitical, hence neutral. Krashen’s claims can be made by invoking a positivist framework. They are presented as objective, rigorous scientific analysis, empirically grounded in second language acquisition theory. Moreover, his theories and assumptions receive considerable “validity” when they are referred to in a number of studies in different teaching/learning contexts. Problematizing such concepts as Affective Filter and Comprehensible Input from a socio-historical perspective opens up different possibilities of examining claims that are being made in second language research.

1.3 Socio-cultural influences: two perspectives

Much of the research to date that has looked at languages and the context in which they have been produced has often implied different social practices and relationships. However, in this tradition, the social and cultural dimensions are viewed as an “added-on framework” (Genesee 1987), “grafting onto an empirical-linguistic scaffold” as opposed to theorizing about language as socio-cultural and “socio-historic systems of knowledge and thought” (McHoul and Luke 1989). The first, grafting onto an empirical-linguistic scaffold, refers to a North American (and possibly British) tradition, and is rooted in linguistics and cognitive systems of language. The second, cultural and socio-historic systems of knowledge and thought, corresponds to a
European tradition. Contemporary Europeans theorize about language from sociological, anthropological and psychoanalytical perspectives within the postmodern. In second language research, there is growing interest in postmodernism and the work of Foucault, Kristeva, Baudrillard, Jameson, Lacan, and Lyotard, to name a few. For example, Pennycook (1994) examined American and British approaches to discourse analysis, including critical discourse analysis. The American framework for discourse analysis is grounded in anthropological ethnography while the British tradition relies on applied linguistics. Pennycook proposes new conditions of possibility for exploring discourse analysis from a Foucauldian perspective. The analysis of discourses is primary to postmodernism because it is through deconstruction of discourses that power relationships are revealed.

Here again the models are Eurocentric. Recent publications (e.g., Walkerdine 1984, Latour 1987, Bourne 1988, Pennycook 1994) have shown how theorizing about language and language systems is strongly rooted in 17th-century Eurocentrism. The work of the rationalists such as Descartes was important to Chomsky’s theory. The empiricists, who were developing along philosophical lines, and to some extent in opposition to the rationalists, were very influential in 20th-century traditions in applied linguistics. The social, political, cultural, economic, and theoretical views at the time of Descartes and Locke, for instance, formed their views of language. These approaches to theorizing about language carry implicit in them “the political purposes and conflicts of that time, purposes anu conflicts which we share today” (Bourne, 1988, p.89). That is why a socio-historical construction of political contexts is critical to understanding the different agendas in language research. It is important to know who sets the agenda, what questions are being asked, and who is asking.

1.4 Reconceptualizing research

I concur with Bourne’s view that we need to reconceptualize research. It is important to examine what is observable, namely performance which is social, gendered, racial, historical, cultural and political. There is a tendency in research to arrive at conclusions that have universal appeal, as if they were universally applicable. Take, for example, Alderson’s (1984) argument about second language reading as a reading problem or a language problem. Bernhardt and Kamil (1995) examined this issue by looking at different research studies, in
addition to one they themselves conducted. The authors concluded that there are many unknown aspects of the second language reading process that have not been accounted for by current research. Moreover, posing the question in such simple terms is an attempt to have universal applicability, that is, the question can be studied regardless of the language or the context. The study by Bernhardt and Kamil (1995) demonstrates how difficult, if not frustrating, it is to generalize across studies. While the sciences might be able to control for variables in order to achieve generalizability/universality, much second language research tries to achieve that process statistically, by controlling for variables. But does scientific objectivity (and statistics) make the research more valid, more legitimate?

1.5 Masking the discourse in psycholinguistics

The aspect of universality will be discussed in greater detail in the next section. Up to now, I have explored some of the ways in which language theory from the 17th century has been taken up. Its impact is central to how language is theorized about in second language research. Research has been grounded in scientific enquiry with a certain disregard for the historical, social and political conditions which led to the emergence of language theories as we now know them. Why did certain theories/concepts get privileged over others? It is those conditions and the relation between knowledge and power that leads us to understand which concepts were "passed on". The theories that come forward are the product of the discourses, socio-historically and socio-politically situated that prevail at the time. What are the discourses taking place now, and how did they come into being? The response to this question is rooted in interested/situated knowledge. While the 20th century might not bring about new theories about language, it allows us to look at them from postmodern perspectives as different "ways of seeing and saying". It is those different ways of seeing that lead me to consider certain discourse practices in psycholinguistic research. Power-knowledge relations operate through discourse. A privileged discourse contributes to setting the research agenda.

