Current Trends in SLA Research and Directions for Future Development

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Abstract

SLA is a broad interdisciplinary field. Its theories and research findings have potential relevance for a number of significant social issues. They include first language acquisition, theoretical linguistics, neurolinguistics, language acquisition in abnormal populations, language teaching, and language in education. Work in the field is motivated by the need to solve practical problems in those areas, but also by sheer intellectual curiosity. Second language learning, the object of study, is an internal, individual, in part, innately specified, cognitive process. SLA’s natural home, it follows, lies within cognitive science. There, it can make substantial contributions over and above understanding how second, including foreign, languages are learned, why adults often fail when children are so successful, the role of metalinguistic knowledge and of explicit and implicit learning, the role of the linguistic environment, and more. The fact that not only natural experiments, but also real ones, are possible (and legal) with adults means that SLA research can throw light on such matters as the dissociation of language and cognition, maturational constraints on learning, relationships among affective and cognitive variables, and other factors typically confounded in simultaneous language and cognitive development in children. The potential SLA contribution is well illustrated by work on the so-called Critical Period Hypothesis.

SLA is also a young science, most work having been conducted since the 1980s. The field shows its youth in a number of ways, disagreements as to the proper scope of inquiry and, not unrelated, an intemperate rush to theory being just two of them. The American philosopher of science Larry Laudan’s concept of “research tradition” offers a way of seeing the wood from the trees with respect to multiple theories in any field, and his “problem-solving” notion is a useful yardstick when it comes to the comparative evaluation of theories of SLA. Substantive future progress, and arguably, the prospects of future research in the field as a whole, will require greater clarity and maturity in these areas.

Key words: second language acquisition
History and scope of SLA

Second language learning has fascinated observers for a long time. Valuable diary studies of child bilingualism were published as early as the first years of the twentieth century (for a historical listing, see Hatch, 1978: 3-9). As shown by the coverage in textbooks, however, SLA as a modern field of study is generally accepted as dating from the late 1960’s, meaning that the discipline as we know it today is still relatively young by the standards even of the social sciences.

Modern second language acquisition (SLA) research encompasses non-native language development (but also simultaneous childhood bilingualism) by children or adults learning naturalistically and/or with the aid of formal instruction, as individuals or in groups, in foreign, second language, or lingua franca settings. “Second” includes third, fourth, etc., “language” includes dialect, and “acquisition” includes attrition and loss. SLA is a broad church, in other words; some think too broad, others not broad enough.

Yet while the field has expanded rapidly and diversified during the past 40 years, the principal motivations for studying SLA have remained constant, and in my opinion, will continue to do so. In addition to sheer intellectual curiosity, at least six broad academic and professional areas can be identified, many of whose participants have an interest in SLA, and some of whose work, equally, is of interest to SLA researchers. All six areas fall within the purview of cognitive science, although not all work in them can be considered truly scientific. It is worth reminding ourselves of what those areas are. For one thing, most researchers are usually preoccupied with just one or two of them, and can forget what drives other work.

First language acquisition

Some problems in first language acquisition (L1A) are difficult or even impossible to resolve using first language data alone. The fact that not only natural experiments but also real ones are possible (and legal) with consenting adults means that SLA research can throw light on such matters as relationships between language development and cognitive development, and among affective and cognitive variables. These and other factors are typically confounded in simultaneous language and cognitive development in children, but (with some exceptions) are distinct in adult L2 acquirers. Testing rival claims about putative sensitive periods for language development is another question to which answers can be provided by research on adult SLA. (We will return to work on maturational constraints and the so-called Critical Period Hypothesis.)

