



JALDA's Interview with Professor James P. Lantolf

Dialectical Emergence of Language and Consciousness in Society

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James P. Lantolf

James P. Lantolf is George and Jane Greer Professor Emeritus of Language Acquisition and Applied Linguistics and former director of the Center for Advanced Language Proficiency Education and Research at the Pennsylvania State University, USA. From 2017 to 2020 he was also Changjiang (Yangtze River) Professor in the School of Foreign Studies at Xi'an Jiaotong University, China. He is currently Adjunct Professor of Applied Linguistics in the same academic unit at Xi'an Jiaotong University. He is founder of the Sociocultural Theory and Second Language

Learning research group, which has been holding an annual meeting to discuss research in progress on second language acquisition from the perspective of sociocultural theory since 1993. He is founding editor of *Language and Sociocultural Theory* (Equinox Press, 2013 to present) and was co-editor of *Applied Linguistics* (Oxford University Press, 1993–1998). He served as President of the American Association for Applied Linguistics (AAAL) in 2004 and was recipient of the AAAL Distinguished Scholarship and Service Award in 2016. In 2017 the School of Foreign Studies of Xi'an Jiaotong University in Xi'an, China dedicated the Lantolf Research Center for Second Language Studies, which is named in honor of Professor Lantolf. He has co-authored or co-edited nine books and has published more than 140 articles and book chapters. His seminal book entitled *Sociocultural Theory and the Genesis of Second Language Development* (2006, coauthored with Steven L. Thorne) published by Oxford University Press coupled with a co-edited volume *Vygotskian*

Approaches to Second Language Research (1994, coedited with Gabriela Appel) ushered in a new upswing of research on language development and teaching from the sociocultural theory vantage point. His co-authored book (with Matthew Poehner) entitled *Sociocultural Theory and the Pedagogical Imperative: Vygotskian Praxis and the Research/Practice Divide* received the Kenneth Mildener Prize of the Modern Language Association of America in 2015. His latest co-edited book *The Routledge Handbook of Sociocultural Theory and Second Language Development* was published in 2018.

The following is a written interview with James P. Lantolf (hereafter: JPL) conducted by Saeed Karimi-Aghdam (hereafter: SKA).

SKA: ---- When and how did you develop a keen interest in Vygotskian sociocultural theory in relation to second language acquisition?

JPL: ---- I began my academic career as a historical linguist with primary interest in changes in the Old Spanish to Modern Spanish phonological system. While I was on the faculty of the University of Texas at San Antonio, where I regularly taught Spanish language courses at various levels of proficiency, I attended two guest lectures that stimulated my interest in second language acquisition. One was by Merrill Swain on bilingualism and bilingual education and the other by John Schumann on his acculturation model of SLA. Eventually, I left UTSA for an associate professorship at the University of Delaware, where I was hired to teach courses in SLA along with additional courses in Spanish. During a doctoral comprehensive exam in 1983, one of the committee members, Bill Frawley, who had studied with Jim Wertsch at Northwestern University, asked an extremely interesting question about the potential relevance of the Zone of Proximal Development for second language acquisition. At the time I had no idea who Vygotsky was and of course I had not even an inkling of the significance of the concept of the ZPD. Following the exam, Bill and I began to discuss Vygotsky further. Eventually, we decided to co-teach a graduate seminar on SLA and SCT. At that point, neither of us had read Vygotsky deeply, since the only accessible publications available at the time were the 1962 abridged version of *Thought and Language*, 1978 *Mind in Society* along with Luria's 1976 report on his 1933 research project conducted among the rural peasant populations in the former Soviet Union, *Cognitive Development*. We did make use of articles published in what was at the time called *Soviet Psychology* (now the *Journal of Russian and East European Psychology*) as well as a number of working papers available through Michael Cole's Laboratory of Comparative Human Cognition. Several doctoral dissertations emerged from the seminar. One other important event in my early access

to Vygotsky came when we invited the late Professor Vera John-Steiner to present a lecture on her then recently published book, *Notebooks of the Mind* (1985). As most everyone in SCT studies knows, Vera was one of the most important researchers to bring Vygotsky scholarship to the English-speaking world, along with Jim Wertsch and Mike Cole. Many of us at Delaware, who were intrigued by Vygotsky's thinking spent as much time with Vera as we could to learn as much about Vygotsky as we could. From that time on, I was committed to grappling with the theory and its potential relevance for SLA. Sadly, I am not a reader of Russian, and as many of us are aware, there have been problems regarding some of the translations into English of Vygotsky's original writings. Luckily, I have had the opportunity to work with several native Russian-speaking graduate students over the course of my career, who have immeasurably helped clarify and rectify many of the mistranslations.