Research that challenges what is considered conventional wisdom often gets labelled as "counter-evidence" without bringing much change to the original conceptual model. Such discourses have also to be addressed as issues of power-knowledge. The discourse of "counterevidence" in second language research lends support to the
processes of normalization within the disciplines of applied linguistics and psycholinguistics. Power operates through the norm, while resistance can be taken up by exploring knowledge on the margins. On the other hand, the success of the normalizing power depends on the willing compliance of the subject who is the target of the technologies of normalization (Walkerdine 1984). For example, in second language research, statistical analyses can be construed as part of the technologies or mediating tools that contribute to normalization.

Normalization as power-knowledge masks and neutralizes social inequalities. Norms, however, are not established by consensus. As Bourne (1988, p.92) points out, "once a standard language has been defined, linguistic diversity never signals only difference but also social power relationships. Power is involved in who is the scribe, who are the informants". As a result, certain language uses are excluded. What is included is critical in the normalization of language. This suggests that "fixing language", or establishing the language code, relegates language diversity to the margins. This is an issue of power-knowledge. "Fixing language" or normalization, if you prefer, has also been central to psycholinguistics. Accordingly, in the next section, I want to examine how psycholinguistic research and the concept of normalization have informed second language learning. Next, I want to look at normalization in reference to metalinguistic awareness, viewed through the work of Gombert, Titone and Bialystok. The concept of metalinguistic awareness needs to be problematized. Research from beyond the margins of Eurocentricism points out the need to reconceptualize what we know about metalinguistic awareness.

2 Informing second language learning

Psycholinguistics, as disciplinary knowledge, defines the type of questions that can be asked about language and cognition. Bourne (1988) says that "psycholinguistics as a social practice working to 'fix' the language as unitary, systematic, and objective" is a 20th-century version of the 17th-century dream of fixing language. While researchers may argue that descriptions are intended to be provisional, they are necessary as points of reference to some kind of ideal model. However, if

descriptions of languages spoken by individuals or sections of a community are made without locating them within an analysis of the ways in which the specific context and the power relationships involved came to
be constituted, then the effect of psycholinguistics is to “naturalize” the dialect of one social group, in one historical moment as the standard and intrinsic to patterns of the mind. (Bourne, 1988, p.15)

Psycholinguistics locates issues of language in the mind, cognition. As such, the research aims to look at individuals. Differences in behaviour are seen as individual differences, measured as deviations from norms: cognitive abilities, rates of development (Walkerdine 1984). Much of the present-day perspective in psycholinguistics can be traced back once again to the 17th century and the rise of science, which permitted normalization, regulation and production of the normal subject. This was the time when science was growing as a legitimate field breaking away from religion, which up until now had ruled the domain of science. A commitment to finding forms of legitimation and guarantee in science rather than religion is the genesis of modern forms of rationality and the idea of rationality as natural (Walkerdine 1984). Within the last half of this century, second language teaching has been much influenced by research that centres on individuality, rationality and natural development (cf. Dulay and Burt: natural development/sequence of second language acquisition). Such research is part of modernist discourse.

With the naturalization of reason (language and mind), the object of study is the natural development of the mind, developmental psychology. With the development of the study of language and mind, knowledge is naturalized and biologized (Walkerdine 1984). Knowledge as a social category is thereby marginalized. Similar notions can be found in contemporary linguistic theory, for example, natural approaches to language and natural language semantics.

