The Ecology of Second Language Acquisition and Socialization

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Abstract

Various theories of second language acquisition (SLA) and socialization (SLS) have adopted ecology as a convenient metaphor to promote sociocultural (van Lier 2004) or sociocognitive (Atkinson 2011) approaches to the study of SLA, and socioethnographic approaches (Duff 2011; Duff and Talmy 2011) to the study of SLS. The main tenets of an ecological approach are: (1) the emergent nature of language learning and use, (2) the crucial role of affordances in the environment, (3) the mediating function of language in the educational enterprise, and (4) the historicity and subjectivity of the language learning experience, as well as its inherent conflictuality. These tenets have been in one form or another adopted by virtually all mainstream theories of SLA and SLS to the point that SLA is increasingly conceived as a form of second language socialization (Douglas Fir Group 2016). While such a development is to be welcomed, it also raises serious concerns about the autonomy of the language learner, the collective pressure on individuals to align with the expectations of the community, alternative theories of knowledge and of knowledge acquisition, and the socializing dominance of English around the world. This chapter discusses the history of the relationship between acquisition and socialization with regard to foreign/second language learning and use, and the role played by ecological theory in that relationship.

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Introduction

Language ecology was originally defined in 1972 by Einar Haugen as "the study of interactions between any given language and its environment" (Haugen 1972, p. 325). The definition echoes the German biologist Ernst Haeckel's 1866 definition of ecology within the life sciences as "the total science of the organism's relations to the surrounding environment, to which we can count in a wider sense all 'conditions of existence'" (Haeckel 1866, p. 286; our translation). The rise of language ecology in the 1970s was paralleled by a similar development in psychology. In this area, Gibson, Bronfenbrenner, and Neisser, amongst others, placed the study of human cognition in a wider context, trying "to understand how organisms make their way in the world, not how a world is made inside of [i.e., represented in] organisms" (Reed 1996, p. 11)

The ecological approaches in biology, psychology, and linguistics share an emphasis on the dynamic and historically constrained relations between elements (organisms, agents, languages) in an environment. This emphasis differs from foci on internal factors in any single element. In biology, ecologists trace anatomical and physiological facts to the animal's needs in its environment; ecological psychologists explain cognition from the interface between agent and environment; and ecological linguists seek to show how, over time, linguistic patterns are shaped by complex natural and sociocultural factors, and how linguistic facts in turn impact on nature and society. However, ecological linguists face a larger challenge than their colleagues in psychology and biology: while one can easily identify the ecology of an animal or a species, it is far from clear exactly what the ecology of (a) language is. As argued by Steffensen and Fill (2014), four different ecologies have been identified in the literature on ecological linguistics: a *symbolic* ecology (the coexistence of

languages as "symbol systems"), a *natural* ecology (language in relation to its ecosystemic surroundings: topography, climate, fauna, flora, etc.), a *sociocultural* ecology (language in relation to the social and cultural forces that shape the conditions of speakers and speech communities, which is the focus of this chapter), and a *cognitive* ecology (language as factor in how agents orient to their ecosocial environment). It is against this terminological background that one needs to understand the development of ecological perspectives on second language acquisition and socialization.

In this chapter we consider how such perspectives have over the years slowly brought second language acquisition (SLA) research closer to second language socialization (SLS) research, and what the benefits and the risks have been for second language research.

Early Developments

In early second language acquisition (SLA) research, the dominant model of second language development was that of individual learners who use their individual cognitive capacities to acquire a new linguistic system. This model is inherently unecological in multiple ways: it assumes that language is a structural entity sui generis; it traces cognition to an inner, mental realm; and it separates learners from their sociocultural and autobiographic contexts. In the eighties, SLA researchers started turning their attention to the influence of the social context in the development of language use or communicative competence. The early immersion programs in Canada and the study of immigrant language learners in natural (i.e., non-instructional) environments in the USA triggered a host of studies that confirmed that the ability to use language to communicate with others, by contrast with merely learning rules, is acquired through the exposure to comprehensible input as well as in and through interaction with others. One could say that SLA thus started becoming interested in the social aspects of acquisition. Some sociolinguists such as Leslie Beebe and Elaine Tarone pushed the field into the study of how speakers interacted with one another through words, i.e., interlanguage pragmatics. Nonnative speakers (NNSs) were encouraged to "express, interpret and negotiate meanings" (Breen and Candlin 1980, p. 92) in communication with native speakers (NSs), and to become socialized into the host society by approximating the NS. However, what was being approximated was less the diversity and variability of NS social and cultural meanings than a rather standard grammatical, sociolinguistic, discursive, and strategic competence (Canale and Swain 1980). That is, until the 1990s, SLA's interest in the social context was an extension of its interest in the acquisition of standardized forms and meanings for the purposes of communication as an exchange of information. Hence, SLA research did not really attend to emergent socialization because it was constrained by its linear, reductionist, structuralist view of communication - and because it took it for granted that language could have no other function than for communication.

