James Lantolf's 50-Year Research Contribution to SLA through Sociocultural Theory: A Systematic Review

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Abstract

Ali Panahi and Hassan Mohebbi review James P. Lantolf's 50-years of research in Sociocultural Theory and language-related issues. They read through his whole research works spanning a period of almost 50 years. To accomplish the systematic review, varying procedures were operationalized. All of his research works were first browsed and attempted to be accessed, based on which the objective themes were extracted and James P. Lantolf's overall achievements were represented. Then, on the ground of a subjective framework and impressionistic criteria, some exclusion and inclusion rules were created for the systematic review. Next, the analysis was performed in the light of five components including his research works, theoretical justification, practical justification, micro-themes and macro-themes. In the end, James P. Lantolf provided his personal discussion and reflection on the systematic review.

Keywords: *James P. Lantolf, Sociocultural Theory, SLA, Systematic Review*

The Outline of the Study

Our enthusiasm, emanating from James P. Lantolf's world-wide academic contribution through the reanalysis and reconsideration of Lev S. Vygotskyan's Socio-Cultural Theory, inspired us (Ali Panahi and Hassan Mohebbi) to review James P. Lantolf's 50 years of research in the field.

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We (the mentioned reviewers) admit at the outset that our interest in James P. Lantolf's work is restricted to our selective treatment of the research works which can highly portray his whole and detailed contribution to the field which can be reviewed in other possible modes, too. In so doing, obtaining access to his much earlier research works was the first priority, of course a highly demanding alternative, as they were published at a time when there existed no Google. This was also a more serious hassle in obtaining access to and systematically reviewing research works of other distinguished scholars, such as Jack. C. Richards, Diane Larsen-Freeman, James Dean Brown, Rebecca Oxford, Brian MacWhinney, and Glenn Fulcher, as analyzed by the mentioned reviewers, i.e., Ali Panahi and Hassan Mohebbi. To accomplish the objectives of the present review and to comprehend the way the ins and outs of SCT leaves practical legacy to classroom teachers and scholars, the study is outlined in seven sections, as they appear below.

Section 1. Introduction

In reading through James P. Lantolf's research works in general, one is probably struck by his overriding concern with the need to foreground the legacy of Lev S. Vygotskyan's Socio-Cultural Theory (SCT), its application in the class, its impact on assessment and teaching and linking the two. Quite clearly, the enduring legacy of Lev S. Vygotsky through his SCT is not what reading a couple of related articles can potentially represent. Its effect has been so widespread that SCT has recently begun to attract attention of L2 researchers even in this digital era; this is what, 30 years ago, Lantolf and Pavlenko (1995) rightly pointed out that SCT is still very much the "new kid on the block" as far as SLA research is concerned.

Not intending to argue that sociocultural theory is the only way to focus on and construe learners and the learning process (Lantolf & Pavlenko, 2001), James P. Lantolf has devoted a vast portion of his academic life to research into it. On this ground, we tended at the outset to trace his beginning research orientations which formatively emerged to revive and reestablish the nature of the SCT originally coined by Lev S. Vygotsky and rekindle interests in it. It is manifestly clear that Lantolf, as a highly influential applied linguist and a distinguished researcher, locates the self at the core of the pedagogy of SCT: A short glimpse of his research works reveals his unswerving commitment to the core principle of the SCT. By going back in time to 1974, James P. Lantolf's dissertation titled "*Linguistic change as a socio-cultural phenomenon: A study of the old Spanish sibilant devoicing*" (Lantolf, 1974) and two years later, his more seminal research work, i.e., *On teaching intonation* (Lantolf, 1976) would have made scholars of the time forecast quite separate research perspectives and orientations compared to what is currently visible from him.

With the above remarks in mind, browsing through his works displays that up until 1983, much less or no traces of Vygotskian legacies and perspectives are observed in his research.

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Although the primary title of his dissertation contains a concept named *socio-cultural phenomenon* (Lantolf, 1974), form this work, we failed to infer the main tenets and notions of Vygotskian legacy. That is to say, one might have possibly predicted that Lantolf would have researched and contributed in the field of linguistics, syntax, phonological issues or other potential research issues. However, as we came up with an intra-paradigm shift in Diane Larsen-Freeman's research trends (Panahi, Mohebbi, & Larsen-Freeman, 2024), we observed roughly the same paradigm shift, with varying tendency, in James P. Lantolf's orientation.

From this time forward by-degrees, i.e., more precisely since 1993, as a leading proponent of socio-cultural theory in second language acquisition (SLA), James P. Lantolf has founded the Sociocultural Theory and Second Language Learning research group, holding an annual meeting concerning the examination of SLA from sociocultural theory perspectives (Karimi-Aghadam, 2020). Taking some steps further back, as James Lantolf quotes, a presentation by Merrill Swain on bilingualism and bilingual education and another lecture by John Schumann on his acculturation model of SLA ignited Lantolf's interest in socio-cultural theory which eventually served as a turning-point in initializing his research career. For instance, his interest in the Zone of Proximal Development (ZPD) proposed by Vygotsky in 1987 seems to have sprung from his social interaction with others, i.e., a practical example of Vygotsky's legacy. Succinctly stated, up until 1983, he did not know who Vygotsky was so that during a doctoral comprehensive exam in 1983, Bill Frawley popped him with questions regarding ZPD for SLA. Then, after the exam, a further discussion on ZPD between James Lantolf and Bill Frawley laid the ground for co-teaching a graduate seminar on SLA and SCT. Since the only publications available at the time were *Thought and Language* published in 1962, and Mind in Society 1978 and a couple of other works, after the seminar, varying resources and discussions emerged. Such preferences and interests as well as chances led him to researching numerous components of SCT and its relevance to language teaching and practice. For example, one of the fundamental concepts in Vygotskian research work is dynamic assessment. Dynamic assessment approach is a term which was first coined by Luria. It derives from Vygotsky's own work in the area of "defectology" (Poehner & Lantolf, 2010). This in general indicates that there should be a dialogue between assessment and teaching and varying numbers of research works such as Vygotsky's teaching-assessment dialectic and L2 education: The case for dynamic assessment. (Poehner & Lantolf, 2010). Believing that theory and research can potentially provide a solid and orientating basis for practice, Lantolf maintains that many scholars often integrate concepts and principles of Vygotskian theory into research frameworks that either distort or do not do full justice to what Vygotsky was trying to accomplish in building his theory of general psychology. For instance, one of the main tenets of SCT is that child's cultural development appears twice: first on the social level and later, on the individual level: first, between people (inter-psychological), and then inside the child (intra-psychological)" (Vygotsky 1978). The former can possibly be upgraded to the interactive role of others in the language performance of EFL learners. The latter can be constructed, of course tentatively, that language learners are human being of cognitive capabilities of their own, of individual differences, of interests and preferences, all of which should be considered in educational context and be duly interpreted, even in this digital and artificial intelligence-driven era. That is why James Lantolf indicates that there appears a necessity to plumb the depths of all concepts and constructs implicit in Vygotskian theory, as this can pave the way for justifying

practice. To refer back to the construct of ZPD, it is more closely associated with micro-genesis, a concept developed by Wertsch (1985) and covers the issue that whereas Vygotsky was committed that development may continue across the lifespan, much of his research indicated processes of development emerging during very short periods of time (Poehner & Infante, 2016). On this basis, the recommendation is that for delivering more effective education to language learners or students, grouping them according to the size of their ZPD is required (i.e., their responsiveness to mediation). Overall, he connected SCT to SLA more seriously and this link began with the publication of Frawley and Lantolf's (1985) article titled "Second language discourse: A Vygotskyan perspective". Since then, as Lantolf and Beckett (2009) indicate, well over 300 journal articles, book chapters and doctoral dissertations have emerged in the research literature which can readily translate principles and theoretical tips of SCT into practice in educational milieus. In a word, he has investigated SCT in the light of SLA and applied linguistics issues, such as language skills and methods, communicative and cultural skills, language proficiency, feedback, syntax, curriculum, discourse, socio-cognitive issues, explicit instruction, intonation, (dynamic) assessment, concept-based instruction, and many other related issues. To delve into the depth of his research orientations and contribution to the field of ELT over the course of his 50-year research, the following methodology section details the way to proceed forward in the study.

Section 2. Methodology for the Systematic Review

Google scholar and personal communication with James Lantolf were the main sources for finding out his works and his CV. In the searching process, it was necessary to clarify which research works to review, so we divided his research works for analysis into articles, book chapters, and books. We created an impressionistic framework for analysis, so the selection was necessarily on a somewhat subjective basis. That is to say, co-authors Panahi and Mohebbi developed a subjective and impressionistic framework aiming to offer a neat orientation to Lantolf's research works over his 50-year professional lifespan in terms of the number and quality of the works. The reviewers struggled to obtain access to the research works, but it was in some cases impossible to have easy access to his works, especially to some of his early works. Naturally, then, we necessarily excluded some of the research works which were inaccessible. For example, some of the articles had neither publication date nor the details and name of the journals in which they were published, so we excluded them from our analysis. The review was carried out in varying phases. In phase one, we (Ali Panahi and Hassan Mohebbi) browsed through his whole research works spanning a period of almost 50 years and based on the title of the research works, we developed objective themes, based on which we coined micro/macro-themes. Then, we browsed through his CV and Google scholar and came up with a notion of developing Table 3 for his overall achievements. Next, before we conducted the systematic review, we were required to decide what to review and analyze and what to exclude from the study. To this end, we created some exclusion and inclusion rules (Table 4 and Table 5). Therefore, we established some impressionistic criteria for conducting the systematic review which required subjective decisions on the issues investigated and emerged in Lantolf's research works. The analysis (Tables 6-8) contains 5 columns: research works, theoretical justification, practical justifications, macro-themes and micro-themes. As regards the first column, we intentionally listed the publications in a chronological order to the extent

possible. However, in a couple of cases, due to the existence overarching themes, the order was necessarily altered. The second and third columns included theoretical justification and practical justification, respectively. The fourth and fifth columns contained macro and micro-theme, respectively.

Section 3. The Themes

At the beginning, before we began the systematic review, we (Panahi and Mohebbi) browsed his CV and Google Scholar and accessed the list of all of his research works. Based on the title as well as the abstract of his research works, we created an impressionistic framework for the themes of the study and named them macro-themes and micro-themes. As such, we took a look at the title of the research works and with reference to the key concepts of the research works, we extracted the themes and included them in Table 1 and Table 2 below.

Table 1

Macro-Themes

1. Sociocultural theory
2. L1, L2, EFL, ESL
3. Testing (cloze testing, oral proficiency testing, language proficiency assessment…)
4. Linguistics, cognitive linguistics, psycholinguistics, integrational linguistics
5. Discourse and genre issues, pragmatics
6. Literature (Sarcasm, metaphor)
7. Bilingual dictionary, bilingualism, multilingualism
8. Syntax (Grammaticality judgement, interlanguage, intonation, phonetics, phonology, interrogative)
9. Curriculum
10. Language teaching research, research timeline
11. Technology (digital language learning.)

Table 2

Micro-Themes

1. Dialectology, dialectics	14. Private speech
2. Feedback	15. Mediation and micro-genesis, genesis
3. Dynamic assessment/ assessment methods	16. ZPD
4. Cognitive and social approaches	17. Signs
5. Emotion-cognition	18. Explicit instruction
6. Gesture and game	19. Praxis
7. Dialogic issues	20. Communicative competence and social interaction
8. Concept-based approach	21. Pre-paradigm-thinking
9. Teacher education	22. Teaching-assessment dialogue
10. Strategy use	23. Recall tasks
11. Exegesis	24. Proficiency construct
12. Krashen's i + 1	25. Self-regulation/ other regulation
13. Teaching methods (silent way, audiolingual)	26. Phonology, morphology, and sentences level text

Section 4. Brief Overview of James P. Lantolf's Overall Achievements

This section presents Lantolf's overall achievements as compiled by Panahi and Mohebbi.