2.1 Metalinguistic awareness: emergence or interaction?

Developmental psychology provides an avenue for the examination of metalinguistic awareness. The latter has important implications for language development, literacy, and second language learning. Much of the research on metalinguistic awareness has centered on children. While there have been other books on the subject, Gombert’s is perhaps the most recent (1992). His conceptualization of the nature of metalinguistic awareness development might appear to be a “new model” but it is couched in old arguments and therefore is not really intended to open new avenues. On the surface, Gombert rejects Piaget’s stages (hence the new model). At a deeper level, Gombert subscribes to the rationalism and universality that domi-
nates psychology and language. He does not problematize the concept. I want to draw some analogies between Gombert's phases of metalinguistic development and Piaget's stages in his developmental thought model. I also want to consider the age factor, and sociocultural influences, what Gombert calls "exogenous" factors.

One of Gombert's concerns is the issue of consciousness or control in the ability to perform metalinguistic tasks. Piaget was similarly concerned with inner control when developing his model of thinking. Piaget's westernized conceptual framework is derived from experiments with children who were gendered, raced, abled and middle-class. That is part of the socio-cultural context of his experimentation. The socio-historical and political context of the time has also to be explored. In this regard, Walkerdine (1984) is influential. While Piaget was interested in the responses children gave in his experiments, the power of reasoning was paramount. "Piaget's natural normalized stages of development towards scientific rationality" were made possible through the observation of individual development. Accordingly, thinking is defined and characterized by Piaget's model of development. Take the example of operational thought. What are the characteristics? On what basis? In which cultural context? Is it not the development of thinking from a certain socio-historical and cultural perspective; hence situated knowledge? Donaldson (1978) was critical of Piaget's work in that she demonstrated that his laboratory-type experimental tasks do not yield the same results when they are contextualized. Vygotsky (1978) had a competing model but his work was available only in the Soviet Union, and then only briefly before it was banned.

Gombert, while not supporting Piaget's model is, in my opinion, nevertheless influenced by the model. Piaget's conceptual framework has become a benchmark. In developing his model Gombert points out that metalinguistic functioning emerges at age 6 or 7 and is facilitated by the development of reading and writing. The age factor, six or seven years old, appears to be very critical. Several questions arise concerning the relationship between metalinguistic awareness, age, the development of reading and writing, and the effect of schooling. One response to these questions can be found in a recent study by Chaney (1992), who concluded that metalinguistic abilities are related to oral language, reading and writing in the pre-school years. Results of her study refute the notion that metalinguistic skills do not emerge until middle childhood. They also provide evidence that metalinguistic
abilities do not emerge suddenly, but instead increase gradually during language development. Ages 2 to 4 are a very active period of metalinguistic learning. This raises questions about the nature of metalinguistic awareness in children. How much controlled processing is going on? How are linguistic and metalinguistic development related in the pre-school years? "To view the child as having a metalinguistic frame at age 3 goes against the classic position that little is understood until about 6 or 7 years, and that thought is developed in distinct stages after that age" (Chaney 1992, p.511). The view Chaney proposes (at age 3) is more in keeping with recent theory about the mind, which suggests that the mind is much more complex than previously recognized (Carnegie Corporation 1994).

Gombert's view may be regarded as a "classic position". Schooling might have been the occasion where reading and writing development takes place, a westernized (Eurocentric) base of reference. Moreover, while recognizing the socio-cultural influences on metalinguistic development, Gombert considers them to be "exogenous" factors. Quoting Gombert: "In our societies, it [a command of reading and writing] thus plays a trigger role in the appearance of metalinguistic awareness" (1992, p.190).

2.2 Socio-cultural influences and meta-talk

Western society today includes people from many cultures (Africa, Asia, the Middle East, South America, to name a few). What are their literacies? How do they talk about language? Do metalinguistic activities evolve without reading or writing, without schooling? Social linguists and social cognitivists provide significant insights into these questions. Meta-knowledge can develop through classroom learning or through certain life experiences (Masny 1995). In classrooms, there often is overt analytical teaching. However, in many cultures people still gain a good deal of meta-knowledge about what they know and do outside the classroom setting. This appears to come about because they have had certain experiences which have caused them to think about a particular discourse in a reflective and critical way (Gee 1991). Here are two examples. The first is through language socialization as in the case of the Vai of Liberia (Scribner and Cole 1981). Vai is a community language with a community-based literacy. English is the official language of school and government. When a letter needs to be read or written in Vai, the Vai get together in a group to talk about the appropriate code and words to use in writing.
the letter. The Vai tend to analyse the code for pragmatics (appropriateness). They apply meta-talk to the letters written in Vai, a community-based literacy. How did this meta-talk become part of their socialization and enculturation process? Was it an influence of knowing other literacies (Koranic, school-based literacies)? Or was it more or less indigenous to their ways of viewing the word and the world in their own community. Would they be involved in meta-talk if there were no other literacies and languages present in their own community?