Since the 1990s, the social has come into its own (Block 2003). Global migrations, the advent of the internet, and the global spread of English have raised concerns about the appropriateness of imposing one NS model or linguistic variety for all. Social and cultural variability in form and meaning have become a source of concern for psycholinguists anxious to have reliable data to analyze, and from which to make claims regarding learners' levels of language competence. But sociolinguists and sociocultural SLA theorists have pointed out that a language is not just a mode of communication, but a symbolic statement of social and cultural identity, especially in the increasingly multilingual environments in which L2 learners now find themselves. For example, Rampton's (1995) study of multiethnic and multilingual adolescents in a British high school showed the dazzling linguistic and social abilities of NNSs to temporarily "cross" over into peers' languages and play with various roles and personae. A renewed interest in the work of Dell Hymes has led proponents of communicative competence in SLA to revisit his understanding of the term and suggest that maybe the computer metaphor in SLA, with its focus on input, output, and interaction, had prevented researchers from doing justice to the complexity of the "ethnography of speaking" (Firth and Wagner 1997).

The growing influence of cultural psychology (Stigler et al. 1990) and of Soviet theories of language (Vološinov 1973) and cognition (Vygotsky 1962) on scholars from anthropology, education, and other disciplines have legitimized the study of the social and the cultural in SLA. Sociocognitive and sociocultural theories have become particularly popular in explaining the relationship between language acquisition and language socialization. The major contribution made to the social aspects of SLA since the early 1990s has been Vygotsky's cognitive theory and its reinterpretation through Leontiev's activity theory, applied to SLA by Jim Lantolf (2000) under the name of sociocultural theory (SCT). SCT reverses the notion that language acquisition takes place in the head and language use merely applies this acquired knowledge to the social world. Cognition, according to SCT, occurs first on the social plane and only later gets internalized on the psychological plane in the form of inner speech in interaction with more capable peers. For Vygotsky, therefore, socialization predates acquisition. SCT is having a substantial impact on SLA theory, as it responds to the need to account for social and cultural phenomena in a field that was originally mainly psycholinguistic. The notions of symbolic mediation, collaborative learning, participation, and the achievement of common activities around real-world tasks all show a desire to adopt a more ecological approach to SLA by moving it in the direction of SLS (Duff and Talmy 2011).

The continued interest in pragmatic and ethnographic dimensions of SLA also shows a desire to bridge the gap between acquisition, socialization, and the social realities of interaction within and across NS and NNS groupings. In this development, a crucial contribution came from Conversation Analysis (CA), which entered the SLA scene in the late 1990s (Firth and Wagner 1997). CA, originating in the 1970s from ethnomethodology and the sociology of language, offers a highly elaborate tool to analyze the way conversational partners orient themselves to the

ongoing interactional situation and position themselves vis-à-vis the turns-at-talk, the topic, and the cognitive tasks that participants set up for one another.

Major Contributions: Ecological Theories of Second Language Acquisition and Socialization

Ecological theories of second language acquisition and socialization gained momentum in the early 2000s with Kramsch (2002), Leather and van Dam (2003), and van Lier (2004) as the three main representatives. From an ecological point of view, the concept of language socialization differs when it comes to adolescents and adults learning a second language from when a child is socialized through his/her mother tongue into a given cultural setting. The L2 socialization processes of adolescents and adults who are already socialized in their primary community are saturated with reflexivity regarding identity, social relations, and their political implications. Their language acquisition is inseparable from the secondary socialization that follows from being transplanted into a nonnative culture, or into the culture of the educational system.