SKA: ---- Do we need to cast new light on Vygotskian sociocultural paradigm including its theoretical constructs and concepts such as Zone of Proximal Development (ZPD)?

JPL: ---- I think it is always necessary to plumb the depths of all constructs and concepts affiliated with any theory, Vygotskian theory is no exception. When one assays the Vygotskian literature, one observes a number of salient tendencies. Some are quite controversial, others less so. At the most general level, many researchers, both inside and outside of applied linguistics have not fully appreciated (if at all) the significance of the link between Vygotsky's theory and Marx's writings on methodology. The implications of this are profound. For one thing, the importance of Vygotsky's reliance on dialectics in formulating his general methodological stance has been with few exceptions (e.g. Ratner) overlooked. As a result, many researchers, including those working in applied linguistics, often integrate concepts and principles of the 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 me, one of the most profound and significant arguments Vygotsky put forth in building his methodological orientation was the need to develop a methodology suitable for the object of study: higher human mental functioning. He chided psychology for borrowing the methodological procedures developed in the physical sciences to study inert reality. He argued that this was not suitable to understand and explain the human psyche because it prevented researchers from untangling the natural or biologically endowed mental processes from role that culture plays in shaping and restructuring these processes, including natural memory, perception, attention, and emotion.

The problem was that in studying the adult psyche the two processes had already merged and thus it was impossible to separate such functions as natural memory from culturally mediated memory or natural perception from culturally mediated perception. Arguably, the leading psychologist of the time, Wilhelm Wundt believed that there is little chance for psychology to disentangle things in order to determine how the two factors interacted to give rise to human consciousness. Vygotsky did not agree with Wundt in this regard. Following Marx, Vygotsky proposed that history is the key to unlocking the puzzle of the human psyche. Just as Marx proposed to uncover the origins of capitalism through the study of history backwards (i.e., begin with a description of the features of the capitalism and proceed backward in time to uncover precisely those historical forces that resulted in the emergence of this particular economic system, Vygotsky proposed to explain adult higher psychological functions by going back in time to observe and trace the development of these functions as they are being formed. To go back in time, for Vygotsky, meant to study the psyche at different time scales: as humans separated from higher primates, as human societies changed over time, and as children matured into adult life. He also focused on very short periods of time as functions emerged in laboratory or educational settings. By going back in time it was possible to disentangle the two strands of mental behavior that eventually produced contemporary human consciousness. Vygotsky referred to his overall methodology as the “genetic method”—genetic in the sense of genesis or formation rather having to do with biological genes. While Vygotsky was interested in all four-time scales, most of his research, with a few exceptions, focused on the ontogenetic domain, which importantly included concern with the relationship between the contributions to development offered by everyday life and those offered by formal education. He and his colleagues also carried out research on the impact of changes in the sociocultural environment on psychological processing as happened when the Soviet government collectivized and introduced formal schooling into the rural farming communities of the USSR. He was also interested in observing the psychological consequences of denying access to cultural forms of mediation to individuals reared in various forms of social deprivation (e.g., street children) as well as those who, because of various biological issues, were unable to take full advantage of the normal forms of mediation made available in a culture. His colleague A. R. Luria, in particular, was interested in how brain insult either because of stroke or physical injury, impacted the system and how it might be repaired to various forms of re-mediation.

In addition to tracing the cultural development (the term Vygotsky preferred to use when discussing the development of our psyche) of humans over time and in different sociocultural environments, he also brought the genetic method into the experimental laboratory. The procedure, which he referred to as the instrumental method, or the experimental-developmental method, was deployed with children of varying ages as

well as with adults in order to uncover the extent to which participants were able to use auxiliary means (i.e., mediation, especially that based on linguistic signs) to solve particular tasks provided by the researcher. The reasoning was that by giving people tasks that they were unable to solve using their current ability, and then offering them the possibility of using some form of mediation (i.e., a piece of colored paper, a picture, a word, etc.) it would be possible to observe in the laboratory setting the formation of mediated mental activity, which Vygotsky's theory argued was derived from the internalization of those forms of mediation offered by one's culture.

When the instrumental method was brought into school, it was referred to as the Zone of Proximal Development. Even though Vygotsky did not write overtly about the ZPD until late in his life, it is clear in reading such works as "The Instrumental Method in Psychology" and "the Structure of Higher Mental Functions" that Vygotsky saw a link between what happened in the experimental laboratory and what should happen in school. In essence, the ZPD relies on providing students with appropriate forms of cultural mediation and observing if and how they are able to integrate these into their problem solving activity. On this basis he suggested that it would be possible to more effectively deliver education to students if they could be grouped according to the size (i.e., their responsiveness to mediation) of their ZPD.