Theoretical linguistics

Like much L1A research, a considerable number of SLA studies are motivated by, and in some cases chiefly of interest to, theoretical linguists. Thus, claims by Keenan and Comrie (1976, and elsewhere) about typological markedness and relative clause formation across languages have inspired a continuing line of work on the development of relative clauses in an L2 (Doughty, 1991; Eckman et al., 1988; Gass, 1982; and Hamilton, 1994, among others). Studies testing various aspects of theories of Universal Grammar in SLA (e.g.,

**Neurolinguistics**

There is an obvious mutual interest among neurolinguists and SLA researchers in almost any advance in our understanding of how, when and where linguistic knowledge develops and is represented in the brain, and of neurophysiological conditions or changes that can affect the location, timing or developmental process. Frameworks as different as Minimalism and connectionism involve explicit assumptions or claims about cerebral development and linguistic knowledge, and many SLA theories implicitly or explicitly recognize the potential impact of such phenomena as lateralization, localization, myelinization, modularity, and biologically based sensitive periods for language development. The same is true of several related areas of inquiry, such as first language acquisition and language learning in abnormal populations. Advances in brain sciences have stimulated interesting work in SLA, but the benefits have by no means been all on one side (see, e.g., Albert & Obler, 1978; Beretta, 2009; Jacobs, 1988; Jacobs & Schumann, 1992; Kroll & Sunderman, 2003; Paradis, 2004, 2009; Schumann, 1998; Schumann, Crowell, Jones, Lee, Schuchert & Wood, 2004).

**Language learning in abnormal populations**

The misfortunes of abnormal populations often create “natural experiments”, in which people attempt language acquisition in unusual circumstances, e.g., without sight or hearing, often relatively late in life (Curtiss, 1988; Newport, 1990), or without being able to negotiate their linguistic environment, as in cases of socially isolated hearing children of deaf parents (Sachs, Bard & Johnson, 1981) or of child neglect, but not abuse (Culp, Watkins, Lawrence, Letts, Kelly & Rice, 1991). These “experiments” have often provided insights into language acquisition in normal populations (see, e.g., Curtiss, 1980). It is heartening when some degree of reciprocity is achieved, therefore, and (S)LAL research findings with normal populations prove useful to members of disadvantaged groups, such as the hearing impaired (Berent, 1996; Strong, 1988).

An outstanding example is the work of Cummins (1984) on the educational testing of immigrant children, and specifically the means of differentiating learning disabilities from difficulties caused by the education (and sometimes by the testing itself) being conducted through the medium of what for the children concerned is a second language. Many an immigrant child has been consigned to the “learning disabled” category, or worse, by a teacher or tester unfamiliar with normal processes and problems in L2 development.

Another example is the influence of research on the role of various kinds of input and conversation for first and second language learning on the design of a language intervention program for Down’s Syndrome children (see Mahoney, 1975, for an early
Language intervention for some mentally different populations involves many of the same questions about manner, place, and timing as does conventional language teaching to adults. Mahoney successfully circumvented the problem created by an inadequate ratio of clinicians to patients in need of language intervention by investing a few hours a week in training the parents in how to converse optimally with their children, so that they could provide a linguistically nurturing environment in the home. Research findings on the adjustments made by native speakers conversing with non-natives became a useful source of information in his work.

**Language teaching**

The most obvious and widespread use of SLA theory and research is to improve second and foreign language teaching. SLA, after all, is the process language teaching is designed to facilitate. SLA theory and research findings have influenced language teaching in many ways over the years. For instance, evidence of developmental sequences in interlanguage development (Ortega, 2009), the modulated role of L1 – L2 differences (Kellerman & Sharwood-Smith, 1986; Odlin, 1989, 2003), the inevitability and constructive role of errors, and constraints on learnability and teachability (Pienemann, 1984), have resulted in a healthy skepticism regarding the psycholinguistic viability of structural syllabuses and, in general, of synthetic approaches to language teaching. In their place, and motivated in part by the same theory and research findings, the field is currently witnessing (i) wider use of non-linguistic units of analysis, notably “task”, in syllabus design (Doughty & Long, 2003; Long, 1985, 2000; Long & Crookes, 1992; Long & Norris, 2000; Robinson, 2003, 2009; Skehan, 2001), (ii) a renewed appreciation of the roles of both explicit processes (DeKeyser, 2003) and implicit processes (Ellis, 2005; Williams, 2009) in language learning, e.g., the potential of implicit negative feedback, as provided by recasts (Li, 2010; Long, 2007; Mackey & Goo, 2007), instead of the traditional dependence on models (positive evidence) in classroom instruction, (iii) recognition of the insufficiency and inefficiency of a pure diet of incidental learning via an exclusive focus on meaning, or communication (Hulstijn, 2003; Norris & Ortega, 2000), and (iv) an interest in focus on form as a psycholinguistically motivated alternative to the traditional oscillation between focus on forms and an exclusive focus on meaning (Long & Robinson, 1998).