The ecological approach opposes the view that SLA research is about individuals who "learn," "acquire," or "develop" a language. In line with ecological psychology, SLA is seen as an emergent phenomenon, triggered by the availability of symbolic and nonsymbolic affordances in the environment. Learning emerges as ecologically embedded agents perceive these affordances, participate in ecosocial processes, and adapt to a nonnative language. Cowley (2012) explains the ecological view when he redefines SLA as follows: "learning is taken to emerge in experience-enriched encounters with the world. The language practitioners' general project becomes that of developing potential for skilled linguistic action" (p. 21).

The ecological view on SLA is dynamic, as it is preoccupied with temporal processes and changes. However, it rejects the simplistic view that SLA can be reduced to a change from Time 1 (e.g., beginning of class) to Time 2 (e.g., end of class). Rather, as Lemke (2002) has argued, an ecological perspective on SLA acknowledges that linguistic processes are multiscalar: they do not just play out on the microsocial timescale of the interaction, but also on biographical timescales of the child, macrosociological timescales of the institution, and ideological timescales of society. Such an ecological model of multiple timescales was later developed by Uryu et al. (2014) and elaborated by Steffensen and Pedersen (2014). According to this line of thought, teachers do not only teach to the actual adolescent in the classroom, but also to the former child and the future adult; they must judge not only the actual capacity and performance but a complex set of perceptions, expectations, and potentialities. For Lemke (2002), the "learner" includes not only the here-and-now of his/her learning but also memories of previous learnings, projections of future scenarios, as well as subjective appraisals and fantasies, and identifications with remembered, relived, and potential selves. Accordingly, SLA

takes place not only in educational settings but also in nurseries, community centers, and on the internet, as documented in the collection of papers in Leather and Van Dam (2003). In fact, in a world of globalization, learning emerges wherever people engage across societal, mental, and personal borders. Ecological theories of learning thus prompt us to rethink the relationship of individuals and various learning environments beyond the classroom, including computer-mediated learning environments.

So far we have mainly focused on SLA in the cognitive ecology of the language learners (cf. Steffensen and Fill 2014), but by invoking globalization, learners' "micro-ecological orbits" (Goffman 1964) mesh with the sociocultural ecology in which cultural and geopolitical forces shape the conditions of speakers and speech communities. Accordingly, the ecological view espoused here implies that language researchers and teachers are prompted to develop a sense of educational responsibility and social justice. As Kramsch (2002) argues, researchers within an ecological framework can do so by adopting a phenomenological stance, ranging from the sociological to the philosophical. Phenomenology is important in this context because our behavior is influenced by how we sense and experience the world. Given the multiscalarity of human linguistic behavior, an ecological approach insists on embedding the phenomenological angle in a larger inter-individual network beyond what is, and can be, experienced. Likewise, the interactional dynamics of SLA exceed what the agents orient to and account for. Hence, even when focusing on the microscopic details of L2 interaction, an ecological approach interprets such data on an ecosystemic and sociocultural level too.

The interest in SLA as an ecological phenomenon has been accompanied by a veritable passion for Bakhtin (1981) and the notion of dialogism that has been associated with his work and that of Vygotsky (Ball and Freedman 2004). What language educators find attractive in Bakhtin is the collaborative, participatory, dialogic aspect of his stylistic theory that converges with the interactional theories of learning reviewed above and with the holistic conceptions of learning advocated by language ecology. While some scholars fear that the notion of dialogic pedagogy is becoming trivialized, thus concealing the truly ecological complexity of Bakhtinian thought (e.g. Cazden 2004), others develop the Bakhtinian stance and use it for developing neodialogical versions of the ecological approach to SLA. In this view, "language learning can be reimagined as appropriation of shared linguistic resources" (Dufva et al. 2014, p. 20).

Likewise, the ecological approach is related to the Chaos/Complexity Theoretical (C/CT) approach, which was introduced by Larsen-Freeman (1997), and later firmly established by Larsen-Freeman and Cameron (2008) and Verspoor et al. (2011). Comparing the acquisition of a foreign language to the complex, nonlinear processes of dynamic systems, Larsen-Freeman (1997) urged the field to eschew the array of well-established dichotomies (e.g., langue/parole, competence/performance, synchronic/diachronic, and innate/constructed), as well as the idea that SLA can be described as neat, plannable cause-effect processes. In a C/CT view, learning is a global change that emerges from numerous planned and unplanned activities. Thus,

C/CT offers a broader lens to view the development of language as one among many semiotic systems through which we make meaning of the life around us.