Table 3

Overall Achievements

Type	Quantity
International and national conference presentations and keynotes	130
Journal articles	91
Books and book chapters:	77
Universities, colleges and schools in the world, where James Lantolf directed dissertations and theses and contributed as an internal/ external examiner	50
(Program) evaluations (30) and book reviews (23)	53
Editorial and advisory board activities as well as special issue editor	34
Honorary awards and Grants received for research activities	27

Table 3 indicates the overall achievements of Lantolf's research works over the course of his 50-year research which appears to be vastly distributed and heavily lying on SCT and langauge. Since his research is centrally focused on SCT and SLA, it renders his enterprise as a unique endevour.

Section 5. Inclusion and Exclusion Rules

In this section, we first present the inclusion and exclusion rules (Table 4 and Table 5), based on which we removed some research work from the systematic review and decided what to include in the review.

Table 4

Inclusion Rules and Examples for the Systematic Review

	Inclusion Rules	Example
1	A publication was potentially included in the systematic review if it was readily accessible to the researchers for the systematic review.	Lantolf (2000b)
2	A publication was included in the systematic review if it was one of the three categories subjectively decided to be analyzed: Journal articles, book chapters and books.	Lantolf (2023) Lantolf (1993) Lantolf (2000a
3	A publication was considered for systematic review as it contained key concepts in sociocultural theory.	Lantolf et al. (2021)
4	A publication related to micro-themes and macro-themes was included in the systematic review.	Lantolf (2021a)
5	A publication was systematically reviewed if it contained a mix of the themes extracted for survey in this study.	Ableeva & Lantolf (2011)
6	A publication was included in the systematic review if it could provide perspectives of the application of one (or some or all) of the themes.	Lantolf & Thorne (2006)
7	A publication was included in the systematic review even if it was published four or five decades ago, as it could significantly contribute to the field of SLA.	Lantolf, (1976) Lantolf (1986)

8	In some cases, we disobeyed the rule of including the research works in the related Table. For example, a book chapter, due to sharing some common themes with an article, was included in the table related to the analysis of articles.	Lantolf (2012) Lantolf (2008a)
9	Approximately, Lantolf's all contributions were attempted to be listed among his overall achievements, but not all were systematically reviewed.	Refer to his overall achievements
10	We merged some research works having the same main themes, such as those concerning Silent Way Method. As such, Lantolf(1983a) was excluded and instead, Lantolf (1986) was included.	(Lantolf, 1983a, 1986)
11	We could not realize the fact that whether a research work, containing 60 pages, is a booklet or a book, as we could not obtain more details about it. So, we excluded it from the systematic review.	Lantolf (1983a)

Table 5

Exclusion Rules and Examples for the Systematic Review

	Exclusion Rules	Example
1	Book chapters appearing in books written or edited by Lantolf were all excluded from the systematic review. However, they were included in the section related to his overall achievements.	Pavlenko & Lantolf (2001)
2	A conference proceeding book was excluded from the study as we could not access it.	Lantolf et al. (1979)
3	We excluded two of his research works (Lantolf, 2000c, 2001) tilted Introduction to the special issue: A century of language teaching and research: Looking back and looking ahead, part 1 and part 2.	Lantolf (2000c, 2001)
4	All tributes, guest editorials, book reviews, varying academic and executive activities, acknowledgements, the courses instructed, academic positions held, conferences organized, dissertations reviewed and supervised by Lantolf, professional memberships, encyclopedia entries, proceedings volumes, and non-refereed journals were excluded from the study due to space, time and manageability considerations and despite their innovativeness, differences in subject, and high quality. However, they were only listed in Lantolf's overall achievement section.	Lantolf's vast research works and contributions would exceed the page limit of the present study if we did not exclude the mentioned ones.
5	A publication was exceptionally excluded from the systematic review if it was related to an interview with Lantolf.	Verity (2007)
6	We excluded a research work as we failed to link the theory behind it and its application in the classroom context.	Lantolf & Swain (2012)

Section 6. Systematic Review of James P. Lantolf's Research Works

Lantolf's explosion of works on socio-cultural theory has provided researchers with a mass of data on the way SCT has impacted the whole real of language education containing both teaching and assessment. For the purposes of the present study, we selected and analyzed three accessible items: journal articles, books and book chapters. As Tables 6-8 below illustrate quite clearly, his works are predicated on connecting theory to practice. That is why we added a

theory and practice section to our analysis of his research works, as this can help educators and classroom teachers to appropriately link theory to practice and find theoretical justification for their classroom practice. Thus, the systematic review seems to us to be of theoretical foundation and pedagogical relevance. No claim is made regarding its perfectly covering all of his research works: our understanding is that the readers, scholars and educators, based on the exclusion and inclusion rules and subjective framework developed for conducting the present review, can review and analyze Lantolf's research works from varying perspectives and trigger them to the needs, preferences and interests of those working in ELT milieu. We present the systematic analysis below.

Table 6

Analysis of Articles

Articles	Theoretical Justification	Practical Justification	Macro-Themes	Micro-Themes
Lantolf, (1976)	The study surveys and reviews some of the significant issues related to instructing intonation and recommends a technique for the students' eventual mastery of the foreign language suprasegmentals.	The study can potentially help teachers to bear in mind that the use of appropriate native contours in free conversation by the student will not be easily realized. Also, it provides techniques to imitate native intonation and transfer the learned skill to free conversation.	1, 8, 10	26
Lantolf (1977a)	The study confirms the principle of stress subordination: The rules determining stress contours are rules that assign primary stress in certain position. Also, the study proposes that Spanish finishes positive evidence for the transformational cycle.	The study is more exclusively useful for Spanish learners and teachers. It provides them with principles and techniques which can help them comprehend the way phonology in Spanish affects their spoken proficiency.	8	1, 26
Lantolf (1977b)	The study examines key issues, principles and concepts in foreign language teaching. It first starts with an elaboration on the audio-lingual method or approach, and reviews its pros and cons. Then, it examines varying perspectives, such as cognitivism.	The study has implications for English as a foreign language teacher; it can raise foreign language teachers' consciousness of understanding the effectiveness of creativity and designing tasks in the context of learning a language for communicative purpose.	2, 4, 10	13, 20
Lantolf (1980a)	A questionnaire-based study containing 188 subjects, the article examines the findings of a questionnaire on subject-verb order in Puerto Rican dialects of Spanish spoken in Rochester in New York.	The study has implications for linguists interested in research into Spanish syntax, as it can help them analyze the findings in the study and further investigate Spanish subject-verb order.	4, 8	1, 26
di Pietro et al. (1983)	The article investigates the main tenets and the centrality of curriculum in foreign languages program. To this end, it surveyed 326 centers of foreign language education in order to find out the kinds of courses instructed, the kinds of specializations offered to students to become professionals and the way the curriculum meets the changing priorities of the graduates.	The study can be potentially effective for teacher trainers. It can widen their perspectives of main issues related to the content of teacher training course and the way to conduct the course in a way that specialization rather than certification will matter.	2, 9, 10	9, 13. 22, 25
Lantolf (1986)	The study examines the Silent Way method of second language instruction and indicates that the approach encourages student self-responsibility for learning the target language based on learning strategies selected by the student.	The study has implications for language teachers and language learners. It helps them maximize the student talking time, minimize teacher talking time, link input and acquisition and develop the cultivation of communicative confidence.	2	10, 13, 20

Frawley & Lantolf (1984)	The study focuses on Tomlin's paper for random criticism, reanalyzes Tomlin's data and paper, and the views his paper as prototypical of the research that assumes language use to be the transference of information. The authors offer a set of assumptions for the analysis of L2 discourse from the standpoint of the Vygotskyan paradigm. For further study on the issue, Frawley and Lantolf (1983) can be potentially informative.	The article can help language teachers and testers focus on engaging language learners and test takers in language as activity rather than displaying knowledge of language as object. Also, researchers need to be cautious when applying statistical models in L2 research so that deeper levels of interpretation should not be sacrificed to a scientific enterprising in research efforts.	1, 2, 5, 10	13, 14, 15, 16, 20
Lantolf et al. (1985)	The study surveys varying ways for accessing bilingual dictionaries. It mainly focuses on dictionaries intended for use by language learners, such as bilingual dictionaries, or what is often referred to as pedagogical dictionaries.	The study has implications for teachers. They need to facilitate the way language learners use pedagogical dictionaries and help learners move from other-regulation to self-regulation through understanding their own ZPD.	1, 2, 7	10, 15, 16, 25
Frawley & Lantolf (1985)	The study reviews and surveys some basic concepts of Vygotskyan psycholinguistics, analyzes second language discourse, then elaborates on the general utility of Soviet psycholinguistic in second language research.	The study has potential implications for educators and researchers. It creates a solid basis for understanding Vygotskyan theories and their applications in the class and serves as a basis for further investigation.	1, 2, 4, 5	14, 15, 16, 25
Lantolf & Frawley (1985)	The study is concerned with serious problems with the American Council on the Teaching of Foreign Languages and the Educational Testing Service (ACTFL/ETS). Also, it examines oral-proficiency testing as defined in the ACTFL/ETS and attempts to develop second-language proficiency guidelines for testing and organizing the language teaching curriculum.	The study has numerous sorts of implications. For example, it can help language testers, specifically IELTS or TOEFL mock-testers or even real examiners, consider the significance of band descriptors and the way language learners should be instructed to use the strategies required for boosting their performance on oral proficiency interviews.	2, 3	10,18, 22, 24, 25
Lantolf (1988)	The main focus of the study is on the sentence level features of written texts and examines the qualitative nature of syntactic complexity. Therefore, it presents an analysis of the ways in which novice L2, experienced L2 and native writers of Spanish deal with relative and complement clauses in their writing.	The study can inspire researchers to further investigate the syntactic complexity of written text and provide a basis for understanding the varying sentence-level aspects and features of Spanish syntax.	4, 26	4, 5, 8
Lantolf & Frawley (1988)	The study argues against a definitional approach to oral proficiency and in favor of a principled approach. To this end, it first identifies four problematic trends in the oral proficiency movement. Then, it offers the rudiments of a principled theory of oral proficiency in the light of human cognitive activity developed by the Vygotskyan school of psycholinguistics.	The study has potential implications for researchers, language assessors and language teachers. It can possibly help them realize the effectiveness of the proficiency testing and attempt to understand the varying guidelines for assessment, and research into assessment.	2, 3, 10	3, 4, 20, 24
Lantolf & Frawley (1992)	The study explores the effectiveness of the oral proficiency interview in assessing foreign language skills and elaborates on the issues and arguments concerning the logic of the interview method, such as the American Council on the Teaching of Foreign Languages guidelines and levels of proficiency as well	The study has implications for TOEFL and IELTS speaking examiners and teachers. The study can help them create an understanding of the way to use the guidelines and performance descriptors and examine the examinees as accurately as possible.	3	3,4, 5, 22, 24

