The semiotics and ecology of language learning

Perception, voice, identity and democracy

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This presentation will outline the principles of a semiotic and ecological approach to language learning, and the practical consequences for classroom teaching and learning that follow from taking such an approach. A semiotic and ecological view of language and of learning entails that the context – physical, social and symbolic – is a central element in teaching and learning, and that issues such as embodiment of language and spatio-temporal structures are instrumental in the creation of learning opportunities. The approach emphasizes the development of the learner's social self and identity within the context of a democratic community of learning. At the practical level the presentation will discuss project-based learning and the roles of modeling, scaffolding and collaborative learning.

Introduction

In this article I want to draw together some ideas that connect language pedagogy and democracy. These ideas come primarily from general education, and discuss the ideological value and the practical possibility of including a democratic goal in our educational endeavours. After looking at some of the major discussions in this area, I will attempt to interpret the central ideas and problems that are raised in terms of the world view of the ecology of learning, particularly taking care to relate the macro and the micro aspects of pedagogical processes.

What does it mean to aspire to, to advocate, and to implement a democratic education? And what does it mean to do so in a second or foreign language classroom? These two questions afford no easy answers. In this article I begin by sketching the basic ground work of what demo-

cratic education can be or might aspire to be. I will then propose how the resulting ideas might transfer to a language classroom (particularly to a so-called foreign language classroom). At that point crucial notions of language teaching principles, strategies and actions will need to be generated and implemented (van Lier 1996, Kumaravadivelu 2002). I will do this from an ecological, semiotic and sociocultural perspective. *Ecological*, in the sense that activity in a meaningful environment generates affordances for enhancing that activity and subsequent activities; *semiotic*, in the sense that meanings rely not just on linguistic but also on all other meaning resources of physical, social and symbolic kinds; and *sociocultural* in the sense that historical, cultural and social artifacts and activities provide tools and resources to mediate learning and action.

Ways of democratic learning

What does it mean to foster a democratic education? I suggest that there are two perspectives on this. The first one is the education of democratic citizens in a democratic society. We might call this the *macro* perspective. The second perspective is the promotion of democratic learning processes in the classroom. We might call this the *micro* perspective. The two perspectives are intricately related, and in fact depend on one another for the full development of the democratic personality (as an alternative to autocratic, authoritarian, individualistic or disengaged personalities). Since we are concerned here with language education, we also need to consider how fostering both macro and micro democratic approaches enhances the growth of language proficiency. In the following I will first discuss the macro perspective, then the micro perspective, and finally make some comments on the strategic application of democratic ideas to a language curriculum.

Educating the democratic citizen

What characterizes a democratic citizen? In a recent study about democratic education in public schools in the US, Joel Westheimer & Joseph Kahne (2004) propose that there are three different visions of democratic citizenship: the *personally responsible* citizen, the *participatory* citizen, and the *justice-oriented* citizen (p. 239).

Table 1: Kinds of Citizens

Personally responsible	Participatory	Justice-oriented
Description: Acts responsibly in his/her community, obeys laws, recycles, volunteers in times of need	Active in community organizations, organizes efforts, knows how agencies work	Critically assesses social, political and economic structures, addresses areas of injustice, knows about democratic social movements and how to effect systemic change
Sample action: Contributes food to a food drive	Helps organize a food drive	Explores why people are hungry and acts to solve root causes
Core assumptions: Citizens must have good character, be honest and responsible, and be law-abiding members of the community	Citizens must actively participate, take leadership positions within community structures	Citizens must question, debate, and change established systems and structures that reproduce patterns of injustice over time

(adapted from Westheimer & Kahne 2004, p. 240).

Westheimer & Kahne note that all three perspectives are focused on in schools, although the *personally responsible* one is the more frequent orientation, since it is politically and institutionally "safe", and can accommodate all manner of political, religious and institutional orientations, whether they foster democratic ideals, commitments, advocacy or not.

How central is democratic education in the total menu of educational goals and requirements? Many argue that it should be central, more than an add-on, more than just a focus on "moral education" or "citizenship education" (Anderson et al. 1997) which is in many cases merely a question of instilling docility and discipline within a set of "panoptic apparatuses" (de Certeau 1984, p. 47; Foucault 1977). In addition, as Westheimer & Kahne report, advocates of democratic education "frequently complain that they are fighting an uphill battle", since "traditional academic priorities and the current narrow emphasis on test scores crowd out other possibilities" (2004 p. 263).

Within the rigid division of the curriculum into separate subjects, the task of democracy education, whether veering towards the docility or towards the critical activism pole of the spectrum, tends to be the job of the Social Studies teacher, and it thus is subject – like all other subjects – to the control of standards, accountability, and measurement. Divergent or non-conformist approaches are therefore highly unlikely to be applauded, encouraged, or even allowed, since they would upset the *habitus* and its reproduction within the institutional structures set up for the very pur-

pose of this reproduction (Bourdieu & Wacquant 1992). Dewey's *radical democracy* (Dewey 1916, Robertson 1992) and other progressive, change-oriented reforms (or intents at reform) have never had an easy time of it, and in the current oppressive Zeitgeist in the US (and assorted other countries) they are definitely on the ropes.