Work in Progress: Recent Undertakings in the Ecology of Second Language Research

In the past decade, a number of important developments have taken place within the ecological enterprise. In what follows, we discuss four such developments, in a list that is in no way comprehensive:

- 1. The development of an agent-environment systems view
- 2. The development of materiality-based and virtuality-based views
- 3. The development of identity-based views
- 4. The development of value-based views

The Development of an Agent-Environment Systems View

First, while second language research has for decades defined its object of study as the individual learner of a specific language, the ecological position (following Gibson 1979) maintains that an agent is not a self-containing structure *sui generis* but an agent-environment system (Steffensen 2015). Accordingly, it is less preoccupied with what an individual learns or knows, and more focused on the ecosystemic dynamics where agents pick up on the affordances and pressures of the environment, and where the environment in turn changes as a result of agents' behavior. For instance, though widely ignored in SLA research, NSs also change when they meet NNSs, both individually and collectively.

According to this agent-environment view, "a language" is a theoretical construct. It is not an entity that we can know or use; it is not a competence that precedes actual utterance behavior. Rather language is an act of languaging; it is a whole-bodied achievement (Thibault 2011), and what we come to recognize as words, grammar, lexicon, etc. are second-order constructs (Love 1990). These may scaffold activities in the language classroom, but reifying them is perilous because we come to believe that human coordination is a purely symbolic achievement. From an ecological viewpoint, languaging depends not just on multisemiotic exchanges but also on extra-semiotic activities. Therefore the ecological enterprise forces practitioners to cross boundaries and supplement their linguistic and sociocultural expertise with input from psychology, cognitive science, and the life sciences (in particular ecosystem ecology).

Inspired by van Lier (2004), Hannele Dufva (2012, 2013) and colleagues combine this viewpoint with a dialogical-Bakhtinian view. While many SLA researchers (see, e.g., Ortega 2011) oppose the idea of a monolithic language system that can be learnt or acquired in toto, Dufva takes us one step further than recent notions of

multilingualism as "many voices" and "many languages." Dismissing both the narrow focus on "the language system" and the semiocentric notion of "the language user," she places the dynamic, interactive relations between agents and their environments center stage. This ecodialogical line of thought invokes living agents who, in order to make their way in the world, "appropriate situated usages that differ in their modality, register, genre, purpose, and so on. Instead of learning a language in its (supposed) entirety, each learner develops individual competences that vary across purposes, modalities, and situations and that are, by definition, always partial" (Dufva 2012, pp. 4–5).

This approach transcends the dichotomous opposition between "cognitive approaches" and "social approaches" – replacing both with what Dufva (2013) calls a *social-cum-cognitive* turn. Taken to its logical conclusion, it ceases to take language learning as its object of study. Rather, second language research becomes preoccupied with developmental processes of appropriation in which "skilled linguistic action" (Cowley 2012) plays a crucial part. In this way, the ecological approach blurs the boundary between language acquisition as a distinct field and language socialization with its neighboring fields in sociology, psychology, etc. (Duff and Talmy 2011).

The Development of Materiality-Based and Virtuality-Based Views

The notion that learning does not take place in individuals, but in complex agent-environment systems has prompted scholars to explore how the material world facilitates learning through processes of virtual socialization. While this aspect was traditionally neglected in the SLA field, a growing number of SLA researchers focus on how virtual environments mediate learners' acquisition of a second language. One example is Kristi Newgarden and Dongping Zheng's work on World of Warcraft and Second Life (Newgarden et al. 2015; Zheng 2012). In these virtual environments, players must coordinate across languages to achieve results, and the outcome is a rich texture of social relations where acting together takes precedence over "learning the language" as a reified goal of learning.

