1 Introducing Sociocultural Theory

1.1 Introduction

The initial section provides an overview of the general theory as it was developed by L. S. Vygotsky in Russia roughly between 1924 and 1934 (the year of his early and untimely death at the age of thirty-eight). We explain the theory's foundational principles as well as the genetic research method Vygotsky proposed, which examines psychological processes and behaviors by tracing their origins and formation over time, including from present to future time, as happens during educational instruction. We then consider the implications of the genetic method for language education. In Sections 2 and 3, we discuss how the principles and genetic method are realized through particular educational activities. Section 2 discusses the pedagogical model referred to as Concept-Based Language Instruction (C-BLI) and includes examples from classroom research, while Section 3 addresses Dynamic Assessment (DA) along with some of the relevant research findings that have emerged from this approach to language assessment. In Section 4, we discuss two current models of teacher education that draw extensively from the theory. One model works with novice teachers at the university level and the other involves novice and in-service teachers who practice in primary and secondary schools. Finally, we offer some concluding remarks that summarize the discussion and consider implications of SCT–L2 for classroom practice.

1.2 The Historical Study of Consciousness

Sociocultural theory (SCT), or as it is also referred to, cultural–historical psychology, is a theory of the formation and functioning of uniquely human forms of mental behavior proposed by L. S. Vygotsky and his colleagues. In its theoretical and methodological perspectives, SCT assigns a central role to *history* as the process through which the human species, human cultures, and human individuals develop their abilities to learn, think, and act. As we proceed through our introduction, why and how history matters will become clear. The way to think about history in SCT is as change over time, but we must bear in mind that change is influenced by the purposeful activities of the individuals, communities, and species that are changed. Said in another way, humans change over time because we intentionally create the conditions in which change happens. This concept plays a central role in the educational process, which has as its goal the development, or change, of those who participate in the process.

To fully appreciate the importance of history in the formation of human thinking, what Vygotsky called the "genesis" of thinking, we need to discuss the new orientation that Vygotsky introduced into psychology. As with any

scientific endeavor, the goal is to explain why any object, event, or system behaves as it does. To achieve this goal requires rigorous exploration of the reality of interest. This means that it is necessary to "look under the hood" to discover the factors that shape reality in specific ways, because those factors are often not open to direct observation by our senses, and in some cases our senses can lead us astray. For instance, our sense of sight tells us that the sun moves across the sky from morning to evening, and indeed many languages overtly express this misleading observation, as for instance when English speakers refer to the "sun rising in the East" and "setting in the West." For centuries this was the accepted belief because it was assumed that the Earth was the center of the universe and that the sun and planets revolved around it. It took a long time for science to discover and convince the general public that the universe is helio- rather than geo-centric. Indeed, if reality were in fact organized as it appears to our senses, science and education would be virtually unnecessary.

The general approach adopted in sciences such as physics, biology, and chemistry is to try to reduce an observed phenomenon to its elements, the smallest components that cannot be further reduced, on the assumption that these elements and interaction among them account for what we are able to observe. This idea can be traced back to ancient Greece, where it was believed that efforts to reduce matter would ultimately lead to their smallest, unobservable, basic components. These components were called atoms, or "uncuttable" elements. For a long time, it was believed that the atom was the smallest element of ordinary matter, but over time it was discovered that atoms are in fact comprised of even smaller elements – electrons, protons, and neutrons. Eventually, even smaller elements were proposed – quanta. The point is that a crucial procedure in scientific explanation is reduction, not for the sake of reduction per se, but because it is believed that all of material reality is likely to be comprised of a small set of elements. This approach has been carried over to the social and human sciences. Psychologists, for instance, sought to understand human behavior by reducing it to a small set of elements, called "reflexes," or reactions to environmental stimuli. One of the famous examples of this process that made its way into popular culture is Pavlov's salivating dog. This view held that living things, including humans, react to environmental stimuli in the same way that dogs in Pavlov's lab responded to the sound of a bell as a signal that they would be fed. In other words, behavior of all life forms, including humans, was reduced to reflexes that were either biologically inherited from ancestors or the result of conditional reactions to environmental stimuli.