Democracy and the (foreign) language classroom

In light of the uncertain prospects of democratic education in the main subject–matter areas of public schooling, we might ask what the promise might be of a democratic focus in the foreign or second language classroom. Traditionally, the language classroom is about language, not about changing oneself or changing the world.[1] We must of course ask ourselves if that is not the best focus, or if our learners really would want it to be any other way. Several studies (e.g., Kramsch, this volume) suggest, in fact, that a large percentage of students would prefer not to have a cultural component in their language classes. Although a "cultural component" is not the same as a democratic orientation (or democratic practices), it is not clear if the latter would fare any better than the former in the opinions of the students.

Against such arguments for a safe, straightforward and neutral (or hard-nosed, grammar-grind, test-cramming neutral, if one wishes) language curriculum, one might set a variety of counterarguments, such as:

- Language is always about something, so it might as well be about something of consequence. Here, of course, it is important for the learners to have a say and a stake in what those "things of consequence" are. They cannot be unilaterally imposed.

- The development of proficiency in a language depends on the development of a dually compatible identity, that is, compatible with the self, and compatible with the life space of the new semiotic reality, in essence, an identity that can provide a solid link between the *self* and the *new reality*. This in turn requires having a *voice* in that language, and having both the right to speak and the right to be heard, as well as having something of consequence to say.

- Language textbooks are often rather trite, filled with inconsequential events around a ubiquitous suburban family with two kids and a dog, or groups of adolescents engaged in soporific exchanges and adventures. It would certainly be interesting to have mate-

rials that challenge students to think, with complex collaborative projects that push the boundaries of experience along with the language boundaries.

- Communication and interaction are central to language development. In many language classes such communication is limited to the transmission of information – and, as suggested above, rather trivial information at that; much more rarely, contingent and dialogical forms of collaborative dialogue (Tornberg 2000, Swain 2000) are encouraged in which learners can develop a sense of true self-other dialogue, and hence an identity and voice in the L2 (van Lier 2004).

There are thus a number of arguments to be made for a move away from safe, tried-and tested language classrooms into more critical, challenging democratic directions. Foreign language frameworks in general do not preclude such directions. For example, in the USA foreign language standards are often based on the "Five C's", *Communications*, *Cultures*, *Connections*, *Comparisons*, and *Communities*. Recommendations under those headings include promoting connections to other disciplines, understanding others' perspectives, and participating in local and global communities. Such notions are compatible with the promotion of democratic practices and perspectives.

Whether or not such changes are successful depends both on the commitment of all participants and on the design of innovative curricula. In addition, the implementation of critical democratic classroom practices requires an environment in which such work is permitted, if not fostered. If the foreign language classroom takes on the role of education for democracy, what might the Social Studies Department say about its legitimate territory being invaded? Certainly, collaboration between foreign language classrooms and other subject-matter classrooms would appear to be highly beneficial. In the next section I will discuss some of the ramifications of these ideas at the macro level.

Democracy and pedagogic rights: Bernstein's work

Basil Bernstein's work on pedagogic discourse (especially Bernstein 2000) is an unusually penetrating analysis of the notions of pedagogy, schooling, and the institutions in which such processes take place. In this section I will use some elements of this highly complex work to illustrate

some of the constraints and dynamics within which a democratic (second) language education operates.

At the basic level of an effective democracy, participants have certain rights; these rights can only be realized when certain conditions are met, and these rights and conditions are enacted at individual, social and political levels. This is represented in table form below.

Table 2: Rights and conditions of an effective Democracy

Rights	Conditions	Levels
Enhancement	Confidence	Individual
Inclusion	Communitas	Social
Participation	Civic Discourse	Political

Bernstein, 2000, p. xxi

Let me elaborate briefly, along the lines suggested by Bernstein:

The first right, to *individual enhancement*, refers to the experiencing of past and future possibilities for growth, within the boundaries of curricula. This right is essential for the condition of confidence in the educational process.

The second right, *social inclusion*, is the right to be included socially, intellectually, culturally and personally (this includes the right to autonomy within the system). Inclusion is essential for the condition of communitas, and operates at the social level.

The third right is the right to *participate* in practices with specific outcomes, i.e., the right to participate in the construction, maintenance and transformation of order. This is the condition for civic practice, and operates at the political level (Bernstein 2000, pp. xx-xxi).