	as the relationship between the bases of proficiency and linguistic knowledge.			
Aljaafreh & Lantolf (1994)	Relying on Vygotsky's notion of zone of proximal development (ZPD), the study surveys the interaction between the learning process and error correction. The claim is that both implicit and explicit feedback are effective depending on a negotiation between the novice learner and the expert knower of the language.	The study has potential implications for teachers and learners. They need to bear in mind individual differences, and WH-questions, such as when, where, what type of errors, and why to correct the mistakes.	1, 2	2, 15, 16
Appel & Lantolf (1994)	The article examines the way speaking mediates the cognitive activity of L1 and advanced L2 speakers/readers of English, as they recall orally an expository and a narrative text. Also, it surveys that speaking not only mediates the subjects' effort to report on what they perceive from a text, but also how it reflects the process through which language learners come to understand a text.	The study has implications for language teachers. Since speaking plays a role in in text comprehension, teachers can incorporate post-reading activities into instructional programs, as this will help learners go beyond asking simple questions concerning the content of texts: It will move to reproduction and help learners recall the text which will deepen their understanding of the text.	1, 2	4, 5, 15, 18, 23
Dicamilla & Lantolf (1994)	This paper analyzes the linguistic features of what is referred to as private writing produced by university-level novice writers of English. It highlights that the formal properties of language, such as the writing tasks, reflect the underlying mental processes which individuals use for solving problems.	The study can raise the awareness of teachers to the effectiveness of private writing, through which they can help their learners utilize their linguistic systems to perform more than just expressing themselves or communicating and socializing with others: They can potentially use their language in the form of private writing and manage strategic mental processes.	2, 4, 10	10, 14, 18, 20
Lantolf & Aljaafreh (1995)	The paper supports L2 learning for Vygotsky's claim that performance and development in mental systems are not a linear process, but entail forward movement and regression called backsliding. Since learning arises in ZPD, regression is in both L2 linguistic features and in the frequency and quality of help as other-regulation negotiated between learners and experts.	One of the implications of the study is for language teachers: They can help their learners move from dependency to autonomy, from other-regulation to self-regulation, and from intra-personal domain to interpersonal domain.	1, 2	4, 5, 15 - 18, 25
Lantolf & Pavlenko (1995)	The article explores the sociocultural theory of mental activity and details three general areas in socio-cultural theory including (1) activity theory and the relevance of motives and goals for L2 learning (2) the role of private speech in L2 learning (3) learning in the zone of proximal development.	One, among many, of the main implications of the study is for both foreign language teachers and learners: It can help them understand and move out of the Chomskian world of the idealized speaker-hearer and believe that language is for communication rather than perfection.	1, 2, 10	7, 14-16, 20, 25

Lantolf (1996)	This study presents a postmodernist critical analysis of the SLA theory building and indicates that scientific theories are metaphorical constructs and are taken seriously by their developers. What it underlines is that there is no foundational reason to grant privileged status to the modernist view of SLA theory.	One possible implication is that theories of whatever kind can contribute to the field. More significantly, all those who wish to contribute to the field should be given the chance to contribute further although they might be full of faulty ideas: What we need is to reanalyze and reconsider a specific theory.	2, 6, 10	4, 5, 15,
Lantolf et al. (1997)	The study proposes the formal properties of speech which reflect the underlying mental processes individuals use in problem-solving situations. It indicates that the content of private speech reveals the speakers' mental activity and the formal properties of this speech also provide insight into the workings of mind.	The study can have implications for language teachers. They can help native as well as non-native language learners to use formal properties of language under certain circumstances to maintain control of their mental activity in the face of a cognitively difficult situation.	1, 2, 4, 8	4, 5, 14, 26
Dunn & Lantolf (1998)	Some associate Vygotsky's construct of the zone of proximal development with Krashen's construct of i+1. The present study argues that such an enterprise is futile, as the two are unrelatable and are also rooted in incommensurable theoretical discourses.	Language teachers can put the two constructs into an operational definition in classroom context. For example, they can design and assign tasks which are reasonably rather than extremely challenging. Also, they can find the capabilities of their learners, their weak and strong points and support them to grow.	1	12
Lantolf (2000b)	This study reviews research conducted over the course of five years on second language learning as a mediated process and seeks to better understand how L2 learning is mediated in the Zone of Proximal Development and clarifies the role of scaffolding and private speech in appropriating a second language.	The study can provide a strong ground for teachers to clearly understand the way to support language learners. Therefore, they can focus on peer and expert-novice scaffolding in the ZPD in concrete classroom situations.	1, 2	15
Lantolf & Sunderman (2001)	This article deals with major themes, including the general arguments in support of the value of foreign language study, optimism about the place of foreign languages in the curriculum, argumentation between the faculties of education and the defenders of foreign language study, and the contribution of foreign language study to a student's education.	Through studying the current article, language teachers can potentially help their learners with "learning how to learn procedures" which can more significantly contribute to their academic performance in terms of foreign language learning.	2	18
Lantolf & Yáñez (2003)	The study explores communication with the self, or private, and inner speech which demands internalization. It indicates that people "talk themselves" into a second language, according to which learners actively develop the language for communicative purposes in L2.	Researchers can be motivated to further investigate a link between private and social speech among L2 learners. Also, it helps researchers realize that "the development of the native language begins with spontaneous use of speech, but the development of the foreign language begins with conscious awareness of language.	1, 2	14
Lantolf & Poehner (2004)	The present paper reviews the application of dynamic assessment to second language pedagogy and assessment. Dynamic assessment is driven by Vygotsky's ZPD and points	The study has implications for language assessors, and classroom teachers. The former can be inspired to further investigate dynamic assessment issues and the latter can	1, 3	3, 15, 16

Study				
	out that the mediation of the examinees' performance is effective for understanding his/her abilities.	contribute to the language learners through making a link between language assessment and teaching.		
Negueruela et al. (2004)	The study investigates Slobin's concept of thinking for speaking in the gesture/speech interface of advanced L2 speakers of English (a satellite-framed language) and Spanish (a verb-framed language) with a focus on the use of motion verbs in the respective languages.	One of the implications can be driven from the fact that language teachers and language learners can make a facilitative use of L1 in both their instructional process and learning process with a focus on the use of strategy use.	1, 2, 8	6
Poehner & Lantolf (2005)	The study surveys the implementation of Dynamic Assessment (DA) in the L2 classroom setting. DA derived from Vygotsky's theory of the Zone of Proximal Development (ZPD) is an assessment and instructional approach.	Language teachers can use DA for the purpose of implementing the principles of assessment for learning and focus centrally on formative assessment rather than summative assessment: The former feeds back into the teaching and learning process while the latter reports on the outcomes of learning.	1, 2	3
Lantolf (2006a)	The artic surveys and reviews sociocultural theory and L2developemnt and indicates that human mental activity arises as a consequence of the functional system and our culturally constructed symbolic artifacts. Also, it presents the L2 research focusing on cognitive mediation and internalization.	The study can help teachers justify the process and nature of the activities they perform in the class. In general, it can help teachers understand the fact that Slobin's "thinking for speaking" framework interfaces quite well with "Vygotsky's theory".	1, 2	14, 15, 16
Lantolf (2006b)	The study provides a general overview of issues on emergentism, chaos/complexity theory and dynamic systems theory (henceforth, ECCTDST) which contributes to the field of applied linguistics in general and SLA in particular.	The study has implications for researchers. They can review the main articles and issues which can serve the purpose of much greater explanatory power than localistic theories and helps researchers deal with challenges associated with some of the theories in the field.	1, 2	13, 18, 20
Negueruela & Lantolf (2006)	The study explores and surveys the rekindling and reconsideration of teaching grammar in foreign language classrooms and is concerned with pedagogical programs associated with grammar and the opportunities to use grammar for communicative purposes.	The study has potential implications for language teachers. They can use the theoretical issues and related pedagogical implications and find out the kinds of approaches for teaching grammar, design appropriate tasks and contribute to their communicative use of grammar.	2, 8	8, 20
Lantolf (2007)	The study emphasizes that second language acquisition research has begun to recognize the impact of the sociocultural issues and environments on the L2 learning. It indicates that SCT has affected L2 development, the conversational analysis tradition, dynamic systems theory, emergentism, chaos and complexity theory. For further study on L2 education, refer to Lantolf (2021b).	The study can help researchers and educators realize the significance of SCT in the context of varying disciplinary and inter-disciplinary sciences, such as emergentism, chaos and complexity theory. This can guide them in the direction of linking theory to teaching practice.	1, 2	13, 14, 15, 20, 25
Lantolf & Johnson (2007)	The study indicates that the reunification of language and culture (re)establishes the unity between people and language,	The study can help teachers help their learners understand the role of cultural and linguistic meaning and build their capacity	2	9

	and highlights that meaning is situated in concrete human activity rather than in the language itself.	to make choices as how to change specific activities and tasks to suit their needs and goals.		
Lantolf & Poehner (2007)	The study argues for a dialectical perspective on language proficiency and pinpoints that traditional approaches to language proficiency within applied linguistics are driven by the dualistic perspective inherited from psychology. For further study on dialectics and applied linguistics, refer to Lantolf (2002, 2017).	The study helps researchers realize the fact that applied linguistics and SLA bring on varying findings from other disciplinary sciences and solves the problems existing inside the black-box of language learning.	2	1
Lantolf (2008a)	The present article explores the implications of praxis in Vygotsky's theory for instructed second language development. It highlights that the real key to the theory is found in the notion of praxis. The fundamental feature of praxis is the dialectic unity of knowledge/theory and action that results in the creation of an object. For further study on praxis, refer to Lantolf (2012).	The study helps teachers realize the significance of instructional factors in classroom teaching. The study can help understand the dialectical link between theory and practice: This link can contribute to the process of teaching.	2	19
Lantolf (2008b)	The article explores the relationship between second language acquisition (SLA) research and theory and Vygotskian sociocultural theory (SCT). The study indicates that there is a difference between Vygotsky's theory and other SLA theories. For further reading on SCT, refer to Lantolf (1994).	As per one of the main implications of the study, the study can potentially help researchers provide general guidelines for teachers in a way that they(teachers) will understand the interactive role of social mediation in individual development within the framework of SCT.	1,2	12, 16
Choi & Lantolf (2008)	This paper examines the interface between speech and gesture in second language (L2) narration in the light of Slobin's thinking-for-speaking (TFS) framework and McNeill's growth point (GP) hypothesis. It clearly indicates whether speakers shift from L1 to L2 TFS pattern as manifested in the GP of narrations they produce.	The study has implications for researchers: It can help them further investigate speech and gesture characteristics in varying settings associated with advanced L2 speakers of Korean (L1 English) and L2 speakers of English (L1 Korean).	2, 4, 8	6, 17
Lantolf (2009a)	The study examines Vygotsky's educational theory. Accrediting to the theory, sensitivity to learners' zone of proximal development is a fundamental issue in development. Also, it highlights that there are differences in development in the formal educational context and in the everyday world.	Teachers can read the content of the article and get sensitive to the dialectical integration of instruction and assessment into the educational process. The nature of integration will help them realize the cyclical relation between learning, teaching and assessment.	1, 2	1, 3, 22
Lantolf (2009b)	Foreign language teacher education programs should design courses which can contribute to the enhancement of the depth and breadth of EFL graduates' explicit knowledge. The study highlights the importance of improving teaching quality and teaching standards.	The main implication of the study is for teachers: It can raise the consciousness of the teachers to reflective teaching and thinking over the process of the teaching and the related events.	2	9