Numerous conclusions have been drawn over the years about how best to teach, and about how best not to, conclusions influenced strongly, although far from exclusively (rightfully so), by work in SLA (see, e.g., Doughty & Williams, 1998). Publications regularly appear, one of whose principal purposes is to survey SLA theory and research findings for language teachers (see, e.g., Doughty, 2003; Gass, 1997; Lightbown & Spada, 1993; Long, to appear; Long & Doughty, 2009). Views differ sharply as to the usefulness to date of SLA research in this regard, as well as to its potential for helping language teachers, but its impact on second and foreign language teaching has been pervasive and undeniable.

**Language in education**

Just as important, and potentially affecting the educational life chances of hundreds of
millions of children and young adults around the world, are the implications of SLA theory and research for the design, implementation, and evaluation of educational programs, often whole education systems, delivered through the medium of a second language. Whatever one’s views as to the merit of particular proposals, work by Cummins, Genesee, Krashen, Lightbown, Swain, and others has had a major impact on bilingual, sheltered-subject-matter, and immersion education in both foreign and second language settings (see, e.g., California State Department of Education, 1984; Cummins, 2009; Phillipson & Skutnabb-Kangas, 2009; Skutnabb-Kangas, 2000). The field has rich, thus far largely untapped, potential for education in second dialect situations, too (for some initial proposals, see Malcolm, 1994; Sato, 1989; Siegel, 1999, 2003), and for educational language planning in general.

In numerous countries on all five continents, if they have access to education and training programs at all, children and adults currently must often receive their classes through what is a second language for them, and sometimes both for them and their teachers (see, e.g., Watson-Gegeo & Gegeo, 1995). Most of the L2 literature related to such situations to date, while important, has treated macro-issues of politics, economics, education and sociolinguistics, rather than work at the micro level of syllabus and materials design, methodology, and classroom processes. Both are needed if an analysis is to constitute a truly explanatory “thick explanation” (Watson-Gegeo, 1992). The situation is slowly changing, however. While SLA research has begun to influence individual educational decision-makers in a few of these societies—a trend that can be expected to grow in the coming years—the linguistic rights of minority groups are under ever more severe attack in some countries, with the situation in present-day Arizona being a particularly dire case (Long & Adamson, in press).

**Intellectual curiosity**

SLA presents numerous fascinating puzzles, many of the basic ones being discussed by Bley-Vroman (1990) in his paper on the “logical problem of foreign language learning”. Why is it, for example, that almost all child L1A is successful, and on the face of it, effortlessly so, whereas SLA by almost all (many would say all) adults ends in partial failure? Why do so many failures occur even when adult SLA is attempted by people of high intelligence, clear motivation, ample opportunity to acquire, and also with what would seem to be the distinct advantage of having learned at least one language, the native tongue, successfully already? Transfer of training would predict comparable success with a similar task, SLA. This and other mysteries attract some SLA scholars, much like mountains attract some climbers, “because they are there”. Unlike the puzzles to be found in newspapers and airport kiosks, however, once solved, problems in SLA will tell us something about the human mind.