Using this model, Bernstein suggests that it is possible to examine learners' (and of course teachers') rights, and to see if these rights are equally distributed. It would for example be possible to check the various 'democratic citizen' programs surveyed by Westheimer & Kahne (2004) against Bernstein's model of democracy and pedagogic rights, and thus determine various reasons for their success or failure. For example, a 'moral education' program that focuses exclusively on good and law-abiding citizenship may lack the crucial conditions of confidence, communitas and civic practice, particularly if it is 'delivered' as course content within a school subject area, and even more so if it disproportionately targets learners who are perceived to deviate from norms set by school or political leaders.

Once the basic rights and conditions of an effective democracy (we might say, the prerequisites of an effective democracy) are examined, two further

sets of concepts from Bernstein can be used to examine relations of power and control within educational settings. That is, processes of power and control determine if and how the democratic rights and conditions can be realized in any given educational setting. Power and Control are defined as follows:

power – classification (voice)
>   the creation of boundaries between categories (e.g. subject matter boundaries), and the discourses that establish, justify and maintain relations between categories, the conditions for specialization and legitimacy of disciplines;

control – framing (message)
>   controls on communication in local interactional pedagogic relations; the internal logic of pedagogic practice; the selection, sequencing, pacing and criteria of curricula; the rules of social order (regulative discourse) and the rules of discursive order (instructional discourse.

Both classification and framing can be relatively weak or strong. When classification is weak, the boundaries between categories (e.g., disciplines) appear permeable, and broad cross-disciplinary work may be possible; when framing is weak, rules of regulative and instructional discourse tend to be implicit, and deep probing of disciplinary reasoning may be possible. Thus, classification appears to control issues of breadth, and framing appears to control issues of depth. The dynamic between these two parameters that control or enable educational growth is important and complex.

This very brief overview of some of Bernstein's central concepts of pedagogical systems serves as a lead-in to an ecological perspective. In particular, Bernstein provides an analytical language that can shed light on interactional opportunities in a setting, and provide a link between micro and macro elements of pedagogical practices. The four central concepts of ecology used below, *perception*, *action*, *relation* and *quality*, refer to processes that take place within a context that has a greater or lesser degree of effectiveness in terms of democratic practices, and in which control and power are realized in weaker or stronger ways, thus influencing the types of activities and relations that can be developed, and ultimately determining the quality or pedagogical work in the setting.

The ecological perspective on educational democracy outlined below is very much at the micro end of the pedagogical scale. It focuses on democracy building from the bottom up. It assumes that very often teachers and learners have little power to change the larger socio-political and

institutional habitus of the work setting, and focuses attention on the personal and interactional processes of language development. It does not dismiss or diminish efforts at larger scale activism, but argues that, whatever else happens in the pedagogical setting, democratizing changes start at the personal and interactional level, within dialogical processes of action and learning. The democratic educator is one who instigates democratizing processes at the interactional level in the classroom, and who knows at the same time what the constraints are that operate in the setting in terms of power and control. In a sense, then, an ecological approach, coupled with an analysis of existing socio-political and institutional conditions, is a form of subversive pedagogy (see Postman & Weingartner's (1969) call to arms, all of 35 years ago, for suggestions along similar lines).

The ecology of language learning

Ecology is not a different research method from the ones that have been used before. Nor is it a particular theory or model of teaching, research, or learning. An ecological perspective is at its core a world view, a way of being and acting in the world that has an impact on how we conduct our lives, how we relate to others and to the environment, and of course also, how we conceive of teaching and learning.

Four basic organizing constructs of ecology are (for a further elaboration and extension of ecological principles, see van Lier 2004):

Perception (multimodal, multisensory)
Action (activity)
Relation (self and identity)
Quality (of educational experience)

Perception

Work on noticing, attention and awareness is quite common in SLA research, particularly in controlled quasi-experimental studies of a primarily cognitive kind. In recent years such work has also increasingly been done from a sociocultural perspective, using intact classrooms in which learners collaborate on a variety of tasks or projects (Lantolf 2000, Swain & Lapkin 2000). However, very little work (if any) addresses the issue of perceptual learning as such, that is how various perceptual processes arise, how they pick up information, what they pick up and why, and

how perception relates to activity and to learning. Such work is more common in L1 acquisition research, and I am suggesting that there is a need for it also in SLA and educational linguistics.

From an ecological perspective, there are several characteristics of perception that are different from standard views of perception as used in most SLA research. The main characteristics of ecological perception are:

1) Landscape rather than picture
2) Direct and indirect perception
3) Activity and perception
4) Multisensory perception

I will discuss each of these characteristics briefly, and then relate them to language learning.