Exposure to another language can lead to an awareness of how the first language can be manipulated grammatically and pragmatically. The second example, a "non-literate" group, the Limba of Sierra Leone, incorporate a metalinguistic and reflective sophistication in their talk about language. This sophistication is due not to the product of writing and formal schooling but to the Limba's multiple contacts with speakers of other languages (Finnegan 1988). Vygotsky (1987, p.222) says that "learning a foreign language (a second language) allows the learner to understand his native language as a single instantiation of a linguistic system". In summary, these studies of the Vai and the Limba provide different ways of looking at how other societies take up the concept of metalinguistic awareness. Moving away from Western societies and Western mainstream research provides a challenge to current views about the relationship between metalinguistic awareness, knowledge of a second language, a second literacy, age, and schooling.

2.3 Metalinguistic awareness and second language learning

This certainly provides a lead-in regarding the link between metalinguistic awareness and second language learning/bilingualism. Gombert (1992) does not really focus on bilingualism or second language learners per se. Therefore, it is important to look at the concept of metalinguistic awareness in second language research proposed by Titone and Bialystok. Titone's position is to some extent similar to Gombert's, in that it is a "classic position". Titone makes a distinction between language awareness and metalinguistic awareness. "Language awareness is characterized as implicit, caused [my emphasis] by cognitive maturation and appearing prior to formal schooling. Metalinguistic awareness, on the other hand, is characterized as a "formal, rational, intentional, declarative knowledge common to languages, appearing at age 12, after exposure to formal school-
It appears that metalinguistic awareness emerges at a certain age either in relation to reading and writing and/or formal schooling. Why, in Titone’s model, does the relationship between metalinguistic awareness and bilingualism not emerge earlier? Bialystok’s model, for instance, is based on the premise that bilingualism would allow children to develop metalinguistic abilities much sooner than at age 12 (Bialystok 1988). Why these differences? Both models are grounded in a positivistic framework. Titone’s, however, is located in developmental psychology; while Bialystok’s is informed by computational or information-processing theories. She has identified two cognitive processing components, analysis of language and control of processing, that apply to metalinguistic development. Her view of what is cognitive is based on the assumption “that an orderly mental world, consisting of representations, is at the heart of building cognitive competence”. Given her rationalist position, it is not surprising that in her view social factors “provide complementary explanations”. Moreover, Bialystok claims that the same model can account for first and second language acquisition. This does not mean that first language acquisition is identical to second language development. There are similarities and differences between the two. First and second language differ in the extent to which they are under the control of biological or cognitive processes of development [...]. To some extent, first language acquisition unfolds as a function of a biologically, or innately, prescribed set of constraints. [...] At least some form of universal grammar is available to guide the progress of first language. (Bialystok 1994, p.162)

A question Bialystok raises is: what is the starting point for second language acquisition? Certainly not with only UG (Universal Grammar), nor with a fully elaborated first language with structures rearranged where necessary. In her response, she refers to Corder, who had proposed a similar position: the starting point is a “simple code derived from the first language, a sort of ‘stripped down model’ that contains the essence [my emphasis] of linguistic structure” (ibid., p.163). This is a modern view that posits a “unified subject or an unchanging human essence that precedes all social operations” (Best and Kellner 1991).