Another example of language acquisition as language socialization is a project led by Steve Thorne (2013). It examines how mobile, digital technologies allow users to navigate in Augmented Reality. By equipping the environment with rich affordances for integrating (first or second) language resources with the agents' behavior, these technologies create novel learning paths through the interaction with others and with the physical and symbolic surroundings. In this way, Augmented Reality "games represent a shift away from models of learning based on information delivery and toward theories of human development rooted in experiential and situated problem solving" (p. 18). In ecological terms, Augmented Reality creates an ecological niche that affords interindividual action and coaction that foster learning of nonnative linguistic resources. These initiatives showcase that learning does not take place in an immaterial, albeit social, room, but in a material reality where semiotic and nonsemiotic entities impact on behavior and on learning. The classroom is not just

a social space in the educational system, but a concrete (and often impoverished) physical setting that facilitates some kinds of behavior and hinders others. Given a starting point in agent-environment systems, learning is the cultivation of prospective agent-environment dynamics, and what is learnt in that agent-environment system (e.g., the pupil in class) may have no impact on another agent-environment system (e.g., the child at home) – even if the agent is the same. Along similar lines, Gardner and Wagner (2015) take their "ethnography of speaking" into the real-world, as they explore the sociomaterial dynamics of language learners' conversations in everyday life.

The Development of Identity-Based Views

In his work on digital technologies, explored above, Steve Thorne (2013) evokes the notion of "superdiversity" (cf. Blommaert and Rampton 2011). At root, diversity is a characteristic of ecological systems, and it implies not just the copresence of multiple cultural backgrounds ("multiculturalism"), but a multitude of interdependent individual and collective life trajectories, aspirations, and motives. Through this emphasis, the notion of identity comes to the fore, because identity dynamics are one of the forces that shape learning trajectories. The pioneering work on this topic was Bonny Norton's (2013) book, *Identity and Language Learning*. Norton revisits notions such as motivation and learning in a feminist, social activist theoretical light. By doing so, she constructs a view of identity as multiple, changing, and a site of conflict. As an example, Norton argues that immigrants to Anglophone countries can capitalize on their various identities, e.g., immigrant, woman, mother, employee, to stand up to their landlords or employers and redress the power imbalance they encounter in social life. Through the work of Norton, the SLA concept of "motivation" in language learning has now been supplemented by that of "investment" – a more participatory metaphor than that of motivation. However, Norton has been criticized for holding still too structuralist a view of identity. Instead of seeing one's multiple social identities as given by one's position in the social world, an ecological paradigm would see them as emerging in the interplay between local interaction and large-scale sociocultural and natural dynamics.

In a recent article, Uryu et al. (2014) relate the question of identity in navigating a superdiverse social setting to an ecological model of multiple timescales. They show how real-time social interaction is influenced by social, cultural, and national identity on much slower timescales. Using a conversation among four women – two Japanese, one German, and one Russian – as their example, they demonstrate how "six decades of postwar trauma and cultural accusation and guilt has accumulated into a high-energetic symbol ['nazi']," and how "the full energy of this symbol is released in a short moment, exploding in strong emotional and cultural cascades in the entire dialogical system" (p. 53). In their view, "identity is neither *stable* nor *constructed*, but *emergent*, and the emergence of identity is determined by identity attractors on many timescales" (ibidem).

The Development of Value-Based Approaches

The fourth development to be mentioned here also builds on van Lier's work. Van Lier (2004, p. 19) introduced the notion of value to SLA, where it denotes ethics and morality, and he concludes that, in this sense, there is no value-free language (van Lier 2004, p. 185). However, Kristi Newgarden and Dongping Zheng (Newgarden et al. 2015; Zheng 2012) point to a richer tradition of researching values in linguistics. They do so by exploring the work of Bert Hodges (Hodges and Baron 1992), and James Gibson's late insight that he had "been moving toward a psychology of values instead of a psychology of stimulus" (Gibson quoted in Hodges and Baron 1992, p. 263). For 25 years Hodges has developed a values-realizing theory that shows how agents balance multiple, at times contradictory, constraints on behavior, constraints that derive from the specific ecosystemic circumstances. Hodges' ecological pragmatics (Hodges 2011, 2014) has inspired Newgarden, Zheng, and colleagues to investigate how second language learners navigate in a 3D virtual world (Second Life and World of Warcraft). Zheng (2012, p. 557) shows that her learners "realized values demanded by the ecosystem by drawing on second-order, sociocultural, and linguistic norms" and that learning a language is not an end in itself, but is interwoven with such values as collaboration, sharing, and caring for one another in a virtual environment.