Lantolf & Beckett (2009)	The study surveys forty-eight publications, all of which work within the general mediational framework. It examines issues and themes such as the theory as a lens (for interpreting data and for promoting L2 development), ZPD, DA, private speech, internalization, regulation, and genetic method.	The study has theoretical implications. One of the implications is that it can significantly contribute to researchers and teachers' knowledge base: If so, it will help researchers raise further questions and provide teachers with theories for the justification of their teaching action.	1, 2	18, 20
Lantolf & Poehner (2010)	The study reports on an elementary school teacher of Spanish as a second language to implement principles of dynamic assessment in her daily interactions with learners. As a result, the use of dynamic assessment represents a unification of theory and practice, as advocated by Vygotsky, whereby theory offers a basis to guide practice, but practice functions to influence and extend theory as well.	One of the implications is that if teachers maximize student talking time through oral tasks and make learners interact with each other, they will mutually create some opportunities to bridge the gap between the potentials of the learners and their actual performance. Moreover, reading such articles will help teachers justifies their practice in the classroom.	1, 2, 10	3, 7, 15, 16, 20, 25
Poehner & Lantolf (2010)	This study explores Vygotsky's concept of the Zone of Proximal Development (ZPD) and dynamic assessment and details assessment situations which give rise to cooperation between learners and assessors. Dynamic assessment aims to reveal fully-developed abilities that are still forming. For further study, refer to Xi and Lantolf (2020).	Dynamic assessment has varying implications for formal testing, for educational practice in general, and for language education in particular: It can help educators realize the demand for formative assessment and indicates that learners can also be involved in such kind of assessment.	1, 2	1, 7, 22
Ableeva & Lantolf (2011)	This article examined the effects of DA on diagnosing and promoting listening comprehension in French as a second language. First, it defined DA based on Vygotsky's ZPD. Then, it outlined the research design of the study, and finally provided a micro-genetic analysis of learner recall of idea units.	The study has implications for teachers as assessors: The content of the article can help them integrate mediation and assessment into their classroom teaching in the light of formative assessment.	1, 2	7, 11, 15, 24
Lantolf & Bobrova (2012)	The study investigates multimodal conceptual metaphors in a corpus of 32 American and Ukrainian beer commercials. The results of the analyzed metaphors reveal cross-cultural variation in the mappings and entailments of the metaphors.	There can be inferred numerous implications depending on the content. One of the general implications is that metaphors play a significant role in the interaction of the interlocutor.	5	17
Poehner & Lantolf (2013)	The article reports on the use of dynamic assessment principles in tests of L2 listening and reading comprehension delivered through an online format. The tests contain items which determine the extent to which learner development is mediated and scaffolded during the test.	The study can potentially help teachers as assessors mediate learners' performance and contribute to their learning potential based on the gain between actual and mediated performance. This leads them to think of future instructional activities required for development.	1, 2	3
Smotrova & Lantolf (2013)	The article reports on the mediational function of the gesture–speech interface in the instructional conversation; this happened when teachers started explaining the meaning of English words to their learners in two EFL classrooms in the Ukraine in the light of Vygotsky's sociocultural psychology and McNeill's theory of gesture–speech synchronization.	One of the implications of the article is that teachers need to attract learners' attention to gestures and explain its role to them: Gestures play a significant role in a potentially rich interactions between teachers and learners as well as learners with each other.	2	2

Hulstijn et al. (2014)	The study developed from the 2013 meeting of the American Association for Applied Linguistics in Dallas, Texas. It deals with limitations of addressing only the cognitive or only the social L2 learning and teaching issues and surveys ways of bridging the cognitive social gap in research.	Teachers are required to study the article and develop their theoretically cognitive and social background of L2 issues. They can bring on the related theories and principles and guide their learners in the process of learning.	2, 10	4
Lantolf & Bobrova (2014)	The study argues that figurative language is a crucial part of any pedagogical program. Metaphors must be placed in the center of linguistic proficiency, without which a speaker cannot effectively express him or herself or comprehend the intended input fully.	The main implication is that teachers should teach metaphors, as they help learners communicate their emotions and exchange their cognition with each other. Therefore, metaphor-related tasks should be included into the course syllabus.	2, 6	17
Lantolf & Zhang (2015)	The study responds to Pienemann's critique of Lantolf and Zhang's study entitled "Orders and Sequences in the Acquisition of L2 Morphosyntax, 40 Years On". Pienemann objected to their claim that the Teachability Hypothesis is a corollary of general Processability Theory; a reply in the study is provided.	The study has implications for language teachers; they can use the theory as a basis for guiding language learners in terms of the tasks they need to perform at varying levels and ages.	2,4, 8	18, 26
Zhang & Lantolf (2015)	The article assesses and surveys the nature and central claim of the Teachability Hypothesis, a corollary of general Processability Theory with use of an interventional design adhering to instructional procedures of systemic theoretical instruction.	The study has implications for researchers; they need to further investigate whether the predictions of Teachability Hypothesis hold true with varying tasks and with numerous learners of different ages.	2,4	18, 26
Lantolf et al. (2016)	The ZPD as one of the most misunderstood features of Sociocultural Theory has been inappropriately equated with Krashen's i+ 1 and with the concept of 'scaffolding'. The study clarifies the deep structure of the two and provides a theoretical and empirical counter argument to Erlam's idea which supports a one-size-fits-all use of explicit mediation. For further study on closely related issues, refer to Poehner et al. (2017) and Lantolf and Xi (2019).	There are implications for teachers and educators. They need to value the significance of mediation within the framework of both ZPD and Krashen's i+1. Regarding the former, teachers can potentially mediate between the potentials of the learners and the way their ability should be actualized. Also, educational materials should be normally not excessively challenging.	1, 2	12, 16
Douglas Fir Group (2016)	Social relations, knowledge structures, and webs of power are experienced in the world and these all are interconnected with broad sociopolitical events and global markets. Therefore, the role of multilingualism is more highlighted in globalization, technologization, and mobility.	Teachers should consider language learning and multilingualism for communicative purposes and meaning-making. They should raise the awareness of the learners about the fact that multilingualism does not belong to one locality and it appears in both local and global context.	2, 7	10, 18

Kim & Lantolf (2018)	This article examines the contribution of spoken sarcasm to second language (L2) learners of English. It used a pre- and posttest procedure to assess learners' ability to detect and interpret sarcasm. The study also used interviews to evaluate learners' conceptual understanding of English sarcasm.	The study has implications for researchers. They can research learners' ability and awareness of the use and functions of sarcasm in their foreign language context.	2, 6 — 18
Lantolf & Swain (2019)	The chapter indicates and examines the fact that even though emotions are significant parts of the 'affective dimension' of motivation, they have not been adequately investigated. Therefore, the chapter highlights and examines the interconnectedness of emotion and cognition (For further study, refer to Zhang, Lantolf & Meng, 2022).	One of the main implications of the study is for teachers: It can provide them some insight into the way Vygotsky's theory can help them inform and justify their action in the class.	1, 2 — 1, 5
Poehner et al. (2019)	Considering Vygotskian theory as a principled basis for reconceptualizing L2 education, the study overviews developments in the application of Vygotskian theory to L2 development in instructional settings. In fact, it surveys the pedagogical research informed by Vygotsky's writings regarding the teaching and learning of languages.	Since the study can potentially provide a background for researchers and educators regarding the way theory can contribute to practice. It can possibly create a reasoning tool for justifying any research or teaching action.	1, 2 — 1, 3, 14, 15, 16
Lantolf (2021a)	This study examines a model of social interaction referred to as motivational dialogue proposed by Patyayeva. It accounts for two types of motivational dialogue: The dialogue between two or more individuals and the one related to private or inner speech.	The examples provided in the study can have implications for language teachers. They can help teachers realize how to use motivational dialogue to enhance learners' performance and help them to arrive at autonomy.	1, 2 — 14, 15, 16
Poehner & Lantolf (2021b)	The study highlights the great practical significance of The Zone of Proximal Development (ZPD) for education and indicates that instruction and mediation can optimally affect learner development. For research purposes, refer to Poehner and Lantolf (2021a).	The study presents practical examples indicating that dialectical activity can reduce tension between learners' actual abilities and task demand with use of mediator-learner cooperation.	1, 2 — 1, 3, 14, 15, 16
Lantolf et al. (2021)	The SCT framework with reference to two major strands of research, i.e., pedagogical practice and assessment, is highlighted. The assessment strand, i.e., Dynamic Assessment, adheres to principles of the ZPD and the pedagogical strand is generally referred to as Concept-based Language Instruction.	The study indicates that SCT is an effective theory which can affect teacher's assessment literacy and their pedagogical practice. Therefore, studying the article and other related research works can broaden their horizon.	1, 2 — 3,8, 14, 15, 16, 25
Lantolf (2023)	The study presents articles included in the special issue of JALDA called "pre-paradigm" research. Each article compares different aspects of SCT with other frameworks and methodologies in the field.	Since the articles are addressed individually, the study can provide novice researchers with effective theoretical insight into varying aspects of SCT which can contribute to the justification of research and practice.	2 — 21

Lantolf & Poehner (2023)	The study provides a brief historical overview of SCT and central related concepts and principles which can be used as a lens to comprehend various facets of learning and instruction. The study highlights that the shift in research orientation reflects Vygotsky's commitment to the unity of theory and research with practice.	The study has implications for East Asia context and also other instructional settings. Teachers can get familiar with the main principles related to dynamic assessment and link SLA theories as reflected in the article to practice as potentially to-be-actualized in the classroom.	1, 2, 10	3, 8, 15, 16, 18, 20, 22, 25
Poehner & Lantolf (2023)	This article is an introduction to the special issue, *L2 Dynamic Assessment Research in China*, and examines the theoretical foundations of Dynamic Assessment (DA) in the writings of L. S. Vygotsky, with particular attention to the concepts of praxis, mediation, and zone of proximal development.	The study provides a brief background for language teachers and researchers. The former can use the content to strengthen their pedagogical and theoretical knowledge base and the latter can read the article and investigate varying aspects of SCT.	1, 2	3, 14, 15, 16, 19
Lantolf & Xi (2023)	The study surveys digital language learning in the light of the principles and concepts of SCT as a social rather than psychological theory. It explains key theories, principles and assumptions of SCT emerging in digital language learning research.	Teachers need to study the article, as it can help them realize that digital language learning research has pedagogical implications guided by the perspectives of SCT: This will help them guide their learners with use of social mediators of the classroom.	1, 2, 11	14, 15, 16, 18
Stam et al. (2023)	This article investigates the effect of systematically organized instruction in L2 thinking for speaking on a change from verb-framed L1 (Spanish) to satellite-framed L2 (English) thinking for speaking that contains the ability to express in gesture and speech Path and Manner of Motion in the new language. For further study on concept-based approach, study Negueruela and Lantolf (2006a, 2006b) and Lantolf and Zhang (2017).	The study can potentially have varying implications for researchers; it can inspire them to further investigate the impact of Concept-Based Language Instruction on Spanish learners studying English as a foreign language.	2	8
Lantolf (2024)	This article supports explicit language instruction with use of theoretical and empirical evidence and arguments and indicates that certain features of a language are so complicated and subtle that learners are improbable to extract their full conceptual meaning on the basis of exposure alone.	The implication of studying the article is that language teachers and learners should value explicit instruction and have a commitment to the unity of theory/research and practice grounded in SCT.	1, 2	18