SKA: ---- How has your own thinking about sociocultural theory in relation to (second) language development evolved over time?

JPL: ---- This is not an easy question to answer in great detail. However, it is clear to me that the most significant change that I had to go through was surrendering the dualistic way of thinking that I had been trained in throughout my academic life in order to adopting a dialectical approach to my work. This was no easy task. For one thing, methodological dualism was not something that was presented in an overt way. Rather it is assimilated through the kind of courses one pursues as a student, the kinds of texts one reads, and the kinds of research projects one participates in. Consequently, in the very early days of my career, I worried, along with the field, about such issues as whether classrooms should be teacher-centered or learner-centered, or whether explicit instruction was more effective than implicit instruction. Like most SLA researchers and practitioners, I thought of teaching as a separate process from testing, and so on. After reading, re-reading, and re-reading Vygotsky and of course Marx (which I believe is necessary if one wants to fully engage with Vygotsky), I gradually began to appreciate what it means to approach a problem from a dialectical perspective. When one does so, one sees an array of possibilities that were not there before. For instance, instead of worrying about teacher-centered vs. learner-centered classrooms, one realizes that what matters is what happens between teachers and

learners—that is, the activity of promoting development through specific kinds of interactions that occur between teachers and learners. Similarly, implicit and explicit instruction are understood as poles of a dialectic in which both forms of activity are vital in promoting development.

SKA: --- What role does (second) language play in the development of human cognition from sociocultural theory perspective?

JPL: --- For Vygotsky, language was the most important form of mediation made available by a culture to restructure thinking. In a sense, one could say that Vygotsky's entire enterprise revolved around the ways in which language as a semiotic system shaped the development and functioning of higher human thinking. To give a brief example: Vygotsky argued that early on in childhood children perceive reality through their natural biological system. As such they do not perceive reality the same way adults do. They are likely to create relations between objects and actions that do not figure into the thinking of the adults in their culture. Thus, a young child looking around a room full of objects does not perceive that room in the same way as adults do because they do not yet know whether an object such as a glass sitting on a desk belongs with the desk or not. If they entered the same room on a daily basis and saw the same glass on the same desk, they might well conclude that they belong together as components of a broader entity. Once children encounter language through the efforts of caregivers, they are able to segregate desk from glass because the caregivers talk of these objects in different ways and they also use them in different ways. As children accumulate words and build the grammar of their language that enables them to understand and talk about relationships between objects, actions and eventually, the relations between the words, they learn to perceive the world through "cultural" rather than "natural" eyes. For Vygotsky, there is a strong relationship between language and human thinking. The functional system of consciousness comprised of various elements such as perception, attention, memory, emotion, imagination, is organized largely through language as a semiotic system. One of the interesting questions that some have asked is whether or not learning a second language, especially later in life, has an effect on how one thinks. Vygotsky claimed that speaking completes the thinking process and traced the formation of this from social to private to inner speech. Thus, one of the interesting questions that we have explored, and that I will return to later, is whether or not learning a second language gives rise to a new way of completing the thinking process. Indeed, Vygotsky raise this very question in a short paper entitled "The Question of Multilingual Children."

SKA: --- How is the development of (second) language influenced by interpersonal and intrapersonal verbal communicative activities?

JPL: ---- It is difficult to provide a definitive answer to this question. I will point to some of the research that has been done on the topic. SCT-L2 researchers such as Maria de Guerrero have investigated the role that private speech (intrapersonal) communication plays in second language development. Leaving aside for the moment whether the PS occurs in L1 or L2, it seems fairly clear that without PS, learning a second language, and perhaps even one's first (see the research on crib speech) might not be possible. I have also carried out a small-scale study on the topic. There seems to be a relationship between those who engage in PS and language development and those who do. When we investigated language students at an American university, we found that those who were enrolled in class in order to fulfill a language requirement reported that they did not produce much in the way of PS, while those students who said that they were interested in learning the language reported that they frequently produced L2 PS as they tried to experiment with various features of the language. They did this not only when in class but also during the day as they might be walking across campus or even when taking a shower or preparing other activities not necessarily related to their language class. Moreover, the approach to classroom instruction that many of my students and colleagues have been investigating for the past 15 years, what we refer to as Concept-Based Language Instruction based on the educational model proposed by P. Gal'perin, integrates two important verbalization phases. One phase, which Gal'perin calls, "communicated thinking", asks learners to explain to other individuals such as peers or even the teacher, their understanding of a particular language concept that has been presented in class. The other phase, called "dialogic thinking" asks students to explain the concept and their use of the concept to themselves. The first is a form of interpersonal communication/thinking and the second is intrapersonal communication/thinking. Merrill Swain has labeled these as "linguaging" activities because focus is on internalizing conceptual knowledge rather than on engaging in typical social communicative interaction.