Problems, Difficulties, and Future Directions

As shown in this overview, there are multiple connections between the ecological approach and the many theoretical approaches in second language research. Perhaps the most striking observation is that some sort of ecological framework is being claimed by virtually all second language research theories to date (see Douglas Fir Group 2016, p. 20), especially by scholars in second language socialization proper. This widespread use of the ecological metaphor is evidence of both its strength and its weakness, its timeliness and its vulnerability. The idea that language learning is not a purely cognitive or linguistic activity but a lived, participatory social activity within communities of practice, subject to the multiple, changing, and conflictual forces of everyday life, is an accepted tenet of current theories of second language acquisition and socialization (see Douglas Fir Group 2016; Duff 2011; Duff and Talmy 2011). In fact, language acquisition and language socialization converge in the recent statement by the Douglas Fir Group that "language use and learning are seen as emergent, dynamic, unpredictable, open ended, and intersubjectively negotiated" (p. 19). But this large scale adoption makes second language acquisition as an ecological socialization process also vulnerable to criticism.

First, from the perspective of educational practice, language ecology has always had its critics from within applied linguistics. For instance, Pennycook (2004), while admitting that the strength of an ecological approach to SLA lies in its relationality, reflexivity, and decenteredness, accused it of losing the capacity to take a critical stance toward certain (nefarious) forms of socialization. This critique should

function as a reminder to ecologically oriented linguists never to lose sight of the power struggles inherent in cultural ecosystems.

Furthermore, while second language research has in the past been keen on maintaining its credibility by aiming to produce findings that are as reliable, generalizable, and predictable as those of the natural sciences, its ecological turn puts it at odds with the demand for standardized tests and institutional controls in language education. It is therefore at odds with the criteria of educational success recognizable and acceptable by a general public that does not necessarily espouse ecological views of education.

In general, a way forward for an ecological educational practice is to embrace practices that take their starting point in concrete learners' microecological orbits, rather than in institutional curricula in isolation. While these define a frame for educational practice, the real-life encounters between instructors and learners open up new possibilities for scaffolding the learners' appropriation of a second language. One way of doing so is presented in the work of Heath (2000) who, inspired by Bakhtin, highlights the educationally beneficial role of literary narratives in providing NNSs with alternative models of socialization, which she calls "scenarios of possibility." A similar approach is presented in Kramsch's (2009) work on how multilingual subjects entertain a personal reflexivity and social relationality based on the linguistic diversity of their own autobiography. The challenge for ecologically oriented research in language acquisition and socialization is to realize that institutional demands for public accountability and efficiency cannot be met if these demands are not also personally relevant and meaningful to the persons involved.

From a theoretical perspective, we see four major challenges for an ecological approach to second language research. The first challenge concerns the subjectivity and integrity of the language learner, and what we may term the ethics of identity. Individuals learning a second language in late childhood, adolescence, or adulthood have already been fully socialized into one language and culture in their families, schools, and workplaces. The memory of this first language socialization lingers when they attempt to adopt the verbal and nonverbal behaviors of another speech community. Applying the paradigm of first language socialization to already socialized individuals raises ethical issues that are currently anguishing many English teachers and researchers of English as a Second Language (ESL) around the world. Many have problematized the idealized NS as the linguistic and cultural model to be emulated in second language acquisition/socialization, especially as the availability of large-scale electronic corpora of NS English is making it easy to socialize NNSs into the ways with words of authentic native speakers on the streets of London or New York. But should NNSs be socialized into NS forms of discourse? And if in a globalized perspective, the very distinction NS/NNS no longer holds, which target should be used as a model? After all, the resistance of learners to reproduction through ESL is well documented (e.g., Lin 1999), and it is crucial to support the processes in which learners establish their personhood as a third place that is neither native nor nonnative (Kramsch 2009). If SLA necessarily entails socialization processes, if only in the institutional culture of the classroom, how do such processes relate to the power structures of the community in which both practitioners and learners reside?