Table 7

Analysis of the Book Chapters

Book Chapters	Research	Practice	Macro-Themes	Micro-Themes
Lantolf (1993)	The study focuses on the concept of mind and learning as viewed in sociocultural theory (SCT) and reflected in the writings of the two great Russian scholars Mikhail Bakhtin and Lev S. Vygotsky whose works. In so doing, varying issues such as strategic interaction, SCT, ZPD, dialogism, and other related issues are surveyed.	The study has theoretical and practical implications for language teachers and language assessors. The study creates a solid ground for teachers to understand what the SCT is and the way it can affect teaching action and learning outcome.	1, 2, 3, 10	3, 7, 14, 15, 16, 22, 25
Goss et al. (1994)	The study examines learners' assessments of the grammaticality status of sentences in the target language, i.e., the way L2 learners render judgments of test sentences. It serves as a basis for Universal Grammar (UG)-based studies of SLA.	The study provides researchers and teachers with some primary evidence whereby they obtain data from learners and help them the kind of required communicative tasks.	2, 4, 8, 10	26
Lantolf (1999)	The chapter deals with varying issues such as the extent to which people can become cognitively like members of other cultures, inner speech and cultural appropriation, lexical concepts and metaphors, culture and mind.	The study has implications for EFL teachers and educators. They need to consider the fact that in learning foreign language education, they need to value, respect and reserve their own native culture.	1, 2, 4	4, 14,
Lantolf & Pavlenko (2001)	The study explores how sociocultural theory in general and activity theory in particular view second language learners. Overall, it focuses on the non-physical features of human beings required for moving beyond the search for idealized models to emphasizing variety, differences, change, motives and goals, individuality rather than uniformity.	Since cognition is situated and distributed, we should not expect any two individuals to learn and develop in precisely the same way: This is what individual differences for teachers should be interpreted. Also, educators should consider humane ways of behaving with language learners.	1, 2	4, 5, 14-18, 22, 25
Lantolf & Genung (2002)	As a case study, the chapter examines one student's failed attempt to learn Chinese as a foreign language during an intensive course. The main focus is on the issue of power associated with course instructors and program director.	The study can help teachers examine, respect and value EFL learners' resistance and challenge resulting from the concept of power imposed on them. They should find the alternative of learners' needs, preferences and interests.	2	18
Lantolf (2003)	The chapter examines an unexplored aspect of sociocultural research: The process through which learners go to develop symbolic artifacts when they are engaged in communicative activities (verbal and visual) in L2. It argues that this development resides in internalization and private speech.	Since the process of L2 learning is not directly observable, language teachers need to develop required theoretical knowledge base to realize "what" happens, "when", and with "whom" once L2 learning is involved.	1, 2	14, 15, 16

Pavlenko & Lantolf (2004)	The chapter indicates that the learning of a second or additional language is a process inextricably connected with issues of culture and identity. Drawing on Schumann's notion of 'social distance and psychological distance, the study overviews the issue.	Teachers need to notice the importance of EFL learners' ego-boundary and identity in the light of respecting their interests, and preferences involved in learning a new language and/or adapting to life in a new cultural context.	2	4
Lantolf (2005)	This chapter does not review the literature on sociocultural theory and L2 research; rather it concentrates on the scholars' view and interpretation concerning the theory and its affiliated research in second language acquisition.	The study can help novice and expert researchers realize the idea of researchers about SCT and the related processes and principles and further investigate the issues they are interested in.	1,2,10	11
Lantolf & Beatriz Centeno-Cortes (2007)	The study explores Vygotsky's notion of internalization which refers to the way culture affects human being consciousness and examines issues such as imitation in L2 private speech, neuropsychology of imitation, interactive imitation in L1 child language, and private speech and child/adult L2 imitation.	The study can potentially provide language educators with a theoretical basis for understanding the process of language acquisition from the perspectives of Vygotsky's concept of internalization and private speech: This can help them justify their practice.	1, 2, 10	8, 10, 14
Lantolf & Thorne (2007)	The chapter provides an overview of the principles and constructs of SCT as an approach to learning and mental development. SCT argues that human mental functioning is fundamentally a mediated process that is organized by cultural artifacts, activities, and concepts. For further study about SCT and the related issues, refer to Lantolf (2010b, 2011a, 2011b).	Teachers need to link theory to practice in order to justify their pedagogical practice in the classroom context and consider language as the primary means of mediation for communicative purpose.	1, 2	14, 15, 16, 18, 20
Thorne & Lantolf (2007)	The chapter deals with linguistics of communicative activity (LCA) rooted in the Vygotskian cultural-historical tradition. It provides an overview of the consequences of certain linguistic theories over the 20th century, outlines LCA, and reports on the nature of language structure and processes of language development.	The study can be useful for those novices to the field, as it presents the consequences of linguistics theories and provides the readers with some details on linguistics of communicative activity. Therefore, to include the chapter as part of course syllabus can be more effective.	2, 4	20
Negueruela & Lantolf (2008)	The chapter focuses on the construction of meaning in L2 as it is reflected through gesture-speech synchronicity with more attention to deictic and iconic gestures, that is to say, those gestures that either do not synchronize with speech or where speech appears to lack co-expressivity with gesture.	The study has implications for researchers and linguists. It can inspire them to further research the way gesture affects communicative action and the inference and transmission of meaning.	2, 4,5	6
Lantolf (2010a)	The chapter examines thinking as a social process mediated by meaning-making resources and the related cognitive function. It indicates that mediated thinking is important for language learning: The chapter considers this issue from the lens of SCT. For further study, refer to Lantolf, Thorne and Poehner (2015).	The chapter can attract the attention of researchers, teachers and linguists to the importance of sociocultural research in SLA. It will provide them with an evidential and theoretical basis for understanding the unity and role of social and cognitive factors in L2.	2	6

Christie & Lantolf (2014)	The chapter argues that the principles of universal grammar is accessible to adults learning an L2. Although there potentially exits L1 interference, there are other issues including the interaction of LI and L2 parameters.	The study has implications for language teachers, novice and expert researchers. They can use the content of the chapter and get conscious of the fact that the English rule depends on phonological, morphological and syntactic information.	2, 4,8	26
Lantolf (2014)	The chapter examines a perspective on L2 proficiency driven by an integrationalist rather than a segregationalist approach to language analysis. The study presents the results of varying perspectives regarding human communication, L2 proficiency and its assessment.	The chapter can be of potential use for language teachers, language assessors and linguists. They can use the content of the chapter and broaden their horizon of the way to view the construct of language proficiency.	2, 4, 8	20, 24
Lantolf & Poehner (2018)	The study reviews assessment fairness linked with validity potentially threatened by construct-irrelevant variance and ensures that tests act similarly among diverse groups of people and are sensitive to the feelings, preferences and needs of the intended test takers, and avoid excessively demeaning input.	The study can help language teachers and language assessors consider the principles of designing a test for decision-making or achievement purposes and remove identifiable construct-irrelevant sources of variance.	3	3, 22
Lantolf & Tsai (2018)	One of the issues for language learners in English is verb+ noun collocations. This chapter describes one facet of the related issue conducted in a Taiwanese college which addressed verb+ noun collocations and examines two of the five verbs addressed in the study: make and do.	Teachers can use the study and draw the attention of language learners to practical and needs-based tasks related to collocation. Collocation-relevant competence can help language learners with communicative purpose and it can lead them to fluency, too.	1, 2, 8	18, 26
Lantolf & Esteve (2019)	The chapter deals with concept-based instruction (C-BI) as an effective means of creative language use. C-BI can be useful for teacher education programs in the light of the principles of C-BI derived from Vygotsky's educational theory.	The study can help teachers take a positive attitude toward the use of C-BI which can promote the learning process and enhance classroom engagement and practice.	2, 9	8, 18
Lantolf (2020)	The chapter offers a theoretical account of the hidden elements in L2 development. It first outlines the theoretical principles and key concepts in SCT. Then, it reviews mediation' concept, examines the dialectical unity between social mediation and neural processes and discusses the use of the sociocultural perspectives. For further study, refer to Lantolf, Poehner, and Thorne (2020) and Lantolf (2013).	The study helps educators and researchers note the role of SCT-driven instruction in the development of ways of thinking and speaking in L1 for L2 learners. Accordingly, it provides a ground for deep understanding of the issue and the way SCT helps teachers link theory to practice and vice versa.	1, 2, 9	1, 7, 14, 15, 16, 18

Table 8

Analysis of the Books

Books	Theoretical Justifications	Practical Justifications	Macro-themes	Micro-themes
Lantolf & Labarca (1987)	The volumes in this series presents papers from the annual symposia on language studies held at the University of Delaware and sponsored by the Program in Linguistics at the University.	Studying the papers presented in the volume can help novice readers get familiar with varying issues in applied linguistics; experienced scholars can also use the volume for researching numerous issues in the field.	2, 10	18
Lantolf & Appel (1994)	This edited volume can serve as a showcase for the state of affairs in the field of SLA research, as it contains papers organized according to three major themes in Vygotskian research: zone of proximal development, inner and private speech, and activity theory.	Studying the book can help researchers and educators. In particular, it can provide those who are novice to the field with insightful background regarding the application of findings of Vygotsky's theory to second language research.	1, 2, 10	14-16
Lantolf (2000a)	Divided into a theoretical and empirical part, the book covers issues such as learning and teaching languages in the ZPD, L1 mediation in the acquisition of L2 grammar, SCT as a theory of L2 learning, gestural mediation in L2 and the position of a self in L2.	Since the book presents the findings of the state-of-the art research on the learning of second languages from a sociocultural perspective, it can provide a basis for clear understanding of the ins and outs of SCT and the way the related theories and principles can help teachers justify their instructional events.	1, 2, 10	1, 4, 11, 14-19, 20, 22, 25
Lantolf et al. (2018); Lantolf & Poehner (2014); Lantolf & Thorne (2006)	The books integrate theory, research and practice in the learning of second foreign languages from a sociocultural perspective and illustrate the use of SCT theory in second language education.	The books can serve as a course syllabus, as they fully detail SCT and its application to classroom. So, it can create an effective background for educators and researchers.	1, 2, 4, 5	1, 6,7 14-18
Poehner & Lantolf (2024)	The book is mainly concerned with SCT, and examines related issues such as foundational concepts and principles of SCT, concept-based language instruction, and dynamic assessment. The main tenet is that theory and research provide the orienting basis for practice, which in turn serves as a testing ground for theory.	The book can be used by researchers, teachers and university instructors or professors, as they can include it or parts of the book in the syllabus of the course. Also, it can serve the purpose of the scholars, as it can help them create a ground for further research.	1, 2, 9, 10	3, 8, 14-19, 20, 22, 25

Section 7. James Lantol'f Personal Discussion and Reflection

I would like to begin my response by thanking Hassan and Ali for organizing the special issue and for the exceptional job they did in analyzing and making sense of my work over the past fifty years. I am also deeply grateful to those colleagues who took the time and effort to contribute some of their own work to the special issue. It is truly humbling.

As I look at the twists and turns of career, I have to admit that "I've come a long way" from where I started to where I ended up. My journey through academia has been an interweaving of research, teaching and administrative events that somehow culminated, through a circuitous route, in my current position as the Greer Professor Emeritus from the same university where I took my first steps along the road. The orientation I set out with in 1969 is at best only vaguely similar to where I ended up in 2024. Initially, I intended to become a secondary-school Spanish teacher. I had no plans to pursue graduate work beyond an MA degree, which was required for permanent public-school certification. While working toward the degree, I discovered historical linguistics, a discipline that combined my dual interests in language and history. I decided to abandon my nascent secondary-school career to pursue a doctoral degree course in historical linguistics with a specialization in Old Spanish. Along the way, I took courses in Old High German, Indo-European linguistics, Lithuanian and Hittite. At the time, I knew next to nothing about applied linguistics beyond the fact that one of my Spanish professors had written a textbook using tagmemic analysis to explain Spanish sentence patterns to novice learners of the language, and I certainly had no idea who L. S. Vygotsky was! My dissertation focused on the loss of voicing in Spanish medial sibilant -s- [z] > [s], a feature unique to Spanish among the Romance languages.