SKA: ---- **How does sociocultural theory deal with culture-biology, or nature-nurture dualisms?**

JPL: ---- We need to be clear from the outset that Vygotsky's theory does not argue that the uniquely human form of consciousness, what he also referred to as psyche, is not comprised of so much nature and so much nurture as some have suggested. Vygotsky proposed instead that humans begin their life in infancy with a biologically evolved form of mentation that humans share with other animals, in particular, higher primates. Included here are what he called natural perception, attention and memory as well as emotional instincts such as interest, startle, disgust, need, endogenous pleasure, distress (see Holodynski, 2013). As infants are brought into contact with adults, they encounter cultural ways of restructuring the natural mind. This happens

largely through language/speech or language mediated activities. I have already considered an example of the shift from pre-linguistic to sign-mediated perception in children. Something similar happens in the case of emotions, whereby the natural emotions just mentioned semanticized into culturally structured emotions such as joy, anger, sorrow, fear, love, hate, etc. (see Holodynski, 2013). For Vygotsky once culture penetrates natural mind, it doesn't create something new, but restructures what is there and through language, empowers individuals to control their own psyche.

[Holodynski, M. (2013). The internalization theory of emotions: A cultural historical approach to the development of emotions. *Mind, Culture, and Activity*, 20, 4-38.]

SKA: --- Do you think dynamic systems theory and sociocultural theory are commensurable? If not, what are the reasons why you think communication across their respective worldviews is not tenable?

JPL: --- This is an exceedingly complex question that I cannot fully respond to an interview format. I will say that it is something that I have been thinking about for quite a while. First, I had to spend a fair amount of time and effort to understand DST. It could be of course that my understanding is off base, and if so, what I am about to say, must be corrected. I believe there a fundamental difference between the theories, which in my view, makes them incommensurable. DST is based on the concept of 'complexity' as it operates in the natural world, both inert and organic, while SCT is based on what goes on in the historically created human world. In this regard Vygotsky, in *The Historical Meaning of the Crisis* makes an extremely relevant argument (although at the time, he was not referencing DST): "we cannot ... study the psychological differences between people with a concept that covers both the solar system, a tree, and man. For this we need another scale, and other measure ... We cannot measure human height in miles, for this we need a tape measure."

In the natural world, phenomena emerge in various ways depending on a particular starting point and they also have no end point. In essence the natural world evolves. Vygotsky points out that the various aspects of human history both evolve and develop. He argues that in phylogenesis and in social history of humans and specific human communities there is no end point or target toward which they evolve. This seems to be a point of convergence between DST and SCT. However, when we look more closely at social history, while there may not be a grand target or end point toward which a community develops (e.g., it would be absurd to argue that when the feudal system collapsed in Europe people already had a notion of capitalism in mind toward which they moved), at a more local level, people continued to act with specific purpose and goals in mind, as happens when one paints a picture or seeks to build a

shelter, or a particular kind of tool to achieve a specific outcome. This is not to say of course that the perfect tool is created on the first, second or third attempt. It is to say that humans continue to modify a tool over time to better fit the purpose of their activity. Thus, a simple handsaw made it easier to cut wood than using a stone or even a knife and a modern power saw is a much easier and more efficient way to cut wood than a handsaw. What has changed is the tool but the goal of cutting wood has remained stable. Without this stable goal created by the need to cut wood there would have been no effort put forth to modify the tool.

When it comes to ontogenesis, as Vygotsky argued, things are different. There is indeed a goal, target or ideal (see Ilyenkov, 2012) and this is what a society has created throughout the course of its history, and history is a uniquely human form of creation, as Marx points out. Consequently, for Vygotsky, in the domain of ontogenesis, we confront development rather than evolution. There is an end point, or ideal toward which the community and its adult representatives move the newcomers (i.e., children). Here Vygotsky uses language development as an example, whereby adults provide the ideal toward which children move as they grow and are brought into the community. Children undertake to imitate the ideal as it is presented to them in the speech of adults. Imitation is not a copying or parroting for Vygotsky, but, following James Baldwin, it is instead a creative process guided by a model or ideal.