1) *Landscape rather than picture.* In traditional theories of perception the perceiver is treated as a static observer of a picture, or of some other source of stimuli (on a screen, or in the case of sound, from a loudspeaker). In an ecological theory the perceiver is an actor within a landscape ("looking around" rather than "looking at", as Gibson puts it, 1979, p. 203). The focus changes in several respects: the perceiver becomes an active explorer of information, and the information that is picked up is partly driven by the purposes of the perceiver (I say *partly* because there is of course also information that is picked up in a relaxed, purely receptive mode, and that is not (yet) pressed into the service of purposeful activity).

2) *Direct and indirect perception.* The information-processing approach to perception assumes that the main job of the learner is to process sense data cognitively (involving short-term memory, schemata, association, inferencing, automatization, etc.), i.e. to enrich the incoming data through cognitive processing. In traditional theories the sense data are seen as "fleeting fragmentary scraps of data signaled by the senses" (Gregory 1991). In contrast to such *enrichment* theories, James Gibson and Eleanor Gibson developed a *differentiation* theory of perception (Gibson 1979, Gibson & Pick 2000). In a differentiation theory the basic assumption is not that the sense data are impoverished and unreliable, but rather that environmental data are rich, and perceptual development consists in gradually increasing detection of new information and increa-

singly varied responses to physical stimulation. Thus, perceptual learning is a process of perceptual activity that is becoming increasingly refined, specific and diversified. The focus is thus on discrimination, rather than on association, inference, or mental representation.

Perception can be both direct and indirect. A number of aspects of language use are perceived directly, and a number of aspects are perceived indirectly, i.e. mediated by sociocultural or cognitive tools of various kinds (gestures, cognitive schemata or cultural scripts, etc.). Presumably, it is the combination of direct and indirect information available in situated speech and writing that allows the receiver to arrive at interpretations that are effective.

3) *Activity and perception*. As I have noted already, the ecological theory of perception focuses on the relation between activity and perception.

Learners may sit passively on a sofa watching TV or at a desk listening to a teacher. Can one not learn from watching and listening to something purely for fun or out of general interest? Surely, such incidental learning can be useful?[2] Yes, I believe that incidental learning can be useful, in limited circumstances. However, the dynamics of incidental learning (and the related pair of instructional terms, implicit and explicit learning) are not at all well understood, whether in experimental or in natural contexts (see eg., Hulstijn 2003). My assumption is that key variables are *awareness*, peripheral in the case of incidental learning, focal in the case of intentional learning, and *intentionality* or *self-determination* in the case of intentional learning, although that often has specific socio-cognitive activity structures.

4) *Multisensory perception*. Imagine that I enter an office in France and don't know any French at all. The person behind the desk says "asseyez-vous". If she does not move a muscle while saying this, just staring me in the face, I may not have a clue as to what it means. It could mean: *What are you doing here? Who are you? Get out! I'm busy!* and so on.

However, if she stretches her hand in the direction of an empty chair by the desk, then I know she said something like "Sit down". Thus, the combination of auditory and visual information allows me to grow this information into signs, involving objects (chairs, desks), signs (words, gestures), and interpretants (emergent mea-

nings). A few cycles of these semiotic ingredients suffice to arrive at a blueprint for action, i.e., I sit down. I may then use cognitive strategies to try and remember the phrase. I probably know "vous", and perhaps I think "asseyez" is a bit similar to sit or seat, so I memorize "asseyez" as "a seat". Then, I can try this myself some time later by saying something vaguely like "a – seey – voo", which of course is likely to work perfectly!

This notion of the various senses (particularly – but not exclusively – auditory and visual) working in concert to facilitate meaning making (semiosis) can be extended to other areas of language experience, including reading texts that have certain visual enhancements in textual terms, diagrams and other illustrations, practical demonstrations of how something works, and many other everyday activities (Kress & van Leeuwen 1998).

Perception and language learning

I mentioned above that perception – in all its multifarious combinations and processes – has been neglected in both the theoretical and the practical areas of our field. There has been much talk about awareness, noticing, attention and other related terms, but it has not been clearly acknowledged that all of these are aspects of the more general class of activities of perceiving. Perceptual activity in general, the importance of learning how to perceive and how to relate various kinds of perceptual information, has received very little attention at both the theoretical and the practical levels of our work.

Learning language is in many ways tied to learning to perceive. This is not primarily hearing the differences between phonemes (though that is important) or noticing the ends of words (also important). Both phonological and morphological awareness are important for language learning. However, the role of perception is much broader than that. As mentioned above, it includes the combination of visual and auditory (and other: multisensory) information within a context of activity. It also includes both direct and indirect perception (about which more below) and perception of self as well as of the other (including the environment).

In situated language use, interpretation relies not only on linguistic information, but also on a variety of other semiotic clues and cues. Above we saw how gesture and physical layout provide the keys to unlock meaning when linguistic information in isolation would be incomprehensible. In a particular activity space, action, perception and speech form one inte-

gral array of semiotic resources with numerous cues providing potential interpretive opportunities. The environment in which linguistic action takes place is therefore characterized by perceptual diversity that can be brought to bear on processes of *semiosis* or meaning making. We can legitimately ask if textbooks and classroom exercises facilitate or hinder linguistic growth by separating linguistic information (so-called "input") from the full array of perceptual diversity.