Of course, plants and animals, including humans, do respond reflexively to environmental stimuli. Nonetheless, Vygotsky argued that following the reductive procedure of the hard sciences would not be a productive way for

psychology to understand human thinking. His proposal (Vygotsky, 1997b) was that psychology must identify the smallest *unit* (not element) that would allow us to observe and understand uniquely human forms of mental behavior. A unit should contain the basic features of the more complex object or process that we want to understand. He offered the following example to explain what he meant. If we want to understand the property of water that enables it to extinguish fire, we cannot reduce it to its elements, oxygen and hydrogen, because hydrogen is flammable and oxygen promotes combustion. Therefore, the smallest unit, given what we want to explain, is the combination of oxygen and hydrogen that is water. Transferring this idea to psychology, Vygotsky reasoned that there must be basic units that would allow us to study and understand human mental processes – processes that go beyond instincts and conditioned reactions to the environment. Among those basic units he included cultural concepts as they are represented in word meaning, which for him entails the unity of thinking and speaking (see Vygotsky, 1987).

Children are born with genetically transmitted psychological processes inherited from their ancestors. Thus, infants cry instinctively when they are hungry and they instinctively suckle when their cheeks are brushed by a nipple, or even a finger. This is not a behavior they learn. Adults also search for nourishment when they are hungry, as do all living things. However, unlike infants and animals, we can – up to a point – inhibit the search for food. Moreover, and unlike other animals, we can frequent special locations (i.e., restaurants) to satisfy hunger and we can even eat when we are not hungry simply to enjoy the pleasure of good-tasting food. Adults can also intentionally pay attention to certain events and objects and ignore others and we can choose to remember specific events and objects and ignore others. Unlike other species and children of our own species, we can imagine and think about realities beyond the immediate context in which we may find ourselves. We even have the capacity to design a way of achieving an imagined reality. What is it then about adult thinking that distinguishes it from children and that of other animals? There must be something that humans do not share with other animals and the young of our own species that makes the difference in thinking.

Vygotsky reasoned that humans (adults) must be simultaneously animals and not animals. We share natural instincts with animals but at the same time we have something unique that extends beyond instincts. He proposed that what makes us unique thinkers is human culture. While many have argued that other species of animals live in some configuration that resembles culture, the configuration is nowhere near as complex and as developed as human culture(s). Most importantly, there is one feature that human cultures have developed that

animals and young children lack – the ability to speak. Speaking (we include sign language of Deaf communities, as well as writing or what Vygotsky called, written speech) is the key to the formation of human thinking, or what is called in SCT, *higher psychological functions*; that is consciousness. Our natural instincts and our learned reactions to environmental stimuli are more or less automatic responses to the world around us. If someone throws an object at us, we instinctively react to avoid being struck. If a particularly pleasurable or painful event frequently recurs, we learn to react positively or negatively to it. However, there are circumstances in which events in our world occur such that we do not have a ready-made way of reacting (instinctive or conditioned), yet we need to find some way of behaving that is appropriate for us. Consider a simple, but potentially fatal, circumstance in which a man finds himself in the woods confronted by a bear. His instinct most likely pushes him to turn and run. Yet, this could provoke the animal, which also reacts on instinct, to chase down its prey. Most of us would have little chance to outrun a bear. The man must inhibit his instinct to run away, not something that instinct prepares us to do, and must at the same time quickly devise a plan of action in order to survive. He might decide to freeze and not move and hope that the bear loses interest, or he might try to slowly back way while not looking the animal in the eye. This process requires a special kind of thinking that goes beyond instinct. The planning process is carried out through his higher psychological capacity, or consciousness – a process in which speaking to oneself is deeply implicated. The conscious mind imbues humans with a very powerful survival mechanism – the capacity to deal with unanticipated objects and events (Arievitch, 2017). Vygotsky (1993a, p. 57) acknowledged mind as "the most valuable biological adaptation" in all of nature, introducing "tremendous complexity" into human behavior "by giving it endlessly varied forms and by providing it with enormous flexibility."

In a very real sense, through the planning process we carry out an action mentally before executing it physically. Planning may be a simple process or it can be quite complex. Before constructing a building, architects work out complex plans using the support of artifacts such as computers to take account of all the factors that are necessary to construct the edifice (e.g., resistance against the forces of nature, including gravity). No worthy architect would consider constructing a building without a plan. On the other hand, deciding what to prepare for dinner requires a much less complex plan, but nevertheless, most of us do not just randomly throw ingredients together and hope for the best. We work out a plan in our conscious mind that takes account of our likes, dislikes, ingredients available, time, and so forth. What this means is that humans act twice before carrying out an action: once mentally and then

materially. This includes not only constructing buildings and cooking meals, but also deciding how to interact communicatively with other people.