Here I don't have space to go into great detail how "ideal" is understood in the theory. One can consult the writings of Ilyenkov to appreciate how ideal is used in dialectical material psychology (It is not what Kant had in mind but is in fact created by human activity in the material world). Humanized reality came about over the course of history because humans sought to fulfill or satisfy specific natural needs (food, water, shelter, personal protection, etc.), social needs (communal activities typical of modern civil society), economic needs (accumulate wealth as called for under capitalism). In other words, humans act with specific goals and purposes in mind. They plan what they will do to fulfill these goals and purposes. An important component of planning of course is language, which enables us to act vicariously before acting in reality. One advantage of this planning is the avoidance of potential risk or harm or the potential wasting of resources that might well result if we rush into action without a plan. According to DST, language itself is a complex adaptive system, which means it changes in accordance with changes in its environment (if I understand DST correctly), in the same way that plants and animals adapt to changes in their environment in order to survive. The problem for me is that language is not an entity unto itself, rather it is a human creation that is pressed into service as with any other tool to achieve specific goals or purposes. Just as humans have created and modified physical tools over the course of history to more accurately and precisely achieve particular needs (e.g., cutting tools have been changed into an array of different kinds

of tools over history in order to better meet the need to cut particular kinds of objects—electrician's knife is very different from a butcher's knife). Language, as a symbolic tool can be expected to behave in the same way—humans over the course of history have modified it to meet different communicative/psychological goals and purposes. The most obvious place to observe this is in the lexicon; however, I think one can see this in grammar and pragmatics as well. Thus, for me, language is not a complex adaptive system, but is instead a complex *adaptable* system, just as any tool or human artifact is. In Luria's (1973) terminology, language, as with most other humanly created systems, is a complex functional system. Said in the language of SCT, language is a functional system—it is complex and it has a purpose and its purpose comes from human needs.

[Ilyenkov, E. V. (2012). *The ideal in human activity. A collection of the writings of Evald Vasilyevich Ilyenkov*. Pacifica, CA: Erythros Press.]

[Luria, A. R. (1973). *The working brain*. New York: Basic Books.]

SKA: ---- Do you think the field of second language development is in a state of crisis searching for a new encompassing meta-theory or paradigm to solve unresolved research problems? If so, what kind of alternative paradigm is emerging at present (if at all)?

JPL: ---- I do believe that SLD, or the term I prefer is Second Language Studies (SLS) to distinguish the field from the process it studies, is in a state of crisis. In fact, I am in the process of producing what I hope will become a book-length manuscript that addresses what I think is a dual crisis. The first is the matter of what the relationship is between social SLS and cognitive SLS. As SLS established itself as an independent discipline from its applied linguistics progenitor, which was almost exclusively interested in how to improve the teaching and learning of languages in classroom settings, its focus was on the process of, and mechanisms responsible for, language development beyond the first language. The assumption from the outset was that the primary place to look for the mechanisms responsible for the process was inside the head of learners. While researchers acknowledged that acquisition took place in social settings, including immersion as well as educational settings, the setting itself did not impact the fundamental acquisition process and therefore social factors were not expected to be part of the explanation of SLD.

As most SLS researchers know, in the late 1990s the field experienced what has been described as “the social turn” and with it, research began to pay attention to the contributions of social interaction to the learning process. At this point, in my view, the field became bifurcated and the crisis emerged. From the cognitivist perspective

the crux of the problem is that social factors do not have legitimate explanatory power to account for the acquisition process, although they perhaps influence the extent to which learners have access to language data and what kind of data they have access to. An interesting question, to be sure, but for a cognitivist, this isn't what explains the process itself. For advocates of the social perspective (humorously, perhaps, the socialists!), the way people interact makes all the difference in the world with regard to the acquisition process, but it seems they don't have much to say about what might be going on inside the head. The way SLS has addressed the crisis is to either focus on cognitive matters or on social matters and there doesn't seem to be a way to focus on both in a unified way.

Taking my lead from how Vygotsky addressed the crisis in psychology during his time, it seems to me that SCT might be able to provide a way out of the crisis. The key is to appreciate the power of a dialectical solution to the problem whereby the head and the social environment represent two necessary poles of a dialectical relationship. We need to look at the head to determine what those mechanisms are that nature provides (as I explained earlier) and we have to look at the social to determine the mechanisms that human culture provides. In Vygotsky's thinking, culture crashes into nature and restructures what is there in a uniquely human way. Said in another way, social activity is at the same time psychological activity. Our mental processing is transformed as a consequence of our social behavior. The environment matters and is the key component of the mechanism that explains SLD.