As mentioned above, certain aspects of the perceived world are experienced directly as signifying material; other aspects are mediated by a variety of tools, cognitive and social. The perceived objects (or events) are not independent of the perceiver; indeed, in ecological terms they are seen as *relationships* between particular attributes of the perceiver and particular attributes of the environment. These relationships are termed *affordances* by James Gibson (1979). As defined by E. Gibson & Pick,

> An *affordance* refers to the fit between an animal's capabilities and the environmental supports and opportunities (both good and bad) that make possible a given activity (Gibson & Pick 2000, p. 15).

When a learner participates in a linguistic event, direct and indirect affordances become available depending on the abilities and aspirations of the learner. The direct affordances refer to such things as prosodic features (rhythm, voice quality, intonation, stress, etc.); gestures, facial expressions, posture, eye gaze, etc.; turn-taking signals, hesitations, repetitions, etc.; all of these in a variety of synchronized combinations. Indirect affordances are of a social and cognitive nature: remembered practices, familiarity with cultural artifacts, conversational and situational logic, etc. When teaching and learning language, it is profitable to bear this multitude of semiotic "material" in mind, and to be wary of assuming that singling out (separating out) linguistic forms and formulas is in fact the most efficient way to create learning opportunities. More precisely, it may be useful to investigate when and under which conditions isolating linguistic features a) occurs naturally b) can be promoted for focused linguistic or metalinguistic work.

A final characteristic of ecological perception is the idea that all perception is two-way perception (bi-directional): directed outwards as well as inwards, or extero-ception as well as proprio-ception, in other words, perceiving something in the environment at the same time as perceiving oneself. Any act of perception is therefore simultaneously and act of self-perception (hence the central idea that an affordance is a relationship between observer and observed). Knowing more about oneself and knowing

more about the external world both enhance the learning of new language and new meanings in context.

This combination of self-knowledge (consciousness) and other-knowledge (awareness) is the key to the role of language awareness and of explicitness in learning. It may involve the raising to consciousness of existing or emergent knowledge, skills, attitudes and other internal states, and it may involve becoming aware of attributes of objects, persons and events in the environment. Self-awareness as it relates to world-awareness is the source of identity development in the new language and culture. Effective functioning in the second language presupposes the development of such a new L2 and C2 identity, not one that replaces L1/C1 identities, or stands independently beside them, but one that is bicultural and bilingual, i.e., the "third place" that Bhabha talks about (see Kramsch 1993).

In sum, language awareness needs to take into account several characteristics of perception that will influence how effective it will be in instigating learning:

1) The centrality of action and interaction (agency)
2) The multisensory nature of perception and learning
3) The nature of affordances
4) The bi-directionality of perception (and awareness), and its role in identity development.

In the next section I will suggest some pedagogical consequences of an ecological view of perception and awareness.

Perception and pedagogy

If we consider that language learning is closely tied to perceptual skills, how do we take this into account in teaching programs? Above I attempted to tease apart the various processes that form part of perception. I highlighted the centrality of action, the multi-sensory nature of perception, the dynamic relations between direct and indirect perception, the bi-directionality of perception, among other things. I suggested that perception goes far beyond noticing linguistic features (phonology, morphology, rule-governed syntax), and therefore SLA research on noticing and focusing on form misses a number of crucial aspects of perceptual work.

A lot of work has been done on perceptual development of infants and the role this plays in conceptual growth and speech development (Gibson & Pick 2000, Kuhl 1998, Trevarthen 1990). Facial expression, tones of voice, gaze, rate, loudness, etc. all provide direct affordances to the infant.

Later on, lip movement assists in hearing words and expressions. Once the phase of joint attention has arrived, indexical gestures (pointing, looking, expressing movement) assist in locating language in space and time. All these connections between the visual auditory, motor (and can we exclude taste and smell?) have been studied in first language acquisition (Kuhl 1998).

If internalization of new language is at all similar to what happens in L1, representations are "polymodal", consisting of "the auditory and visual speech [children] experience, and the motor patterns they themselves produce" (Kuhl 1998, p. 300). However, this is just one side of the coin, that of the enrichment theories of perception, where sense data are used to enrich mental representations (focusing on information processing). On the other side of the coin, there is also differentiation in terms of information pickup from a variety of sources available in the environment.

Activity

In the previous section I have pointed out that activity and perception form one whole, a necessary unity. To perceive, we must act; to act, we must perceive. Activity in one's environment brings forth the affordances in those environments that are relevant to the agent. For language learning this mean an activity-based approach, in which what is structured in the curriculum are the activities (projects, tasks) and not the language. In such an activity-based curriculum language would "surround" the learner in all its richness and complexity – it would not need to be simplified or sequenced along grammatical, functional, or any other lines.