The second challenge concerns the theoretical and methodological difficulty of approaching SLA from a socialization perspective. In line with the assumption that it is illusory to think of 'language' as a countable entity (Makoni and Pennycook 2007), ecological researchers in SLA need to engage with theoretical approaches that focus on languaging as a whole-bodied achievement (Larsen-Freeman 2003; Thibault 2011) but they must not forget that the code itself is a source of symbolic power that can be manipulated for propaganda and other deleterious or beneficial purposes (Kramsch 2016). It is fine for second language researchers to acknowledge that their object of study is not what learners say and write (or hear and read), but how they "appropriate sociocultural resources" and "navigate diversity" in an ecological environment. Language socialization offers ample methodological models of qualitative, longitudinal data analyses based on learners' microecological orbits on multiple timescales. But as Kramsch has shown (2009, Chap. 1; 2016) the symbolic power of the code to impact on memories, perceptions, projections, and fantasies cannot be overestimated. Language socialization research must be supplemented by research in semiotics, literature, mythology, and translation to understand these code-related aspects of learning and using a language other than one's own.

The third challenge is of a political nature. Massive globalization, new waves of migration, and the uninhibited growth of neoliberalism are a challenge to second language acquisition as socialization. Many constructs in the field, such as the reifications of "the" language, "the" culture, and "the" speech community, may have lost their theoretical value, but they all too easily become part of a neoliberal agenda for controlling and containing social change, such as when language assessments are exploited for purposes of social selection and exclusion. There is a real risk that language practitioners and researchers – in the name of whole-bodied meaning-making, multimodal communication, learning-through-gaming – play ostrich while English monocode bulldozes speech communities all over the world.

Finally, we address second language research from a sociology of science point of view: Has the ecological approach to language acquisition/socialization benefited or suffered from being incorporated in current second language research theories? Its main tenets -(1) the emergent nature of languaging and learning; (2) the crucial role of affordances in the environment; (3) the mediating function of language in the educational enterprise; and (4) the historicity and the subjectivity of the language learning experience, as well as its inherent conflictuality – seem to have found their place in mainstream theories. For instance, The Douglas Fir Group's (2016) call for a transdisciplinary approach to SLA claims to offer an ecological framework that "assumes the embedding, at all levels, of social, sociocultural, sociocognitive, sociomaterial, ecosocial, ideological and emotional dimensions [of SLA]" (p. 24). But in this view the term "ecological" has only become a more sexy metaphor for "sociocultural context." It does not put into question the very epistemic categories we use to construct our object of inquiry. A truly ecological model ushers in a paradigm change to research in SLA/SLS. It does not consist of an eclectic list of various "dimensions of SLA," but seeks theoretical coherence in redefining SLA and SLS. It does not take categories like immigrant, refugee, mother, learner, community,

and dichotomies like global vs. local for natural, universal categories, but puts these categories into question (see Kramsch 2013). Indeed, it problematizes the very notion of "level" (micro-, meso-, and macrolevels) and questions the ideological base of Anglo-American research itself. By reinstating historicity and subjectivity into our theories, the ecological approach reminds us that a transdisciplinary SLA, coming as it does from the "global North," does not have universal validity. A transdisciplinary theory of knowledge can easily become a tool in the service of a global economy that benefits some and leaves others behind. Theories, like researchers themselves, are embedded in webs of historical relations of power and in specific natural environments (Steffensen and Fill 2014). An ecological approach itself is not necessarily shared by all those who have a stake in second language learning and use, even though they claim to think ecologically. Among these, described by the Douglas Fir Group as "learners, and other stakeholders, including teachers, administrators, appointed and elected officials, parents, community members, business leaders and educational, business, and health organizations" (Douglas Fir Group 2016, p. 39), many would not subscribe to an ecological approach to language education, yet they too are part of language ecology. It would be a pity if the ecological stance in second language research became so trivialized as to serve to reinforce the very inequalities it purports to fight against.

Cross-References

- ► Language Socialization in Digital Contexts
- ► Language Socialization: An Historical Overview

Related Articles in the Encyclopedia of Language and Education

Alan Rogers: Learning: Embedded, Situated and Unconscious. In Volume: Literacies and Language Education

Claire Kramsch: Applied Linguistic Theory and Second/Foreign Language Education. In Volume: Second and Foreign Language Education

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