The second crisis is that regarding the relationships between SLD theory and research and classroom practice. Even though SLS emerged as a discipline in its own right in the late 1960s and early 1970s, it continued to feel the pull of the concern of its progenitor applied linguistics, which, as I stated above, was how to improve language teaching and learning in classrooms. Over the course of its history SLS has worried a good deal about whether and how its theories and the findings of its basic research could legitimately inform classroom practice. One can trace this in the commentary of some of the leading figures in SLS who have at various points in time worried if the field itself had reached a stage of sufficient maturity to enable researchers to speak with confidence about the relevance for practice of the findings of their research. To this day, the jury is still out (see Ellis, 2020). Again, I suspect that Vygotsky provides a way out of this crisis with his proposal that when it comes to the social sciences in general and psychology, in particular, we should not adopt the dualistic perspective that emerged from the natural science research model. For him, applied research is basic research and as such it provides the ultimate test of the validity of any theory of human mental functioning. By applied Vygotsky was not only referring to education, which was a major focus of his theorizing and research, but also to clinical research as he and Luria conducted with culturally deprived individuals or with those who

suffered brain damage do to stroke or injury, as well as those who were not able to take full advantage of what was at the time considered the normal forms of mediation that a society had created for its members, including language. Here is addressed especially the issue of individuals born without hearing and were therefore deprived of access to spoken language. Of course, today we understand much more about the power and sign language to fully mediate mental behavior than was the case at Vygotsky's time in the 1920s.

[Ellis, R. (2020). A short history of SLA: Where have we come from and where are we going? *Language Teaching*. 1-16.doi:10.1017/S0261444820000038]

SKA: ---- What is the role of time and by the same token history in (re)constructing human consciousness and subjective development of (second) language?

JPL: ---- History and time are central features of Vygotsky's research methodology. In his methodology he proposed four different time scales for studying the formation of higher psychological functions: phylogenesis, sociocultural history of human culture in general and of specific cultures (some separate these into two scales), ontogenesis, and microgenesis (a term I believe was coined by Jim Wertsch). It is important to appreciate that Vygotsky connects time to history rather than time in general. He points out for example that only humans have history, which is the process through which we humanize or idealize reality through purposeful social activity (following Marx). The inert and organic aspects of reality have a past, a present and a future but no history as such. Keep in mind that the goal of Vygotsky's theory is to explain the development of the uniquely human higher psychological system comprised of logical memory, voluntary perception, attention, creativity, semanticized emotion, conceptual thought. To achieve its goal, there must be a way of separating out the contribution of the natural system of mentation from the culturally organized system. The argument Vygotsky made, contrary to Wundt, who believed that it was impossible to separate the two systems from a research perspective, is that it is indeed possible to observe and therefore understand the contribution of both systems if we adopt a historically based methodology and use this to trace the development of the higher system. According to Vygotsky, the natural system does not evolve into the higher system, although this is how it may appear by looking at the finished product – adult consciousness. Rather the natural system is restructured and transformed when cultural forms of mediation enter the picture, again, as I explained earlier. The key component in the process is language/speech.

SKA: ---- How does sociocultural theory reconcile the perennial and dichotomous dilemma between theory and practice in (second) language education?

JPL: ---- Following up from my response to question 5, for SCT there is no real dilemma between theory and practice. Vygotsky forcefully argued that the dichotomy between theory and basic research on the one hand and practice on the other that the social sciences inherited from the hard sciences is inappropriate. He makes it very clear that the ultimate test of any theory is practice. Said in another way, applied research is basic research. To quote Vygotsky:

- Practice pervades the deepest foundations of the scientific operation and reforms it from beginning to end. Practice sets the tasks and serves as the supreme judge of theory, as its truth criterion. It dictates how to construct the concepts and how to formulate the laws. (*The Historical Meaning of the Crisis in Psychology*)

What SLS researchers call “action research” from Vygotsky’s perspective is the only research that matters, it is for all intents and purposes basic research.

SKA: ---- Do you think ‘causal explanation’- as it is advocated in natural sciences being anchored in mechanical materialism ontology- is applicable to (second) language development to account for language changes? If not, how does sociocultural theory - with its ontological grounding in dialectical materialism- account for processual changes of (second) language development?

JPL: ---- Causality is a very complex matter in any science. It seems clear that in most scientific domains, causality is no longer a matter of simple efficient causality, whereby each time X precedes Y, Y occurs, and Y does not occur unless X occurs. Minimally, we need to make a difference between necessary and sufficient causes. I recently read a short online piece on causality which used the example of the cause of forest fires. It seems that a number of factors need to line up for a forest fire to break out, not just a spark of some kind, either natural (lightning) or manmade (a tossed cigarette). There must be a sufficient amount of tinder that must also be sufficiently dry, and there must be wind of sufficient speed to spread the fire if it begins. Thus, to claim that the cause of a forest fire is a tossed cigarette is not accurate.