Instead of being presented with input (structured in one way or another), learners will pick up linguistic information they need for their activities and projects, so long as access is provided. The provision of access can be done in many different ways: by assisting learners in how and where to look, by providing opportunities for interaction and collaboration with peers, by structuring tasks so that they have clear procedures and goals, while at the same time allowing for learners to employ creativity in a context of growing autonomy.

The work that allows for these things to happen is often called *scaffolding*. As I have argued recently (2004), scaffolding presupposes two key conditions:

a) Scaffolding occurs during novel, unpredictable moments in activities, when learners try out something new and venture into uncharted waters;

b) Scaffolding is aimed at handover (by the teacher or peer) and takeover (by the learner) of control.

Without these two conditions, the word scaffolding becomes just another word for any and all kinds of pedagogical assistance.

Relation: self and identity

Self: social, dialogical, reciprocal

Notions of self and identity have been discussed in various disciplines for a long time (also soul, spirit, mind, spirituality).

Defining the notion "self" is no easy matter. To begin with, how does it relate to the older words such as consciousness, mind, soul, spirit, etc.? Are these just synonyms of the self, or are they different concepts, or subcomponents of whatever it is we might call a person's sense of "self-ness?" In psychology, education and SLA, the notion of self is most often discussed under the heading of *identity*. Is identity the same as self? How is it identified, and with what traits or activity patterns is it associated? In some work it seems most closely identified with motivation, invest-ment, self-determination, autonomy, voice. In other work terms from per-sonality traits or learning styles are brought in: ego-permeability, atti-tude, tolerance of ambiguity, extra or introversion, among others from the well-known catalogue of individual differences.

From this variety of perspectives and ingredients it becomes clear that *self* and *identity* comprise a range of approaches, interpretations and components in the fields of education and language learning. This should be no surprise given that the terms (and their cousins) have an equally varied range of employment in neighboring disciplines such as psychology, sociology, anthropology (for a discussion of different per-spectives, see Gallagher & Shear 1999).

Terms that have been used in connection with self/identity in the lit-erature include narrative self, remembered self, dialogical self, social self, discursive self, among many others. As these names suggest, the self is often associated with the person's experiences in life, particularly social and cultural ones. Life experiences, social relationships and cultural con-texts, as well as actions, activities and utterances, shape who we are to ourselves and to the others with whom we interact. The self can thus be seen as a reciprocal relationship between the individual and his/her world. This theme is common in literature as well, as this little poem of Schiller illustrates:

> If you want to know yourself,
> Just look how others do it;
> If you want to understand others,
> Look into your own heart.

>   Johann von Schiller (1759–1805)
>   *Tabulae Votivae*, 1797

Coupled with our earlier observations on the reciprocity of perception (i.e., that to perceive the world is to co-perceive oneself – see Gibson 1979, p. 141), these comments suggest that both language and the self are dialogical by their very nature. Not only that, perception is also dialogical, so that our dealings with the world, our meaning making (semiosis) are essentially dialogical and interactional in nature.

Self, identity, language

In this section I will briefly outline my argument that self and identity are two separate, though intimately interconnected, concepts. The self, we can argue, exists from the beginning, as the sense of our own body represented in our brain (Butterworth 1999, Damasio 1999), or better put perhaps, as the sum total of all the connections between the brain and the rest of the body, in constant calibration and feedback. According to some researchers, this "proto-self" (as Damasio calls it, 1999) is inherently social or dialogical in nature. Thus, Stein Bråten claims that the baby's brain contains a neural structure he calls a "virtual other" that is designed for social cognition (Bråten 1998). Colwyn Trevarthen (1990) echoes this notion, based on detailed study of interaction between neonate babies and their caregivers, a type of interaction (before speech) that he calls "proto-conversation".

Over the life span the notion of self develops in a variety of ways. In an elaborate model of self-knowledge, Ulric Neisser (1988) proposes that there are five types of self:

> The *ecological self* is the self as perceived with respect to the physical environment: 'I' am the person here in this place, engaged in this particular activity.

> The *interpersonal self*, which appears from earliest infancy just as the ecological self does, is specified by species-specific signals of emotional rapport and communication: I am the person who is engaged, here, in this particular human interchange.

> The *extended self* is based primarily on our personal memories and anticipations: I am the person who had certain specific experiences, who regularly engages in specific and familiar routines.

The *private self* appears when children first notice that some of their experiences are not directly shared with other people: I am, in principle, the only person who can feel this unique and particular pain.