Vygotsky argued that psychology must answer the following questions: How is consciousness formed? How does it function in our life activity? How can its quality be enhanced? To begin to answer the questions, he proposed a set of principles as well as a new research methodology that has implications not only for general psychology but for education and for our purposes, language education.

1.3 Principles Guiding the Formation of Consciousness

1.3.1 First Principle: Mediation

Mediation: a "*transition from direct, innate, natural forms and methods of behavior to mediated, artificial mental functions that develop in the process of cultural development*" [italics in original] (Vygotsky, 1998, p. 168). This principle reflects "the historical development of human behavior" (p. 168) as cultures create different kinds of physical and symbolic tools to help them modify nature to survive and to improve their living conditions. For example, if we need to dig a hole to plant a tree, we can try using our hands as an animal might. However, it is much easier and more efficient to use a shovel – a cultural invention that enhances our ability to dig holes. If we need to plant many trees in a short period of time, we can use specially designed power machines – a more advanced version of hands/arms and shovels. Similarly, if I want someone, such as a child, to move from one location to another, I can do so by physically pushing or pulling the person, or I can use another human creation – language – to achieve my goal symbolically. Both physical and symbolic tools, such as shovels and language are said to mediate human relationships to material reality and to each other. In other words, culturally created tools come between myself and reality (physical or social) and in so doing, change my relationship to this reality. For a fuller discussion of mediational tools, see Kozulin (2024).

1.3.2 Second Principle: Sociogenesis

Sociogenesis: "*the relation between higher mental functions was at one time a concrete relation between people; collective social forms of behavior in the process of development become a method of individual adaptations and forms of behavior and thinking of the personality*" [italics in original] (Vygotsky, 1998, p. 168). This principle captures the fact that every higher mental process appears twice in development, first interpersonally, between people, and then intrapersonally, within each individual. Thus, functions such as attention,

perception, memory, imagination, emotions, logical thinking are in the beginning of our life mediated through our social relationships with other people. In early life, the other people are usually parents and older siblings. Later, as we grow, other individuals take on this role, including teachers, friends, coworkers, and so forth. How other people behave toward us and eventually how we behave toward them interpersonally affects how we relate to ourselves psychologically, or intrapersonally. This process takes place primarily through linguistic communication. A simple example having to do with perception should make things clearer. In early childhood, before we learn language, our natural perceptual instinct enables us to perceive objects and movements around us. However, prelinguistic children do not have any idea what they are perceiving until another person, such as a caregiver, tells them. Caregivers usually do not do this with a formal plan in mind, in the way a teacher might plan a lesson; nevertheless, it is through speaking with children that their natural ability to perceive is reshaped as a culturally constructed way to perceive. A child might see an object such as a drinking glass sitting on a table. The child has no way of knowing that the glass and the table are separate entities and might easily conclude that the glass is part of the table, until someone lifts and refers to the object as "glass" and also hears the other person refer to the object on which it was resting as "table." Over time, the child is likely to see "glass" in a variety of different contexts and will then come to understand that it is not a feature of table but is in fact a separate object, with a specific function.

As our language system develops, more and more parts of reality become visible to us as they are mediated through the meanings of our language, which is why words are important units of analysis for Vygotsky. Not only are we then able to talk about these parts, but we eventually are able to think about them as well. Thus, what was in the beginning perception mediated by others, interpersonally, becomes perception that is self-mediated, intrapersonally, but relying on the same symbolic meanings that others presented to us. Vocate (1994) described the shift from social communication between people to psychological communication within an individual as movement from "I ~ You" dialogues to "I ~ Me" dialogues.