The first academic appointment I held was as assistant professor in the Department of Modern Languages of the State University of New York, College at Geneseo, a primarily undergraduate liberal arts institution. In such an environment, and without easy access to an appropriate research library, it was difficult to continue working on Old Spanish phonology. I soon discovered that the nearby city of Rochester had a substantial Hispanic population, most of whom were from the Caribbean region. As far as I could determine, the dialect of the community had not been studied in much depth. Working through a local Catholic parish, I was able to gain access to some of the community leaders who helped me carry out my initial projects on interrogative word order (Lantolf, 1980a) and grammatical mood (Lantolf, 1978). I had virtually no opportunity to offer courses on Spanish dialects or historical linguistics and dedicated the majority of my instructional activity to teaching the language.

As the only linguist in the department, the chair assigned me the task of revamping the pedagogy course for the teacher education program, which encompassed, Spanish, French and German. Even though I had little formal course work in language-teaching methodology (one required course at the undergraduate level and a two-day crash course for TAs at the start of my graduate work), but wanting to be a good departmental citizen, I spent the better part of my first summer in Geneseo organizing a course built around Chastain's (1971) volume on language teaching, a copy of which still sits on a shelf in my library. I found that teaching the course was more stimulating than I had originally thought. The student teachers raised some challenging issues for discussion that pushed me to think more deeply about the effects of my own teaching on learning than I previously had not considered. I eventually managed to publish two pedagogical articles. One (Lantolf, 1976) was based on a sonographic research project on

variations in intonation patterns across two Spanish dialects that I carried out during my graduate studies. At that time, sonographs were not digitally generated but were mechanically produced using chemically treated paper attached to a rotating drum onto which a stylus inscribed the relevant formants for each pattern. After several hours of breathing acrid air in a small enclosed room, it was necessary to take a respite for some fresh air and to clean the black grit from my nostrils. My idea as outlined in the article was that it might be useful for L2 learners to use sonographs to try to match their intonation patterns with those of native speakers. The other article (Lantolf, 1977) was an effort to defend the presence and value of foreign language study in the undergraduate curriculum at a time when universities were jettisoning general education requirements and language study had an especially large target on its back. While at Geneseo, I also managed to complete work on my only publication in historical linguistics, Lantolf (1979), which didn't appear in print until I had already joined the newly-established San Antonio campus of the University of Texas system (UTSA).

Perhaps the most enduring legacy of my time at SUNY—Geneseo was the effort to establish a linguistics minor. I galvanized support for the undertaking from colleagues in Anthropology, English, and Philosophy and together we put forth what turned out to be a successful proposal that included a relatively small inventory of courses. I developed a new course on ESL pedagogy designed with an eye toward attracting students and members of the local community interested in working with migrant workers, who travelled to the area each year to harvest crops from local farmers and to work in a regional canning factory. I again relied on Chastain's book supplemented with two recent publications both of which addressed the relatively new topic of error analysis—Burt and Kiparsky (1975) and Richards (1974). I am happy to say that after fifty years, the minor continues to flourish albeit with a considerably enhanced slate of courses and a larger cadre of faculty. Although this was my first involvement in program building, it was far from my last.

At UTSA I continued working on U.S. Spanish dialectology, including a comparison between the Rochester and San Antonio dialects, especially with regard to grammatical mood. This resulted in a publication that argued for a comparative approach to U.S. Spanish dialectology (Lantolf, 1983b). I also carried out a couple of other studies on the San Antonio dialect including one on the reduction of the preposition *para* (for) > *pa'* (Lantolf, 1982) and another on pragmatics (Lantolf, 1980b). The Chicano community in San Antonio became interested in my work. The local press published an article in Spanish about my research and a local radio station interviewed me in Spanish under a Spanish rendering of my name, Jaime Landolfo, which was much easier for the interviewer to pronounce than the Anglo version. I grew fond of my Spanish name and used it on other occasions when interacting with the community.

I eventually realized that the large amount of data that I was collecting on the dialect necessitated knowledge of statistics, something that one does not normally engage with when pursuing a degree in historical linguistics. I worked my way through the 1970s version of the SPSS manual and learned how to operate a key punch machine. For those not familiar with this device, it had a typewriter keyboard that punched holes in cards with each hole representing a bit of data and each card containing the set of responses produced by each participant. Typos could result is misanalysis and so it was necessary to double check to be sure that the correct hole for each response on each card had been accurately punched out. Punched cards were a

precious commodity that were usually stored in cardboard boxes that I lugged from my office to the mainframe room to be handed over to the technician. The cards were then fed into the computer accompanied by the card containing the syntax for the statistics to be run on the data. Mistakes in key punch holes here could also result in a misanalysis or could result in the computer spitting out gibberish, which then required further scrutinizing of the holes to locate the error. If things worked out as planned, in a few days, one could pick up the analysis printed on stacks of perforated computer paper and then go to work making sense of it all. While a great deal of time and effort went into the dialect projects, I learned how to carry out a different kind of research from what I experienced during my graduate work in historical linguistics, where reading and comparing texts written in Old Spanish was the challenge for generating data.

At UTSA I once again found myself as the only linguist in the Division of Modern Languages (the other linguist departed shortly after my arrival). This time, I was asked to become coordinator of the language programs and the language lab. The courses were taught by a combination of tenure-line faculty and full- and part-time instructors, most, though not all, of whom had little or no background in methodology. I organized a non-credit methods course for new instructors and any faculty who wished to attend. In addition to readings in pedagogy, it also provided an opportunity for participants to share ideas and thinking on pedagogical matters and to discuss specific issues that arose in their classes.

As the only linguist, I didn't have much opportunity to discuss linguistic issues with colleagues in my unit. There were, however, a number of linguists and applied linguists in the Division of Bilingual and Bicultural studies that I gravitated toward. One of these, the Sister Carolyn Kessler, an important figure in early bilingual education and TESOL, was kind enough to engage me in discussions on language pedagogy, bilingualism and the emerging field of SLA. An especially interesting topic that she was working on at the time was the effects of bilingualism on divergent thinking of school children, a topic that I found fascinating. In conjunction with the U. S. Defense Language Institute housed at a nearby air force base, Sister Carolyn arranged for several guest lectures by leading figures in SLA, including Merrill Swain, John Schumann and Evelyn Hatch. As a result of their presentations as well as the informal conversations that followed, I was motivated to engage with the SLA literature in greater depth than I had to that point. Eventually, I gravitated more and more toward applied linguistics, SLA and away from historical linguistics and dialectology. The late 1970s saw the rise of what we might call pre-fabricated methodologies, including Silent Way, Total Physical Response, Community Language Learning, and Suggestopedia, among others. I was particularly attracted by Silent Way and developed a two-course sequence in Spanish, which turned out to be quite successful as is documented in Lantolf (1986).

Merrill Swain and I would meet again more than a decade later at the 1993 Georgetown Roundtable in honor of Robert Di Pietro by which time, I had committed to SCT. Merrill expressed her nascent interest in the theory that Bill Frawley and I were trying to extend to L2 research. As a consequence of our mutual academic interest, Merrill and I have become close personal friends—a relationship that I cherish and that has been especially significant for me as she has always been willing to listen to and critique many of my ideas on how SCT can inform L2 research. She also graciously provided feedback and guidance to several of my graduate students as they shared their in-progress research at the annual meeting of the SCT-

L2 research working group. I invited Merrill and John Schumann, along with several other applied linguists (Elaine Tarone, Andrew Cohen, Bill VanPatten, Sue Gass, and Kees de Bot) to participate in the applied linguistics component of the 1997 Summer Linguistics Institute held at Cornell University. When I moved to Penn State in 2000, we organize a series of rather successful applied linguistics summer institutes that involved an expanded group of internationally recognized scholars, who offered courses and provided consultation for graduate students from various corners of the world. But I get ahead of myself.

The decision that had the biggest impact on my professional trajectory occurred as a consequence of accepting an offer from Bob Di Pietro to join the faculty of the Department of Foreign Languages at the University of Delaware in 1980. Bob was organizing a new graduate program in applied linguistics, which afforded me a second opportunity to contribute to program building. Eventually, the program morphed into a separate department offering MA and PhD degrees in applied linguistics. I had the pleasure of serving as its first chair, an honor which I happily ceded to Bill Frawley when he returned from a year-long sabbatical leave.

In 1983 I participated in my first doctoral defense as an advisory committee member for one of Bob's students. At the defense, Bill, who had studied with Jim Wertsch (see Wertsch, 1985), a leading Vygotsky scholar, asked two intriguing questions about L2 learning framed within SCT. One had to do with the relevance of the Zone of Proximal Development for classroom instruction and the other was whether or not L2 learners might be able to mediate their thinking through the second rather than the first language. Following the defense, over drinks at the Faculty Club, Bill and I began to talk further about the questions and about other aspects of Vygotskian theory. We eventually decided to organize a jointly taught seminar on SLA from a Vygotskian perspective, such as we understood it at the time. Most of our source material came from the journal *Soviet Psychology* (now the *Journal of Russian and East European Psychology*), publications put out by Mike Cole's (who had studied with Vygotsky's colleague, A. R. Luria) Laboratory of Comparative Human Cognition and three books: the highly abridged translation of *Thought and language* (Vygotsky, 1962), the selected writings of Vygotsky edited and by Mike, Vera John-Steiner, Sylvia Scribner, and Ellen Souberman published as Vygotsky (1978), and A. R. Luria's (1976) monograph on his controversial study on the effects of collectivization and schooling on the rural communities of Uzbekistan and Kirghizia carried out at Vygotsky's suggestion.

Our first joint SCT publication, Frawley and Lantolf (1985), emerged from the seminar and addressed Bill's question about learner ability to mediate thinking through the L2. We submitted the manuscript to *Studies in Second Language Acquisition* where it was rejected because the editor felt the theory was too new and most people would not appreciate our argument. (Two decades later, the same journal published an invited state-of-the-art article on SCT-L2 research, Lantolf (2006a). We then submitted the manuscript to *Applied Linguistics*. According to Vera John-Steiner, an influential SCT scholar, who would become a dear and respected friend, Bernard Spolsky, co-editor of *Applied Linguistics* at the time and a faculty colleague of Vera's at the University of New Mexico, asked her if the manuscript made sense and should be published. Vera, who had published some work on L2 from the SCT perspective (see John-Steiner, 1985), recommended publication and thus our first SCT article appeared in print.

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One of the most influential conversations I had regarding Vygotsky's theory was with Vera shortly after the first volume of Vygotsky's collected works appeared in English translation (see Vygotsky, 1987). Vera warned me that to truly understand the significance of Vygotsky's thinking required reading and re-reading his work multiple times. She used the metaphor of a railway tunnel in which one can see the light at the end, but to reach the light takes a lot longer than it appears. She was so right ! If one were to carry out an archeological analysis of my copies of the six volumes of the collected works published between 1987 and 1998, one would find layer upon layer of different colored highlights and marginalia, some of which I now have a hard time interpreting. I have read these and others of Vygotsky's works, including his notebooks (see Zavershneva & van der Veer, 2018) scores of times, and each time I see something new that reveals the depth and insight of his thinking. The most important insights emerged once I realized and fully appreciated the fact that Vygotsky was quintessentially a dialectical thinker influenced by his reading of Marx's writings. His project was to create a *Das Kapital* for psychology using principles of historical dialectics (see Vygotsky, 1997a). This included the importance he assigned to uncovering appropriate units of analysis to study human consciousness, rejection of what he saw as inappropriate research methods that psychology had borrowed from the hard sciences in favor of the historical-developmental method that he explained in his writings (see Vygotsky, 1997b), and the fact that the higher psychological system is formed through sociogenesis in which our natural instincts and behaviors are restructured through cultural forms of mediation.