2.4 Conditions of possibility

If we are to chart the conditions that made such work possible, we must consider Bialystok’s model in relation to specific sets
of historical conditions and their effects at one historical moment. It is a model that is analytic and rational, and much influenced by cognitive (information-processing) psychology, which gives primacy to positivistic, hence statistical, models to explain language proficiency. Such models assign secondary roles to social and cultural forms in cognition. Knowledge is conceived as objective, universal and apolitical. Consequently, tasks are designed and validated that address such issues as task difficulty. But then how does one establish task difficulty? Is it gendered? Is it socio-economically and culturally "normed"? If the latter, whose norm provides the point of reference? Subjects in these studies come to the tasks as socio-culturally and socio-historically knowing subjects. Ideological forms abound around issues of knowledge and power. However, they are masked or neutralized when put to the test against the norms of statistical methodology in order to support law-like universals. That is why it is important to problematize notions like individual, mind and society, instead of viewing them as "pre-given objects of the human sciences" or familiar assumptions. In order to do this, it is necessary to become postmodern border-crossers. A postmodern view aims to break down barriers between academic fields. It encompasses a socio-historical theory of postmodernity and analyses new postmodern cultural forms and experiences. Postmodernism attempts to break with Western history, in knowledge, culture and society as well as class, and attempts to develop different modes of thought and writing, and different values and politics to overcome the constraints of modern discourses and practices.

Accordingly, other ways of researching language learning can be considered. I am referring to, for example, "legitimate peripheral participation" (LPP), an historical-cultural theory of learning (Lave and Wenger 1991). It has definite applications for second language learning. It is a model based on Lave's ethnographic research on craft apprenticeship in West Africa. "Legitimacy and peripherality are relations to a practice; they are primarily characteristics of the form that learning takes, rather than characteristics of the person who is learning" (Wenger 1990):

learners inevitably participate in communities of practitioners and [...] the mastery of knowledge and skill requires newcomers to move toward full participation in the sociocultural practices of a community. LPP provides a way to speak about the relations between newcomers and old-timers, and about activities, identities, artifacts, and communities of
knowledge and practice. It concerns the process by which newcomers become part of a community of practice. A person's intention to learn is engaged and the meaning of learning is configured through the process of becoming a full participant in a sociocultural practice. Moreover, LPP is a complex notion, implicated in social structures involving relations of power [...] through time and across cultures.

(Lave and Wenger 1991, p.29)

Legitimate peripheral participation is a social cognitive theory as well as an historical-cultural theory of learning, because LPP refers to a view of how knowing and learning are part of social practice. In social cognition, language is one of many semiotic means, musical and mathematical notations being others. These semiotic means are based on cultural practices. This phenomenon is referred to as cognitive pluralism, a concept developed by John-Steiner (1995, p.5). The theory of cognitive pluralism examines “cultural, technological and disciplinary aspects of the development and appropriation of diverse symbol systems and semiotic means”. This contrasts with the cognitive account of language as a prerogative of the mind of individual speakers. John-Steiner puts forward the idea of cognitive pluralism as a way of studying cognitive diversity in a pluralistic world.

To end this second part of the paper, I have charted possibilities of examining second language learning, metalinguistic awareness and cognition from socio-cultural and socio-historical perspectives embedded in relations of power and knowledge. I have questioned familiar assumptions and consequently disturbed otherness within me and possibly in others. In so doing I have taken up a politics of identity and difference, a postmodern stance. By appealing to a politics of difference, I have crossed borders and opened myself up to diverse cultures in order to understand how fragile identity is as it moves into “borderlands crisscrossed within a variety of discourses, experiences and voices” (Giroux 1992). I am referring to a postmodern stance that seeks to challenge dominant forms of knowledge and to produce new forms that are socio-historically and politically situated and break down the barriers of the disciplines. Research, in the postmodern perspective, entails crossing research borders that each discipline has produced and developing new cultures of research that can be considered fragile in nature because postmodern research is socially, historically and politically constituted. This is the subject of the next section.
3 The fragile (social/cultural/political) nature of research

3.1 Questioning science’s objectivity

Science should not be placed on a pedestal. It is a highly political enterprise. Science can be bought, affected by politics, by bias, by funding sources, and by human beings who have a tendency to want their hypotheses to be successful. (Boston Globe, 1994)

This quotation suggests that science is indeed political. One way of addressing issues of power and knowledge is by deconstructing internal histories (i.e. assumptions) as they are presented through scientific articles and texts. The objectivity and rationality attributed to any scientific endeavour depends on a number of key assumptions and propositions that become the shared beliefs of those working in the field.