With regard to the higher human psychological system, certainly a necessary condition is an intact human brain, but this in itself is not sufficient to generate the system that Vygotsky is interested in. There must also be normal access to idealized/humanized reality that is made available through the mediation of others. If access is inhibited for some reason (see my earlier comment) then the system does not

fully develop. Both poles of the dialectic (biology ~ culture) are necessary and neither alone is sufficient.

As far as SLD is concerned, following what I just said, I don't think we can look for a single cause responsible for the process. We know that access to the ideal is necessary, but in itself it is not sufficient, because of course individuals may, for various reasons opt not to take advantage of that access. We also know that access can be different in different environments. So-called immersion settings where learners have access to robust, although not necessarily well organized, affordances may or may not be a sufficient condition, again depending on motives and goals that people bring to the situation. Moreover, natural affordances may not even be a necessary condition for successful SLD. Properly organized educational environments may be just as effective in promoting development. I will say more about this below.

SKA: --- What in your opinion are the main misconstruals of sociocultural theory in second language development studies?

JPL: --- The fundamental problem is that many SLS researchers have not delved deeply enough into the theory. By this I mean they have not grappled with the original writings of Vygotsky (here I would also include Luria, who is an important proponent of Vygotsky's theory and who carried out significant research informed by that theory.). They have instead read what I and my colleagues and students have written, which is fine, but to be honest many of our early publications did not fully embrace Vygotsky's dialectical methodology. As a result, many have imported their often-mistaken understanding of Vygotsky's concepts and principles into their own framework, which contorts Vygotsky's original theoretical proposals. To give a parallel example, it would be difficult to imagine anyone engaging in serious UG research without reading Chomsky.

We can see several examples of how SLS researchers have in a sense jumped the gun without fully understanding the theory. Two recent cases involve the increasing amount of work that focuses on a concept that Vygotsky proposed rather late in his life—*perezhivanie*. He considered this the unity of emotion and intellect that arises in concrete environmental circumstances that impacts how individuals react and deal with these circumstances. It is not an easy concept to understand and long-standing SCT researchers have been intently debating the concept for some time. SCT-L2 researchers, including Merrill Swain, Steve McCafferty, Holbrook Mahn and I have published couple of papers on the topic over the past few years. I believe this has led to an increase in the number of papers on the topic by SLS researchers whose work belies less than a full understanding of the concept, and more importantly, how it fits

within Vygotsky's overall theory. While it is encouraging to see that researchers take some inspiration from our work, it is somewhat discouraging to see that shortcuts are taken in the sense that the concept is not fully appreciated for what it can offer the field.

A second example is work that has been done on Dynamic Assessment, a concept that Matt Poehner and I introduced into SLS about 15 years ago. Without a thorough understanding of the Zone of Proximal Development, a concept from which DA emerged, it is difficult to fully appreciate what DA contributes to L2 teaching and assessment. I know that Matt, who is without a doubt the leading figure in DA L2 research, is at times quite frustrated at how the concept has been misconstrued.

Perhaps the most egregious misconstrual is the unfounded assumption that the ZPD is equivalent to Krashen's proposal regarding $i + 1$. Several of us have published articles demonstrating the lack of correspondence, yet people continue to cling to this false equivalence. A related matter with regard to the ZPD is the mistaken assumption, among both general SCT and SCT-L2 researchers that the concept of scaffolding and the ZPD are also somehow equivalent concepts. They are not. An important scholar, who has written about the misconception is Nikolai Veresov (2017). More recently one of my graduate students and I published an extensive article arguing that while scaffolding may be a worthwhile concept, it does not capture the same process that Vygotsky intended to capture with the ZPD (Xi and Lantolf, 2020).

[Veresov, N. (2017). ZBR and ZPD: Is there a difference? *Cultural-Historical Psychology*, 13, 23-26.]

[Xi, J., & Lantolf, J. P. (2020). Scaffolding and the zone of proximal development: A problematic relationship. *Journal for the Theory of Social Behavior*, 1-24. doi: 10.1111/jtsb.12260]

SKA: ---- What are the important watersheds which separate sociocultural theory from other seemingly cognate second language acquisition theories such as socialization theory which are concerned with culture and context of second language acquisition in general?

JPL: ---- SCT is not a theory of language socialization, it is not a sociolinguistic theory. It is a theory of the human psyche/consciousness/higher mental functions, which asserts that uniquely human forms of mentation arise from the penetration of cultural forms of mediation into what nature has provided as consequence of biological evolution. Once culture enters the picture as children are brought into their communities through the social mediation of others (i.e., old-timers), their human

consciousness is formed as their natural memory, perception, attention, emotion, is restructured as a result of their internalization of cultural forms of mediation. At the risk of distorting things to some extent, we might say that SCT is a theory of cognitive development, which argues that the primary mechanisms responsible for the formation of human cognition are to be found not inside the head but in the social world.