The *conceptual self* or 'self-concept' draws its meaning from the network of assumptions and theories in which it is embedded, just as all other concepts do. Some of those theories concern social roles (husband, professor, American), some postulate more or less hypothetical internal entities (the soul, the unconscious mind, mental energy, the brain, the liver), and some establish socially significant dimensions of difference (intelligence, attractiveness, wealth). There is a remarkable variety in what people believe about themselves, and not all of it is true (1988, p. 36).

Neisser's scheme presents the construction of self as the weaving of a rich tapestry of relations between the person and the world. Taking these selves as a starting point, it is possible to develop a proto-curriculum of sorts that could be used as a blueprint for an ecological and democratic approach to language education. Table 3 below shows in embryonic form what such a curriculum might look like.

Table 3: Neisser's Five Selves in Language Learning

1. *ecological* the physical environment	Time and space. Deixis. The body. Speech acts. Peirce's Indexical signs. Demonstratives. Pronouns. Prepositions. Names. Categorization.

2. *interpersonal*
   emotional rapport and
   communication
	Mutuality, reciprocity, intersubjectivity. Rapport. Turn taking. Rhythm, intonation. Conversation. Formality, distance, intimacy.
	Later: social/societal expectations.

3. *extended*
   personal memories and
   expectations, my way of doing
   things
	Memories, remembering. Story telling. Diaries. Looking for learning opportunities. Strategies, initiative.

4. *private*
   personal uniqueness,
   separateness, differences from
   everybody else
	Inner and private speech. Self knowledge (Gardner's Intrapersonal intelligence). Learning styles. Self-presentation.

5. *conceptual*
   identity, roles and status, my
   'theory of me', my beliefs about
   myself
	My expectations, investment, motivation. Notions of power, control. Discursive self.

Neisser's view of the self as a multifaceted construction of relations and beliefs enriches our view of the self in language learning. However, there are two areas in which this view must be supplemented. First, there is no explicit discussion of how the self is constructed on the basis of social interaction and socialization into a particular speech community. Second, the orientation is primarily past and present-oriented, and does not address the self as a continual process of becoming; it is lacking an activity-based, future-oriented dimension. The self is not only what and who we have been (where we have come from), and who we are now as we are aware of ourselves acting, being and having certain experiences and opinions, but it also includes who we are in the process of becoming, or who we want to be as a result of our present actions or dreams of actions.

A view of the self as a present actor (I) informed by information from his or her personal history (me) is exemplified in George Herbert Mead's work. Mead was a pragmatist, but as several writers have pointed out (e.g., Colapietro 1989, Wiley 1994), his vision of the semiotic self was past-oriented, whereas that of the founder of pragmatism, Charles Sanders Peirce, was future-oriented. Whereas Mead's self consists of the present *I* informed by the past *me*, Peirce's self consists of the present *I* and the future self-to-be that he referred to as *you*. Colapietro and Wiley propose a "merger" of sorts that combines Mead's and Peirce's perspectives and sees the self as past, present and future – oriented.

From a pragmatic perspective, the self, while socially constructed, is a universal property common to all humans, given from the outset, and providing a generic capacity for semiosis (meaning making). This meaning making begins with the body as it relates to the other (primarily the mother and other intimate caregivers), and grows into the various kinds of self-knowledge outlined by Neisser (1988). It is thus in essence an egalitarian (non-racist, non-discriminatory) construct, one that was used by the pragmatists to combat the social Darwinism of the late 19th Century. Identities, on the other hand, are more contextually and culturally determined, and can result in various conceptions of gender, race, inequality, worth, and so on. Identities can be seen as projections as well as projects of the self, and serve to connect the self to the world in a multiplicity of ties, roles, aspirations and practical activities.

When people find themselves in a new culture with a new language, they need to develop new identities to reconnect their deep sense of self to the new surroundings. To do this successfully requires reciprocity between the person and the host community.

New modes of semiosis need to be established, with iconic, indexical and symbolic sign processes freely developing so that a person's actions,

thoughts and meanings can establish connections between the self and the environment, i.e., can develop new identities (without necessarily giving up old ones, of course). In a hostile or unwelcoming environment, the free flow of semiosis can be blocked or curtailed, resulting in identity struggles (Norton Peirce 1995), in oppositional subcultures, or in the worst of cases, anomie.

Negotiating new identities, creating new semiotic networks, and language learning are intimately connected in a language learner's world. Since these are dialogical pursuits, the host environment must be amenable to this development, rather than curtail, block or force it in self-threatening directions. In this perspective then, a democratizing education for a language learner will encourage the free flow of semiosis in a rich social life space. In such a context, multidimensional perception and contingent action are crucial elements of an ecology of learning.

The quality of educational experience

From an ecological perspective, all learning is the ability to adapt to one's environment in increasingly effective and successful ways (this does not preclude "niche-creation", a term used in biology to refer to animals adapting their habitat to create their own ecological niche, so to speak). This applies to language use and learning as well. An ecological perspective is not neutral since it explicitly includes a non-passive relationship between the language user/learner and the environment, in all the spheres of physical, social and symbolic functioning. This then adds an ethical and moral dimension to learning.