**Problems in SLA**

As noted earlier, most SLA research dates from the mid-1960s. The vast majority of work
has been completed since 1980, in fact. SLA is a young science, in other words, even by the standards of the social sciences. The field’s immaturity is visible in a number of ways. At a fundamental level, disagreements exist as to its proper scope. At one extreme, for many researchers (see, e.g., Gregg, 1996, 2003; Schwartz, 1998, 1999; White, 2003), the appropriate focus is fairly narrowly constrained by linguistic theory, in particular, the property theory of innate linguistic competence as defined in the work of Noam Chomsky and his followers. At the other extreme, it is argued that acquisition occurs through language use and the functioning of a processor, not an innate language acquisition device (e.g., O’Grady, 2005; Ellis, 2011). In the broad center, one finds the majority of active SLA researchers, most operating within a (non-generative) cognitive framework of some kind (see, e.g., DeKeyser, 2006; Doughty & Long, 2003; Gass & Mackey, 2011; Long, 2011; Ritchie & Bhatia, 1996; Robinson, 2003), and working on such issues as implicit and explicit learning (DeKeyser, 2003; Ellis, 1994; Williams, 2009), incidental and intentional learning (Hulstijn, 2003), automatization (Segalowitz, 2003), developmental sequences (Pica, 1983), variation in interlanguage development (Romaine, 2003), input and interaction (Gass, 1997), language processing (Jiang, 2004; Gor & Cook, 2010; Pienemann, 1998), negative feedback (Chaudron, 1977), fossilization (Han & Odlin, 2006; Lardiere, 1998; Long, 2003), age effects (Hyltenstam & Abrahamsson, 2003; Abrahamsson & Hyltenstam, 2009; Granena & Long, 2011), language aptitude (Abrahamsson & Hyltenstam, 2008; Doughty, 2002; Granena, 2012; Skehan, 2012), attention and memory (Robinson, 2003), and other individual difference variables (Robinson, 1992). Disagreements over the field’s scope and related methodological issues has led to fragmentation during the past two decades, with separate conferences and journals forming for this or that school of thought, and a growing tendency for researchers with some orientations simply to ignore work carried out within a different framework.

Not unrelated to these developments, and another indication of immaturity, is theory proliferation. By some counts, there are as many as 40-60 “theories” of SLA, or at least, theories in SLA (for recent surveys, see Long, 2007a; Mitchell & Miles, 1998; VanPatten & Williams, 2007). Postmodernists like Lantolf (1996, 2002) welcome this state of affairs, since, as relativists, in their view, there is no objective reality, no facts of the matter; all knowledge is socially constructed, theories are just metaphors, no theory is better than others, and more theories generate more research. Each of these assertions has been challenged (see, e.g., Gregg, 2000, 2002; Jordan, 2004; Long, 1997, 2007b), and certainly do not reflect the views of the vast majority of those who actually do SLA research. Most SLA researchers, like scientists everywhere, are rationalists of one kind or another, not relativists, and from that perspective, theory proliferation is one of the chief obstacles to progress (see, e.g., Beretta, 1991; Gregg, 1993, 2000, 2002; Gregg, Long, Jordan & Beretta, 1997; Long, 1993, 2007c). Theories embody the field’s interim understandings of how second languages are learned and why they often are not. Identifying flawed theories constitutes progress, therefore, whereas a multiplicity of theories, especially oppositional ones, including those with known weaknesses, obstructs progress.

Decades of work in the history and philosophy of science have provided numerous potential criteria for the evaluation of (SLA) theories, in absolute terms or comparatively.
They include internal consistency, non-tautologousness, systematicity, modularity, clarity, explanatory adequacy, predictive adequacy, scope, generality, lack of ad hocness, extendability, fruitfulness, consistency with accepted theories in other fields, experimental testability, ability to make quantitative predictions, simplicity, falsifiability, fertility as a paradigm for puzzle-solving, explanatory power, ability to account for different kinds of data, ability to account for phenomena different from those for which the theory was invented to explain, novel predictive successes, ability to account for data a rival theory cannot handle, simplicity/parsimony, consistency, generality, empirical adequacy, proven fertility, unproven fertility/generative potential, continuity/rationality, a pragmatic ('get on with things') relationship with experiment, and ability to resolve fundamental conceptual difficulties. For explanations of the criteria, sample applications, and evaluation, see Darden (1991), Laudan (1990), Laudan & Laudan (1989), and Long (1993).