The field of second language research is no different. Key assumptions are shared beliefs embedded in a power-knowledge relationship. An example of this is the widespread acceptance of the notion that the individual is biologically programmed. It is a way of avoiding the uncomfortable questions raised by the growing awareness of linguistic diversity that signals differences and social power. Linguistic diversity requires a different understanding of power and knowledge, one that promotes the questioning of familiar assumptions. This calls for a new configuration of language and power. In charting such conditions of possibility, it is necessary to break the silence of social histories (Schenke 1991). It is important to know who listens, who speaks, and what the research agenda is. Human subjectivities and language use are produced within cultural and ideological contexts, and so are social inequalities. It is critical to understand the socio-historical and political implications of the assumptions that inform second language research. A way of doing research is never innocent. It is implicated in a set of (tacit) assumptions that incorporate values and beliefs, ways of being and seeing, which are socially and historically constructed. Assumptions become the basis on which theories and pedagogies are built.

3.2 Common sense knowledge

There are assumptions that are the result of common sense knowledge. The discourse of common sense knowledge appeals to reasonableness. It is a dominant discourse that comes across as truthful and real. Dominant claims about existing power relations appear
rational and objective. Researchers opposed to dominant forms of knowledge might be forced to position themselves according to the norms that they are opposed to. For instance, they could be called on to justify their position according to norms of statistical methodology, that is, in terms of a form of validation taken from quantitative methods in order to support law-like generalizations (Walkerdine 1984). In other words, unless one adopts this kind of critiquing or takes up this type of epistemological position (for example, calling on statistical methodology), other perspectives such as the postmodern can get viewed as "bashing tactics". This form of discourse used by those opposed to the postmodern view has to be deconstructed within an ideological context of interested knowledge. The postmodern attempts to validate differences, otherness, diversity and heterogeneity. Using language in a linguistically diverse society involves making choices about discourse practices that become an "act of identity" within a framework that legitimates differences. The politics of identity is lived out of one's own linguistic, historical, cultural, gender, class and ethnic background. Politics of differencearticulates important differences between groups and individuals. Such positions might unsettle modernist views that are in the mainstream of second language research, with their concern for the unified subject and normalization of language. The postmodern perspective is incommensurate with the modernist position.

3.3 The fragility of research

The modernist or the mainstream science researcher might say, to quote again from the Boston Globe: "There can be no multicultural solution to the genetic problem of cystic fibrosis." My response is: Just as gender does not have an effect on medical research agendas! What gets researched, and how? By dismissing differences in this way, the modernist appeals to the universal. One critical aspect in research that I mentioned earlier is that of generalizability or universal applicability. The latter is achieved through replication of research studies. How do you reconcile difficulty of replication with science’s claim that it is objective? There are situations where scientists load the deck,\(^5\) or make inferences too rapidly (cf. Blondlot's "discovery" of N-rays; see Latour 1987). This is also the fragility of research.

Duplicating studies in second language research is a daunting task. Learners, according to Bourne (1988), have multiple proficiencies de-
pending on the range of tasks on which they are assessed, quite apart from different social situations and different relationships being introduced as variables in a study. One specific example is Chaney (1992), who studied language development and metalinguistic awareness in 3-year-old children. She asked when/how do metalinguistic abilities develop? First, which hypothesis is being considered: the autonomy hypothesis or the interaction hypothesis? How we view the notions of consciousness, control, and intentionality depends on our answer to this question, and this in turn will determine our definition of metalinguistic ability. Moreover, there is task complexity: too many operations may be difficult for young children. For example, tasks have been explained using metalinguistic terminology. Tasks preceded by demonstration and practice trials have been known to improve children's performance (phonological awareness: length and familiarity of word, use of words with/without pictures). In the end, the different contexts in which testing takes place produce different results. Is it after all possible to generalize?