Learning ecologically is thus not separate from living ecologically; it is not a neutral or mechanical acquisition of autonomous knowledge and skills that can then be applied to various ideological and political perspectives. Rather the development of ideological and political perspectives is part and parcel of the language learning process, in the same way that ideological and political stances and power relations are deeply embedded in language itself (Fill & Mühlhäusler 2001).

The ecological perspective has several well-defined consequences in terms of how we conceptualize and conduct language education. Let me briefly summarize these here. Most of these points will seem obvious to this audience, and some may even be agreed to by policy makers and politicians, however, any such agreement would contradict many current policies and practices.

1) *Standards do not equal quality.*
   The founder of the deep ecology movement, Norwegian philosopher Arne Naess, has pointed out that standard of living does not equal quality of life. He argues that our relentless pursuit of the former has over time had significant negative effects in terms of living and working conditions on large parts of the planet.

2) *The quality of education cannot be measured by test scores.*
   The age-old debate over the effects of large-scale tests on the quality of education has heated up again in the USA with the advent of the NCLB act (No Child Left Behind, also referred to as "Nickleby" – allusions to Dickens's novel quite intentional, to be sure). There are different views on this, but there is little doubt in my mind that high-stakes tests lead to teaching to the test, and teaching to the test diminishes the quality of education. To illustrate, I read in the current issue of Education Week that

   > Schools are largely focused now on test scores and the kind of reporting and consequences associated with the NCLB law. What remains are lots of "drill and kill" approaches to teaching and a blind faith in remediation that promises to suck the last vestiges of joy from the learning process (Thorpe 2004, p.48).

   Furthermore, I also believe that there are no good standardized tests, i.e. that requirements of mass production, consumption and evaluation inevitably mean that the most important elements of a good and rich educational experience are not testable. This leads me to the next point.

3) *Some of the most important indicators of educational quality cannot be measured quantitatively.*
   Wittgenstein said that there are remarks that reap and remarks that sow. Similarly we might say that in education there are activities that reap and others that sow. The reaping type of activities tend to be those that are immediately demonstrable and perhaps testable, such as clearly defined skills (the ability to use *ser* and *estar* correctly in a Spanish exercise), but the sowing activities tend to bear fruit much later, possibly in ways that can no longer be traced back to the original sowing event. In the latter case there is of course no way of quantifying the effect of these sowing events. The fuel for learning in an ecological perspective is not 'input' or 'exercises,' but *engagement*.

Ecology and democracy: conclusions

I began this exploration with a look at current practices of democratic education in the US. Such education varies in terms of whether the focus is personal citizenship, participation in democracy-enhancing activities, or critical reflection on the root causes of injustice, oppression, etc. These various orientations are not mutually exclusive, indeed, they should form a unified set of goals and purposes. However, we saw that many programs focus on so-called moral education and citizenship, and they may in practice have little to do with democratic education at all, and more with the maintenance of the status quo.

In the foreign language classroom the focus can variably be on language or on content (or both, of course). Traditionally the content is of a light-hearted, neutral nature, one that reflects a common denominator of uncontroversial topics and safe ideas (exceptions include the work of Elsa Auerbach, Hilary Janks, Roz Ivanic, and many others, to be sure). When democratic principles are taken seriously, then a political edge is inevitable. We see then that such critical-pedagogical work is most commonly practiced in low-classification, low-framing contexts such as university service departments (writing across the curriculum, reading classes, etc.), and not in elementary or secondary schools, where both classification and framing tend to be strong, the space for deviating from approved directions is consequently narrow, and high-stakes tests dominate the curriculum.

I suggest that an ecological outlook can erode, and to some extent counteract a deficit of rights and conditions in the democratic infrastructure, as well as excessive rigidity of classification and framing. It can do so by using the keys of perception, action and relation. At the micro level of the classroom, a focus on ecological processes can awaken in the students (and teachers) a spirit of inquiry and reflection, and a philosophy of seeing and hearing for yourself, thinking for yourself, speaking with your own voice, and acting jointly within your community. These bottom-up processes may be the most effective means of ultimately achieving the conditions of democracy that Bernstein talks about. It is in this way that an ecological approach can be a form of 'subversive' education (harking back to Postman & Weingartner 1964).

Notes

1. The student might say, "I am here to learn language. If I wanted to become a better citizen or become morally improved, I would have signed up for a social studies class". A serious comment deserving serious consideration.

2. I am using "incidental" here in a non-technical, pedagogical way, in general meaning "the learning of X while focusing on Y". Thus, an example is the learning of grammar while focusing on meaning. See Hulstijn, 2003 for a review of different meanings and applications of the terms incidental and intentional learning.

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