An alternative approach to the problem of theory proliferation can be found in the work of the American philosopher of science Larry Laudan (see, e.g., Laudan, 1977, 1996; Laudan & Laudan, 1989; Long, 2007c; Riggs, 1992). Laudan’s concept of research tradition offers a way of seeing the wood from the trees with respect to multiple theories in any field, and of putting some order into the picture. Research traditions, a technical term in his theory of theory change, group together theories with a shared ontology, and agreed-upon methodological ground rules. Unlike (some) theories, research traditions are not directly testable; they can survive the demise of one of their particular subordinate theories. To take an easy example, while oppositional, the Weak Continuity/Minimal Trees and Full Transfer/Full Access positions are properly viewed as theories in the same generative research tradition. Vainikka, Young-Scholten, Eubank, Schwartz, Sprouse, Lardiere, Hawkins, White, and others involved in the “access” debate agree on the existence of an innate language faculty and on its approximate contents (in children), on underlying linguistic competence as the proper domain of inquiry, on acceptable research methods, e.g., the use of grammaticality judgment tests, and on the standards to be met by their analyses. They play, that is, by the same rules. Perhaps less obviously, Krashen’s, Long’s, and Swain’s Input, Interaction, and Output Hypotheses arguably belong to the same research tradition, Schuman’s Acculturation Model (Schuman, 1986) and Gardner’s Socio-Educational Model (Gardner, 1988) to another Social-Psychological tradition, work by Huebner (1983), Sato (1990), Tomlin (1990) and others to a Functionalist tradition, and so on.

Laudan’s “problem-solving” notion is a useful yardstick when it comes to the comparative evaluation of theories and an approach to measuring scientific progress (see, e.g., Laudan, 1977). In Laudan’s view,

…the aim of science is to secure theories with high problem-solving effectiveness. From this perspective, science progresses just in case successive theories solve more problems than their predecessors. (Laudan, 1996: 78)

There are two kinds of problems (Laudan, 1996: 79), empirical and conceptual. Empirical problems include (a) potential problems—things accepted as facts about the world for
which there is as yet no explanation, (b) solved, or actual, problems—claimed facts about the world which have been explained by one or more theories, and (c) anomalous problems—problems solved by rival theories, but not by the theory in question.\(^3\) (Note that potential or unsolved problems need not be anomalies by this analysis.) Conceptual problems include (a) internal inconsistency or ambiguous theoretical mechanisms, (b) assumptions made that run counter to other theories, prevailing metaphysical assumptions, or widely accepted epistemology and methodology, (c) violation by a theory of the research tradition of which it is a part, and (d) failure by a theory to utilize concepts from more general theories to which it should be logically subordinate. A theory, Laudan says, achieves solutions to empirical problems, or solves a problem, when it entails a statement of the problem, and to conceptual problems when it avoids a conceptual difficulty of its predecessor. Many different theories may solve the same empirical or conceptual problem, so a theory’s worth will depend, among other things, on how many, and the importance, or weight, of, problems it solves.

Potential empirical problems for a minimally adequate theory of SLA include widely accepted findings, or problems—salient facts about SLA the theory needs to explain. Researchers may disagree over just how widely accepted some SLA findings really are, but by way of illustration, most would accept the following two examples (see Bley-Vroman, 1990; Long, 1990a, Spolsky, 1989, for many others).

1. *Age differences.* Older starters outpace younger ones in the early stages of the acquisition of morphology and syntax (a rate advantage), but exhibit inferior ultimate attainment. Following a period of peak sensitivity from birth to age six, vanishingly few achieve native-like abilities in any linguistic domain if first exposure comes later than age 12 for phonology, lexis and collocations, and the mid-teens for morphology and syntax (for data and reviews of findings, see Abrahamsson & Hyltenstam, 2009; DeKeyser, 2012; DeKeyser & Larson-Hall, 2005; Granena & Long, 2011; Hyltenstam & Abrahamsson, 2003; Long, 1990b; Newport, 2002). What accounts for these and other well attested age differences in SLA?