3.4 The black box syndrome

To explore this question, I want to introduce the notion of the "black box syndrome" (Latour 1987). The black box is a device which performs some useful function, but whose internal mechanisms are not available to inspection (e.g., a telephone or the hard drive on the computer). There are many instances of black boxes... Scientific articles may contain several black boxes and so may research. Metalinguistic awareness, for example, has been known to play a significant role in language research. There are various forms of metalinguistic awareness: phonological, syntactic, lexical, pragmatic. Metalinguistic awareness is known to be related to oral language, reading, writing, and bilingualism. But what is metalinguistic awareness? From my perspective, it is a black box. The input constitutes the tasks. The sensitive context in which the tasks are manipulated is important to the output, the production of metalinguistic awareness. Every time I try to peel away the cover of the black box, I am confronted with another black box. For example, from metalinguistic awareness I may proceed to the inner working of consciousness, control or intentionality. Another black box might be the citing of other research studies indicating what metalinguistic awareness is. Researchers interested in metalinguistic awareness may agree with what is said in a particular study. They support the author's claim and help the author by
using it further without dispute. “It gets abstracted, abridged, stylised and sinks into tacit practice” (Latour 1987). I might be tempted to re-open the black box, but I am not so sure that this will bring about a clearer understanding of what metalinguistic awareness is. The other possibility is to attempt a new understanding of the black box within a broader socio-cultural and historical context: knowing that the meanings contained in the black box are shaped by specific research interests and specific power structures. Research on metalinguistic awareness, and what it is, involves research agendas that get played out as differences in power relations.

4 Conclusion

What are the implications of all this for language research and language pedagogy in the postmodern era? In order to understand the contribution of Krashen, Piaget, Gombert, Titone, or Bialystok, it is necessary to examine how their work is constituted and made possible socio-historically and politically, that is, in relation to existing discourses, practices and conditions. According to Walkerdine (1984), claims both to theoretical and empirical validity do not stand outside the discourses and practices for (re)producing what counts as scientific evidence. Epistemology is not immune to socio-historical and political conditions.

Discourses in second language research, then, are about the creation and limitation of possibilities. Discourses are organizations of knowledge/power linked to social institutions. It is in discourses that we take up subject positions and produce ways of understanding and ways of being in the world.

“Ways of being in the world” brings me to consider the politics of identity and difference. The two are linked. Differences rearticulate and reshape identity so that, in the words of McLaren and Lankshear (1992), “identities are transformed and in some instances broken down but never lost [...] identities immersed not in centrist politics, but identities affirmed as reshapers of their own histories”. What does this mean? Linguistic, cultural and social diversity is central to my work in second language research. I am confronted with the struggles between centrist politics and the politics of difference. I would like to think that these positions are not incommensurate, a fait accompli. Rather, I would like to promote a “language of possibility” (Simon 1987) in order to question familiar assumptions, to challenge and deconstruct power relations. It is only by reflecting on the socio-his-
historical and the political conditions of research that I can make sense of the assumptions underlying language theories and hypotheses. This reflection, moreover, is informative and transformative. It allows me to question how representations and practices in research are named, and to consider how I can actively challenge my own assumptions.

Notes

1. This project was developed while on sabbatical leave as a Visiting Scholar at the Ontario Institute for Studies in Education and at Harvard University, Graduate Studies in Education. An earlier version of the paper was presented at the Centre for Language and Communication Studies, Trinity College, Dublin in Trinity term 1995. Address for correspondence: University of Ottawa, Faculty of Education, 145 J. J. Lussier, Ottawa, Canada, K1N 6N5; e-mail: dmasny@aixl.uottawa.ca

2. A small caveat is in order here: regarding applied linguistics, I have only touched the tip of the iceberg. For an extensive analysis, it is necessary to look at assumptions based in the British empirical tradition.

3. In questioning familiar assumptions, I unsettle within me what was for me a foundation of presuppositions out of which I had been working. In disaffirming my affirmations, I have called upon otherness and politics of difference (Giroux 1992).

4. Latour (1987, pp.74-9) has been able to demonstrate this in an interesting way.

5. In 1994, results from an international study on breast cancer research were invalidated because collection of data, including selection of subjects, was inaccurate.

6. There is much more to explore about the black box. This is only the beginning of my reflexions concerning how concepts get "black-boxed". What is invisible? Why? With the black box as interested knowledge, what transformations can occur to the black box? How are power relationships constituted when the contents of the black box are culturally and socio-historically constructed?

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