SKA: ---- What are the most important and promising research avenues in sociocultural theory within the remit of second language development studies?

JPL: ---- One of the topics of interest that UG researchers have pondered is the question of “ultimate attainment”, which is concerned with whether or not L2 speakers can attain grammatical competence equivalent to the knowledge that native speakers of a language are assumed to possess. I think that from the SCT perspective there is another way of looking at “ultimate attainment” and this has to do with the extent to what L2 users are able to deploy the new language not just in communicative interaction with others, but to mediate their thinking in the same way that they mediate their thinking through their L1. We know that L2 speakers can achieve a high degree of communicative ability in a new language when socially interacting with others. Anecdotally, there was a time when my communicative ability in Spanish was interpreted by native speakers as indistinguishable from native Spanish. It has since declined given my lack of opportunity to engage others through the language. However, when it came to regulating my thinking through cognitive and emotional issues, it was clear that I had to rely on my first language for mediated support, especially when the task was complex. A couple of research studies that address this issue have appeared over the past few years with mixed results. Some have demonstrated that it seems possible for people to use their L2 as a psychological tool, while others have shown that it doesn't happen. A particularly interesting domain to include in research that addresses this topic is “gesture”, especially the kind of gesture that co-occurs with speech. A few SCT-L2 researchers, most especially Gale Stam, have investigated this topic and the results are far from clear. For me, then, the SCT version of “ultimate attainment” is a particularly interesting topic for SCT-L2 researchers to address.

A second important area for SCT-L2 research is the teaching-learning dialectic, which Vygotsky referred to with the Russian term *obuchenie*. Since the time of Eduardo Negueruela's 2003 doctoral dissertation an increasing number of SCT-L2 researchers have focused on this topic. Keep in mind that this research is fundamentally applied research (as per my earlier comment). It is generally conducted in ordinary L2 classroom settings under the umbrella principle of Concept-Based Language

Instruction. To date, research has considered a number of different target languages, including English, Spanish, Korean, Chinese, Japanese, and German. While much of the earlier work to date has focused on grammar, an increasing amount of work has focused on pragmatics. Without question the leading researcher in this area is Adam van Compernelle. In addition, a small amount of work has been done on L2 reading and writing, but much remains to be carried out in this area. I am unaware of any C-BLI research on the teaching-learning of pronunciation or vocabulary—two wide open research domains.

A third area of course has to be DA research. Here my colleague Matt Poehner, as I have said, is the leading scholar. One of the salient topics that people are now exploring within DA is how optimally to carry out the process at a group level. Some work is underway on technology-based DA that also looks promising.

A fourth area, and one that has been alluded to earlier is how SCT relates to other theories of SLD. In general, I feel that SLS has not allotted sufficient attention to theoretical research. Most journals in our field privilege empirical research studies over studies that investigate theoretical topics. This is unfortunate because in my view it has resulted in a field populated primarily by excellent technicians, in the sense that researchers know how to design experimental studies, run stats and draw conclusions, or to collect and analyze data sets using a particular analytical lens, such as Conversational Analysis, Corpus Linguistics, etc. We also need in-depth discussion of the various theories that operate in the field. There have been some efforts to deal with this issue at important conferences such as AAAL and AILA and there has been the occasional article appearing in journals such as *Studies in Second Language Acquisition* and *Language Learning* that address such theoretical concerns as cognitive and social approaches to SLD. There have also appeared a handful of edited and authored volumes that address various theories. But there has not been, to my knowledge, the kind of intense and productive comparative discussion that is necessary if the strengths and weaknesses of theories are to be brought to the surface. One of the impediments to such an undertaking, unfortunately, is that most of us are unwilling or simply do not have the time to dedicate to understanding theories other than our own.

SKA: ---- What is your advice to young researchers who would like to learn and pursue research on second language development and teaching drawing upon sociocultural theory?

JPL: ---- My advice is to spend time reading Vygotsky! You might also consider attending and/or participating in our SCT-L2 Working-Group meetings that until the

Covid pandemic were held annually. The meetings are opportunities for junior as well as senior scholars to present work in progress, both empirical and theoretical, and to receive commentary and feedback from other participants. The next meeting, if all goes well, will be held in Pamplona Spain, most likely in 2022, although 2021 might be a possibility.

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Interviewer's Biography



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