2. *Autonomous syntax.* Interlanguages exhibit features with no obvious source in either the L1 or the L2. Obvious examples include well-documented common developmental sequences in the acquisition of L2 structures (English negation, German word order, etc.), regardless of learners’ age, L1, or (classroom, naturalistic, or mixed) acquisition context (Ortega, 2009). Some interlingual structures in those sequences, e.g., pre-verbal negation in the L2 Swedish of L1 speakers of Turkish (Hyltenstam, 1978), are difficult to explain, since both source and target language have post-verbal negation. Another case is the use of pronominal copies in L2 Swedish (Hyltenstam, 1984) and English (Pavesi, 1986) by native speakers of languages, e.g., Italian, which, like Swedish and English, disallow them. What mechanisms, language-specific or general cognitive systems, and/or characteristics of the linguistic environment underlie these and other widely attested patterns in interlanguage development, especially those not easily explained as a product of L1 transfer or L2 input: common errors and error types, accuracy orders, developmental sequences, gradual approximation (cf. sudden, categorical learning), stabilization, and fossilization?\(^4\)

Laudan’s proposal is that theories should be evaluated comparatively in terms of
the number and importance of problems like these that they solve. Judgment is needed with respect to such matters as the weight to be ascribed to problems, whether to count some phenomena as single problems or as clusters of related ones, and how early in the development of a theory to apply the problem-solving criterion, but there is little doubt that Laudan’s approach holds considerable promise for the field of SLA, and perhaps for other areas of cognitive science.

Current and future research directions

If one compares the coverage of the major SLA textbooks and handbooks, it quickly become obvious that there is broad agreement as to the most interesting and salient problems in the field, and, perhaps to a slightly lesser extent, the appropriate research methods with which to address them. While not an exhaustive list, I believe most experts accept the following as central issues in SLA, and I believe they are, therefore, the most likely foci of future research programs: age differences and potential biological constraints on (second) language acquisition; the existence, scope and limits on the availability of innate linguistic knowledge; language universals and cross-linguistic influence; processes in interlanguage development; the role of implicit and explicit learning; the relative importance of positive and negative evidence and of variation in the linguistic environment; individual differences in such factors as language aptitude, memory, attention, and executive control; and the relative importance of cognitive trait variables, and affective state variables, e.g., intelligence and language aptitude, and attitude and motivation, respectively. I also believe far more attention will be paid, and needs to be paid, to comparative theory evaluation.

Not one of the items on the list is a new issue or research topic. Where innovation is more likely is not so much in issues as in the research methods employed to address them. Examples include eye-tracking, brain imaging, measures imported from L1 psychology and psycholinguistics, and new L2 measures, e.g., of language aptitude, that take into account the last 40 years of research findings in SLA and cognitive science.

To illustrate, while research on corrective recasts has been appearing in the literature for about 20 years, it has relied on behavioral data, i.e., records of speech of writing. It is only recently (2009) that eye-tracking methodology has been applied to the problem, and the results of the first two such studies, impressive enough in themselves, show what a methodological innovation can contribute to an existing research program.

O’Rourke (2008) conducted eye-tracker research on computer-mediated conversation that provided behavioral evidence of learner focus on form and noticing leading to uptake. Gaze and keystroke data showed a student briefly interrupting her focus on communication to attend to the information contained in recasts, often involving her in reading and re-reading her native interlocutor’s responses, comparing the input with her own output, and then incorporating the information in her subsequent output. O’Rourke writes:
Current Trends in SLA Research and Directions for Future Development

The gaze data show that just prior to this correction she re-reads Steffi’s “Mihr geht es gut”, the start of the most recent line in the output pane, then fixates on the word “Ich” in her own draft (“Ich geht mer gut”), and then implements the change. [More examples are described.] We can thus confirm with near certainty what we could only conjecture from the output logs: that Ciara does indeed take up Steffi’s implicit recast…these gaze data also point to focus on form on occasions when none of the other data sources give us any strong reason to suspect it. (O’Rourke, 2008: 246)