Not only do we learn how to think about reality through mediation provided by others, we also learn how to feel as a consequence of "I ~ You" dialogues. We are born with a set of emotions that have developed over the course of human evolution. These include among others, *distress,* exhibited through crying as when an infant has an "urgent need" for food (Holodynski, 2013, p. 24) and *endogenous pleasure,* displayed through a smile and the relaxing of tension upon recognizing a caregiver's face (p. 25). During the enculturation process these natural emotions, also mediated by others, develop into more complex

emotions as they are brought into language. Distress, for example, in Western cultures, morphs into frustration, anger, defiance, sorrow, and sadness (Holodynski, 2013, p. 26), while endogenous pleasure develops into pleasure, joy, affection, and amusement (p. 26). Just as with perception, once emotions are brought into language and become semantic emotions and not just biological feelings, we are able to understand what it is we feel as defined by our culture. Moreover, we can use language to talk about our emotions with others even if we do not experience them at the time. Indeed, before his untimely death, Vygotsky proposed a new unit of analysis for understanding consciousness – *perezhivanie* – the unity of intellect/cognition and emotion (see Vygotsky, 1994).

1.3.3 Third Principle: Internalization

Internalization: the "*transition of a function [is] from outside inward*" [italics in original] (Vygotsky, 1998, p. 170). The point of this principle, especially as it relates to principle 2, is that our psychological makeup is shaped by our social experiences. Thus, the connection between our psychology and our social world is necessary and inseparable. Humans as such are always social, even when alone because we always carry others with us in our I ~ Me dialogue what was originally I ~ You dialogue. Vygotsky (1997b, p. 170) stated this connection cogently and succinctly: "through others, we become ourselves."

The process alluded to in the third principle is described as *internalization,* which entails the use of language (i.e., speaking) to master, or regulate, our own mental and physical behavior. In so doing we gain freedom from coercion by the here and now of the immediate environment. Children are not able to understand and talk about the past and the future or about things not in their immediate surroundings until they have developed a sufficiently sophisticated language system that includes the means of talking and thinking about past and future objects and events – that is, things that are extra-contextual. This capacity is crucial in the development of free will, which Vygotsky (1997b, p. 171) equates with verbal behavior: "without speech, there is no will."

An important aspect of internalization is that it not only encompasses cognitive development but also entails the formation of culturally appropriate emotions that emerge from precursor natural emotions (i.e., distress, disgust, interest, startle, and pleasure) as mentioned in Section 1.3.2 (see Holodynski, 2013, pp. 24–25). As children are enculturated along with their cognitive development, their natural emotional instincts are linguistically restructured into a semanticized emotional system as they engage with members of their community. Thus, not only are they able to perceive natural objects as different

as palms, pines, oak, and maples as belonging to the same superordinate category "tree," they are also able to perceive, think about, and linguistically express specific bodily reactions and feelings such as love, hate, anger, fear, shame, joy, and so forth, even when they are not actually experiencing these in real time. Concepts such as "tree," as argued by Danziger (1997), are not natural kinds, but are human kinds created throughout cultural history as communities interacted with nature. In other words, what is expressed through the English word *tree* is not a specific concrete object that would exist in nature in the absence of humans. What exist in nature are concrete objects referenced in English as palms, maples, pines, oaks, cypresses. Moreover, not all cultures have found it necessary to group the array of natural woody objects into a single category. Some indigenous communities in Australia do not have a word equivalent to English *tree*, but instead they have individual words for each of the wide variety of eucalyptuses growing in their environment. Similarly, semanticized emotions created from the precursor emotions are not universal across human cultures. For example, Ratner (1990, p. 78) points out that according to some anthropologists, indigenous North American Arctic communities lack the concept of "anger" "because they do not blame individuals for their actions," even though they may feel annoyed at a particular act perpetrated by someone else.

1.3.4 Fourth Principle: Developmental Stages

Developmental Stages: as every higher mental function is internalized it passes through four developmental stages (Vygotsky, 1997b, p. 103). The first is the stage where our natural innately specified instincts predominate. The second is the stage of external mediation of behavior by other people. It initiates the organization and subordination of the natural processes through social "I ~ You" communication. The third stage occurs when the individual begins to direct the symbolic means used by others toward the self in "I ~ Me" communication in order to mediate, or regulate, our own mental and physical behavior. This stage is associated with *egocentric* or *private speech* (Vygotsky,1987; Flavell, 1966) – speech that at first appears to be social in form but is psychological in function. The fourth stage appears when private speech is completely internalized and no longer overtly expressed. At this point, it becomes *inner speech*, which loses all the formal features of external speech but retains its meaning as it mediates our mental activity.

To give an example of private speech, consider someone trying to complete a jigsaw puzzle. As the person works on the puzzle, it would not be unusual for her to produce such utterances as "Now, the red one," or "Wait, wrong," "Blue."