This brings me to an important point that I want to highlight in my response. To do so, I need to go back to the time when Bill Frawley and I gave our first public presentation on SCT-L2 at the 1983 Toronto TESOL Convention. The presentation was based on data from our 1985 article. We were assigned a room with a capacity I would estimate to be well over 200. It was a theatre-in-the-round design. We were surrounded by an audience of no more than 10 or 15 individuals scattered throughout the room. As we worked our way through the presentation (relying on paper handouts), we realized that perhaps the editor of *SSLA* had been correct in his assessment of our manuscript, as most of the audience had little appreciation for what we were talking about. The thrust of the argument was that the pronouns that L2 speakers used when trying to relate what for them was a difficult picture narrative task were not intended for a would-be interlocutor but were in fact part of the private speech necessary for them to mediate their thinking as they struggled through the story. The speakers understood that the pronouns in an utterance such as "He took the ice-cream cone and he started to cry" referred to two different individuals and consequently failed to differentiate the referents for a would-be interlocutor. This was because, according to our argument, their discourse was private speech intended to regain lost mediation rather than a socially communicative event. At the end of the presentation, we received no questions or comments from the audience. We reasoned that the problem was most likely due to our failure to explain the theory and relevant concepts in sufficient depth for the audience to follow our analysis. We agreed that in future presentations we would spend the time necessary to explain the theory and its concepts. The problem with this strategy was that it was time-consuming and often ran out the clock before we had the opportunity to present the actual study.

As time passed, however, and we, our students and colleagues produced an increasing number of publications, it became less necessary to explain the theory, or so we thought.

Perhaps not too surprisingly, people began to co-opt theoretical concepts and operationalize them in ways unintended by, and at times, antithetical to, the theory. Perhaps no concept of SCT has been more egregiously damaged than the ZPD, not only within the L2 literature but also within the general educational literature that presumes to draw on the theory. Here I will only address the L2 problem. The general misinterpretation of the concept is analyzed in Xi and Lantolf (2020).

Almost from publication of our first article on the ZPD (Aljaafreh & Lantolf, 1994), L2 researchers have for some reason erroneously equated it with Krashen's i + 1. Within the theory, the ZPD is a means for diagnosing and promoting future development and as such it is about the relationship between an individual's history and future that depends crucially on the quality and quantity of mediation and the person's responsiveness to this. In short it is about the sociogenesis of development, as is forcefully demonstrated in the plethora of research carried out under the rubric of Dynamic Assessment (see Poehner, 2008; Poehner & Lantolf, 2024). At least three publications have addressed the matter of ZPD and i + 1, Dunn and Lantolf (1998); Kinginger (2002); Lantolf (2008b). I also published a chapter (Lantolf, 2005) that attempted to resolve the broader misunderstandings of the theory and its concepts. Unfortunately, to this day, we continue to encounter claims that the ZPD and i + 1 are the same thing.

In 1991 I accepted a position in the Department of Modern Languages and Linguistics at Cornell University, where I remained until 1999. I was professor in linguistics and Romance languages and associate chair of the department with the responsibility of coordinating instruction in some 30 different languages with an instructional staff approaching one-hundred. Although I had been coordinator of Spanish at UTSA, the task of working with 30 language programs ranging from the big three European languages, Spanish, French and German, plus ESL, to small programs such as Swedish, Dutch, Burmese, Nepali, and Khmer, was daunting.

The only way to describe my time at Cornell is bitter sweet. I was the only applied linguist in a department comprised of a majority of faculty devoted to Chomsky's theory—a theory that mixes with SCT about as well as oil and water. Despite the tilt toward generative linguistics, I was able to offer graduate seminars in SLA, language methodology and SCT, some of which enrolled only four or five students, a luxury that an institution such as Cornell made possible. There were a couple of functional linguists in the department, with whom I shared some common research interests. One of whom, Lin Waugh, became a very close friend. Indeed, when we both eventually left Cornell in the late 90s, she for the University of Arizona and I for Penn State, we remained in regular contact, especially with regard to our mutual efforts to establish Language Resource Centers funded by the U.S. Department of Education at our respective institutions.

One of the problems I had to confront at Cornell was the vestige of the so-called Cornell Method of language instruction that was formulated during the 1940s to meet the language needs of the U.S. government as it prosecuted WWII. Each language program was headed up by a linguist, who explained the grammatical structures of the relevant language to the students, who then engaged in several days of intense practice drills conducted by a native speaker of the language. By the 1990s some of the programs had moved away from the Cornell Method and toward more contemporary methodologies, albeit to varying degrees. However, the East Asian language programs, especially Japanese and Chinese, continued to adhere to the old

format. Each program was still headed up by a linguist, only by now the majority were generativists, who understood very little about language pedagogy, yet they frequently made decisions about what and how languages should be taught and who was qualified to teach. Trying to open space for innovation and development of the instructional staff was among the most complex and difficult tasks I encountered in my career. I tried to establish a methods course that all graduate teaching assistants as well as newly hired teaching staff would be required to take, but I soon gave up because of the resistance from many of the program heads and the department chair. The language programs were relegated to second-class status and primarily served as opportunities to fund graduate students as teaching assistants. I did manage to establish a workshop series for the benefit of the instructors that brought to campus many of the leading individuals in pedagogy and assessment, including Lyle Bachmann, Andrew Cohen, Nina Spada, Rick Donato, Elizabeth Bernhardt, and Kathleen Bardovi-Harlig.

Although the linguistics program advertised that students could pursue the study of applied linguistics, the PhD required a superabundance of courses in formal syntax, semantics and phonology, which left minimal space for coursework in other areas of linguistics, a circumstance that students accepted into applied or functional linguistics frequently objected to. The non-generativists tried to push for a modest revision in the requirements but without too much success. Ironically, when it came time to apply for jobs, most of which were advertised for applied linguists or at least for someone with some background in pedagogy, the students who had shunned this area asked me and some of my students for a crash-course in pedagogy, which we were hard pressed to provide. The stresses in the linguistics program increased over time until a singular event became the proverbial straw that broke the camel's back. Against the desires of the majority of the faculty, some of us managed to convince the Dean of the College of Arts and Sciences of the need to hire a sociolinguist. At the meeting where the search committee presented its recommendation to the faculty that a young scholar from Stanford University should be offered the position. Despite the job posting, the generativists tried to highjack the position in order to hire a newly-minted MIT syntactician. I'll spare the reader gory details of the internecine blow up, and just note that both individuals were hired, one justifiably so and the other not. Eventually, both left for what they saw as greener, and no doubt, less contentious, pastures.

Following the row, in what can only be described as an act of Solomon-like wisdom, the Dean cleaved the department in two—one a department of linguistics and the other a department of modern languages. Of course, I cast my lot with the latter unit and once again I was involved in program building, and again I ended up as its first and only chair. Unfortunately, the Dean soon left Cornell to accept a position as president of another prestigious university. His successor, a literary scholar, decided that the original philological model established at the inception of language instruction at the post-secondary level was to become the preferred model at Cornell. Consequently, the modern language department was dissolved and the programs were subsumed by the national literature and culture departments. My position was to be moved to the Department of Romance Studies, which I was unwilling to accept. Recognizing that I no longer had a viable future at Cornell, I was delighted when Penn State approached me about the possibility of becoming director of its new Center for Language Acquisition.

Although my eight years at Cornell were by any measure, tumultuous, I did manage to mentor several outstanding graduate students, not all of whom were interested in SCT. As the only applied linguist in the department I felt the responsibility to work with, and support, students interested in any aspect of the field. While at Cornell, I had the idea of convening what I called "a gathering" of researchers (faculty and graduate students) who were interested in SCT-L2 that gave them the opportunity to share work in progress and to receive mediation from others in attendance. Given that Ithaca, New York, at the time was often referred to as "centrally isolated", I reached out to one of my former students, Rick Donato, who was on the faculty at the University of Pittsburgh, to organize the gathering on his campus, which he enthusiastically did. The inaugural gathering, a small two-day event, was held in the fall of 1994. Although those in attendance expressed their support for continuing the gathering, I was not optimistic that we would be able to maintain it on an annual basis. Nevertheless, a second gathering was organized by Joan Kelly Hall at the University of Georgia. In one year, interest in the working group had exponentially grown to the point where we unfortunately had to schedule several concurrent sessions, something that we experimented with a few more times, but eventually abandoned in favor of plenary sessions. Beyond my wildest dreams, it turned out that enthusiasm for the annual gathering continued to increase and by 2018 we celebrated a 25th anniversary with a return visit to the University of Pittsburgh. Over the years, gatherings have been held at various universities across the U.S. as well as in other countries, including Puerto Rico, Canada, the Netherlands, and Spain. Following this year's (2024) third visit to Penn State, we plan to return to Canada and to visit Brazil for the first time.

Two additional positive events marked my time at Cornell. In 1997, I arranged a faculty exchange with Mike McCarthy, professor of corpus linguistics at the University of Nottingham, and with whom I had the good fortune to work during my co-editorship of *Applied Linguistics*. Mike spent a semester at Cornell living in our house and enjoying the severity of an Ithaca winter. He offered a course in corpus linguistics, a domain anathema to those of the generative persuasion; nevertheless, a few of the graduate students were attracted to this particular orientation to language analysis with at least one writing a dissertation based on corpus analysis. My wife and I spent a semester living in Mike's house in Toft, a village outside of Cambridge, from which we commuted to Nottingham where we each offered a course and had the good fortune to interact with faculty colleagues and interested graduate students.

As an aside, when I approached our department chair upon being offered the co-editorship of the *Applied Linguistics* in 1994, asking him for some modest editorial assistance and anticipating an enthusiastic response at what I thought was substantial recognition from the American Association of Applied Linguistics, his response was quite disappointing: "What do you want to do that for ?" At any rate, I enjoyed my five years working with Mike and having collaborative opportunity and responsibility of influencing the trajectory of research in the field. Little did we know at the time that the decision of the previous editors to publish a manuscript by Leo van Lier (1994) would involve us in the initial salvo of the SLA theory wars. A group of researchers, who apparently considered themselves gatekeepers of what was and was not acceptable as SLA theory, objected to publication of the manuscript and since Mike and I were the new co-editors they directed their ire at us. A few years later, I managed to contribute to the conflict when I published an article, Lantolf (1996), that the editor of *Language Learning* described as a post-modern "rant," which it no doubt was. It was my only

foray into the post-modern turn. At the time, I felt that it was a way to challenge the dogmatic approach that some were taking with regard to what should or should not count as a theory. Even though the article was roundly criticized by the gatekeepers, which was anticipated and not surprising, I was also subjected to uncalled for and unproductive ad hominem attack in print (Gregg, 2002) and in speech. In the spring of 1998, the late and sadly missed Tim McNamara, invited me to spend a semester as visiting professor at the university of Melbourne, which was one of the great experiences of the academic and personal life. I thoroughly enjoyed and profited from the interactions with faculty and students regarding their work as well as my own. Near the end of my visit, one of the gatekeepers was shortly to arrive in Melbourne to deliver some lectures. Tim thought it might be a good idea for us to engage in a debate on SLA theory, which would have meant rescheduling my departure flight, which I was willing to do until Tim informed me that the visitor responded to the debate invitation as follows: "There will be blood on the floor." At this, I decided that such an event would be of little academic value and would likely degenerate into a vacuous brawl and so I flew out as scheduled. It is lamentable that an opportunity for what could have and should have been a civil academic discussion about the crucial topic of theory and theory building had to be missed.