In a second eye-tracker study, Smith (2010) evaluated 12 ESL learners’ eye movements for the duration of eye fixation on recasts immediately following their delivery by a native speaker during task-based SCMC (synchronic computer mediated communication). Smith’s results showed learners noticing 60% of intensive recasts they received, with lexical recasts much easier than grammatical recasts for students to notice, retain, produce more accurately on a written posttest, and use more productively in subsequent chat interaction. Successful uptake following recasts was relatively rare. Like O’Rourke, Smith notes that, coupled with the fact that the eye-tracker data had shown learners attending to a substantial proportion of the recasts, his results suggest that overt uptake, as measured by behavioral data, i.e., audible or visible immediate improved production, may tend to underestimate the positive effect of recasts on acquisition, as suggested by previous researchers (see, e.g., Li, 2010; Mackey, 1999) who have produced evidence of recasts on delayed, but not immediate post-tests.

I fully expect work on other long-standing issues to be equally enhanced by such innovations and also by the advent of new, more sophisticated and sensitive instrumentation. An example of the latter is the thus-far seven-year study at the University of Maryland (Doughty, to appear; Doughty, Bunting, Campbell, Bowles & Haarmann, 2007) designed to develop a new test of language aptitude, and in particular, aptitude for achieving advanced proficiency levels on the ILR scale in what for native speakers of English are notoriously difficult languages for adult starters, such as Arabic and Chinese. Another is the use of measures imported from L1 psycholinguistics for use in SLA research, as was the case with a four-year, federally funded study of “Linguistic correlates of proficiency” (Long, Gor & Jackson, 2012). In addition to traditional measures, such as elicited imitation, translation, grammaticality and acceptability judgment, AXB discrimination, multiple-choice and picture-matching, use of such measures as lexical decision with priming, accent detection, speech in noise (SPIN), and moving window, made it possible for us to scrutinize the fine detail of what learners at advanced levels can and cannot do in (what in the USA are) less commonly taught languages (LCTLs). As a result of that work, curriculum designers and teachers who are given groups of adult learners of Russian, informed that they are “level 1”, “level 1+”, “level 2”, etc., on the ILR scale, and that they have X weeks to move them to “level 2+” or “level 3”, now have a concrete idea of which features in both reception and production of the L2 phonology, morphology, syntax, lexis and collocations are known by their students, with approximately what degree of control, and which additional ones need to be mastered to achieve the new mandated proficiency level.
SLA and cognitive science

To conclude, still in its infancy as a field of scientific inquiry, SLA has yet to resolve several basic issues. Prominent among them, disputes continue over the appropriate scope of research, and over epistemology and methodology, and the field suffers from theory proliferation. Those problems notwithstanding, the majority of researchers are engaged in productive work of increasing methodological rigor, most operating within a broadly cognitive, psycholinguistic framework. Moreover, as shown by the frequency of peer-reviewed publications of empirical research on certain topics (maturational constraints, implicit and explicit learning, processes in interlanguage development, negative feedback, individual differences, input frequency, etc.), there is evidence of a consensus as to which the important issues are. Those issues are likely to remain the focus of research programs for the foreseeable future, but with the research effort improved by methodological innovations of various kinds.

Like cognitive science, of which it is a part, SLA is a field whose unifying focus is its principal object of inquiry: the cognitive mind. Most SLA researchers accept that the study of cognitive phenomena involves use of the notions of representation and computation, and also that successful research will require interdisciplinary collaboration. In this sense, SLA and cognitive science exhibit many of the same characteristics: youth, interdisciplinarity, and theoretical and methodological diversity, on the one hand, and on the other, a clear focus on cognition, the excitement and satisfaction that comes with scientific discovery, and steady progress on issues of intellectual and social importance.

Notes

1. One might be forgiven for wondering why postmodernists would be interested in research if there are no facts of the matter.
3. Laudan’s use of “anomaly” constitutes a departure from the term’s traditional meaning in the philosophy of science as a problematic fact or result for which a theory cannot account.
4. While neither a conceptually very coherent, nor empirically well supported, phenomenon, in my judgment (see Long, 2003), fossilization is widely accepted as real within the field (see, e.g., papers in Han & Odlin, 2006).

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Current Trends in SLA Research and Directions for Future Development