Having accepted the offer from Penn State to head up the CLA, I began my duties in September 1999. The primary responsibility of the CLA was to foment research in applied linguistics, support language instruction, attract funding from public as well as private sources, and above all establish a national Language Resource Center. In my view, to compete for funding from government sources as well as private donors, required a coherent program in applied linguistics, preferably one approved to award doctoral degrees. In a short span of time, the Dean of the College of the Liberal Arts and the central administration of the university approved a graduate program that quickly achieved department status with an international reputation that Henry Widdowson described as "a whirling vortex." This was my fourth and final act of program building, and I must say that this time it was without question a spectacular success.

Over the past twenty-five years, the CLA has managed to establish a substantial grant portfolio of well over seven million dollars under my directorship as well as that of my successor, Kevin McManus, who assumed the position upon my retirement in 2019. In addition, we were successful in attracting financial support from private donors, including a generous gift that established a young career professorship along with a dissertation fellowship. Two additional gifts endowed named professorships, one of which I was honored to occupy for a decade and half. We also received a private gift that supports an annual endowed lecture in applied linguistics. As it happens, since its inception in 2004, eight of the seventeen tenure-line faculty who are current or former members of the Department of Applied Linguistics have held named professorships. Four of the faculty have served as president of the American Association of Applied Linguistics and two of us have received its Distinguished Scholarship and Service Award. I think this speaks volumes about the quality of what we have been able to build over the past two decades.

In addition to a strong faculty, and a stimulating research environment, the department has been able to attract exceptional graduate students from all parts of the world. Indeed, the twenty years I spent at Penn State were the most productive of my career, thanks in large measure to the quality of the graduate students I was able to work with. During this time, SCT-L2 research

grew exponentially. Our first book-length study of SCT-L2, Lantolf and Thorne (2006), explained the principles and concepts of SCT and surveyed much of the existent SCT-L2 research, which at the time was fairly easy to keep up with. Our 2009 survey of SCT-L2 research (Lantolf & Beckett, 2009) was also relatively easy to organize in terms of the work to be reviewed. However, a little more than a decade later, it was necessary to publish two articles on SCT-L2 research, one on Concept-Based Language Instruction (Lantolf, Xi, & Minakova, 2021) and another on Dynamic Assessment (Poehner & Wang, 2021). Recognition of what SCT-L2 research has achieved came in 2015 when the Modern Language of America awarded its Mildenberger Prize for outstanding publication in language research to Lantolf and Poehner (2014). In 2012 I approached Equinox Press about the possibility of establishing a journal dedicated to the study of language from the perspective of SCT. The motivation for this proposal stems from the fact that language is central to the theory, yet relatively few publications in the SCT literature focus on language. I was very pleased when Equinox immediately accepted the proposal and in 2013 the journal *Language and Sociocultural Theory* was launched. I served as editor for a decade and in 2023 we transitioned to Matt Poehner and Steve McCafferty as co-editors.

The majority of the initial research in SCT-L2, beginning with our 1985 publication up to the early years of the 21st century used the theory as a lens to analyze a variety of data on L2 learning and use. As such it did not exploit the full power of the theory/practice dialectic at the heart of the theory. For example, Lantolf, DiCamilla and Ahmed (1997) considered how ESL speakers used tense and aspect as a mediational strategy when confronted with a difficult narrative task. Ahmed (1994) compared the regulatory function of the speech of ESL speakers with L1 speakers of the language when trying to solve a visual puzzle. Donato and MacCormick (1994) examined the mediational function of language learning strategies. Coughlan and Duff (1994) analyzed how learners exercise their agency when engaged with a difficult task from the perspective of activity theory. Several publications expanded on Frawley and Lantolf's (1985) work on private speech. McCafferty (1994) demonstrated that language proficiency was a factor influencing the use of private speech by L2 speakers. de Guerrero (1994) confirmed McCafferty's finding regarding language proficiency. She also reported syntactic, phonological, semantic and lexical variation in L2 private speech, and suggested that private speech may provide access to learners' minds as they process L2 data. The year-long private-speech study of L2 learners of Japanese by Ohta (2001) provided support for de Guerrero's speculation. Appel and Lantolf (1994) compared the private speech of advanced ESL speakers with NSs of English when recalling narrative and expository texts and concluded that the difference between the groups is not categorical but depends on the nature of the task. Centeno-Cortés and Jiménez-Jiménez (2004) addressed the original question asked by Frawley regarding the ability of L2 speakers to use the language to mediate their thinking. They reported that advanced L2 speakers had a difficult time solving complex cognitive tasks if they attempted to mediate their thinking through that language. On the other hand, Garbaj (2018) reported some counterevidence to this argument as he showed that some individuals are able to mediate their cognitive activity through the L2.

Negueruela's (2003) work on Concept-Based Language Instruction (C-BLI), and Poehner's (2005), on Dynamic Assessment (DA), laid the groundwork for future research that was to realize the praxis-based foundation of Vygotsky's theory in the domain of L2 studies. Indeed,

much of the current SCT-L2 work focuses on either of these concepts and takes seriously Vygotsky's assertion that the true test of a theory is its capacity to foment change in everyday life. Thus, the goal of C-BLI and DA is to intentionally and systematically promote and assess development in educational contexts through well-organized explicit mediation.

SCT-L2 praxis-based research expanded beyond the domain of grammar as several studies (e.g., Kim, 2012; Kim, 2013; Kim & Lantolf, 2018; Lantolf & Bobrova, 2014) focused on figurative language, including metaphor and sarcasm, a central feature of language that has not been given the attention it deserves, with the possible exception of English-language pedagogy. Unfortunately, some have unjustly cast doubt on this research as falling "outside of the typical concept of language" (VanPatten & Smith, 2022, p. 26), despite the fact, as Gibbs (1994) argued, that figurative language comprises an indispensable mode of human communication and is clearly a necessary competence for effective social interaction. Studies also used somewhat modified versions of C-BLI to explore its effects on reading (Urbanski, 2023) and writing (Ferreira, 2005) development.

SLA research, in my view, has inherited the assumptions of 19th-century English philosopher and psychologist, Herbert Spencer, who viewed a child's mind as essentially "a kind of embryo" (Egan, 2002, p. 81) of an adult's mind that eventually matures and grows as the body matures and grows. He argued that since children easily learn the objects and processes of everyday life [including language] without much direct instruction from adults, educators should explore how best to replicate this type of learning in school settings (Egan, 2002, p. 16). This is perhaps an early proposal for inquiry-based or discovery learning that has been influential in general education and manifests itself in L2 instruction in approaches that promote implicit instruction and learner autonomy. Furthermore, and perhaps most importantly with regard to SLA, Spencer's views on progress, evolution and development had a significant impact on Piaget and through him to developmental psychology and eventually to SLA in terms of what Egan (2002, p. 83) called the "hierarchical integrative" nature of cognitive development. Accordingly, "each stage or phase of development contains, elaborates, and builds on the developments of the previous stage or stages (p. 83). This assumption has become accepted dogma within cognitivist approaches to SLA, which insist that the secrets of SLA reside in the mind-brain (Long & Doughty, 2003, p. 866), rather than in the social environment. The so-called 'natural order' of acquisition for English grammatical morphemes proposed by Krashen (1982, p. 13) adheres to the concept of hierarchical integrity, as do the developmental sequences posited for such features as English negation and question formation, German word order, and Chinese topicalization, among others.

While some researchers have, on occasion, encountered a few learners who did not follow a proposed developmental hierarchy (Spada & Lightbown, 1999), the only systematic challenge to the hierarchical model of L2 development and in favor of the sociogenetic perspective of SCT that I am aware of was a dissertation study by Zhang (2014) that I co-supervised, and which challenged the Teachability Hypothesis (TH) (Pienemann, 1989) grounded in Processability Theory (Pienemann, 1998). An abridged version of the study appeared as Zhang and Lantolf (2015). Zhang's study addressed the Chinese topicalization hypothesis proposed by PT, which argues that L2 learners of Chinese, instructed or not, adhere to predicted developmental stages, beginning with canonical SVO word order at stage 1, followed by pre-positioning of Adjuncts at stage 2, and terminating with prepositioning of

Objects at stage 3. TH argues that instruction cannot affect the sequence and thus learners must pass from stage 1 to stage 2 to stage 3. Zhang's C-BLI project provided robust evidence that learners can skip from stage 1 to stage 3. A follow-up study by Zhang (2020) provided additional evidence in support of sociogenesis when he successfully taught learners to develop the ability to use stages 2 and 3 simultaneously.

Clearly, one or two studies do not provide sufficient grounds to prove one theory and disprove another. What is needed to truly assess the claims of any theory to the point where proponents are willing to abandon the theory (see Lakatos, 1978) is a series of collaborative studies carried out by proponents of the divergent theories where the principles and claims of each theory are made clear. In the case of SCT and PT there could not be a clearer divergence in theoretical assumptions with the former arguing for the sociogenesis of development and the latter favoring a cognitivist orientation. Currently, proponents of the theories are in the initial stages of discussions designed to carry out what Melloni, et al (2021) characterized as "adversarial collaboration." My hope is that such a project will not only assess the claims of the two theories, but will also encourage others to pursue similar research. It seems to me that this is a promising way of reducing the number of SLA theories, of overcoming the tribalism that currently pervades the field, and of making genuine progress in our understanding of SLA.

In 2004 I received my first invitation to deliver a keynote address at an L2 conference in East Asia—the annual meeting of the Korean Association of Teachers of English (KATE). Since that time, I have had the pleasure of speaking at numerous conferences in other regions of East Asia, including China, Japan, and Taiwan. I have been very impressed with the extent of interest in SCT-L2 among East Asian academics and graduate students. Since my initial visit, I have established close contacts with colleagues working at several different academic centers in this part of the world. Perhaps most significant in terms of opportunities to interact, consult, and learn from faculty and graduate students in the East Asian context have been a distinguished lectureship at Temple University, Japan, an honorary professorship in the College of Education at the University of Hong Kong, a Changjiang (Yangtze River) professorship in the School of Foreign Studies at Xi'an JiaoTong University (2016-2019), where I had the opportunity to supervise a doctoral dissertation and consult on several graduate student research projects, and a distinguished professor position in the Center for the Cognitive Science of Language at Beijing Language and Culture University. Recently, Matt Poehner and I were guest editors of two special issues of top tier journals (*The Modern Language Journal* and *Language Assessment Quarterly*) that featured research of East Asian scholars focused on C-BLI and DA (see Lantolf & Poehner, 2023 and Poehner & Lantolf, 2023).

Looking back at my life in academia, it has indeed followed a long, winding but exceptionally rewarding road. Even though I have been officially retired since 2019, my academic activities have not retired, in fact, I would say I'm involved in more projects now than I perhaps should be at this stage of my life, but I have to admit I have not lost the excitement and passion for SCT and what it brings to language teaching, assessment and development. I must admit that I do not miss the grind of meetings, year-end reports, budget preparations, and strategic planning that is commonplace in contemporary academia. I do, however, miss teaching and working with graduate students. I would like to end my response by thanking all of the students I had the pleasure of interacting with since the start of my career in 1974. I want to add a very special heartfelt thanks to the 47 doctoral students who allowed

me to work with them on some exceptionally innovative projects. I very much enjoyed and benefited from engaging with each and every one. It has been a great ride!

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Ethics Declarations

Competing Interests

No, there are no conflicting interests.

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