A Review of *Language: The Cultural Tool* by Daniel L. Everett

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Language: The Cultural Tool by Daniel Everett covers a broad spectrum of issues concerning the nature of language from the perspective of an anthropological linguist who has had considerable fieldwork experience studying the language and culture of the Pirahã, an indigenous Amazonian tribe in Brazil, as well as a number of other indigenous languages and cultures. This review focuses mainly on the key elements of his approach to language: language as a solution to the communication problem; Everett's conception of language; what makes language possible; how language and culture influence each other.

In our everyday lives we engage in such activities as talking to each other, listening to each other talk, writing/texting each other, and of course, reading what others have written or texted. It is not infrequently said that we are *using language* in performing these activities. *Using language* seems to imply that language is a tool, or at least like a tool, that is, a device fashioned to aid human beings in carrying out some task or a number of tasks. But wait a minute! When talking, we use our brains, our lips, our tongues, our vocal cords, the air coming out of our mouths, and so forth. When we listen to someone talk, we use our ears, our brains, our eyes (if we can see our interlocutor), and so forth. When we write or text, we use one or both of our hands and presumably our brains, as well as such external tools as pens, pencils, keyboards, or keypads. And when we read, we use our eyes and brains, as well as books, magazines, monitor screens, and so forth. So aren't all these parts of us that we use in talking, listening, reading, writing also tools?

Then what is this thing called language that we presumably use and seemingly cannot do without if we are to engage in these linguistic activities? We cannot see it, we cannot hear it, we cannot touch or hold it, we cannot smell it, and we cannot taste it. We only seem able to talk about it.

We can sense things going on in our bodies to some extent. Is language a bodily organ or part of a bodily organ—one can

think of the brain—or is it one of things that the bodily organ does? How did it come about? Was language phylogenetically or ontogenetically fashioned to drive all the other parts of us that make linguistic activities possible? Or is it both a phylogenetically and ontogenetically fashioned composite tool?

In *Language: The Cultural Tool*, Daniel Everett (2012) has written a guidebook for the interested general reader, as well as for anthropologists, educators, linguists, philosophers, and psychologists, to help answer these and other questions about language. Others have written guidebooks on language (for example, Pinker, 1994) and Everett is well aware of these works. They not only inform his narrative, but some of them also contain narratives that Everett believes provide misguided and even wrong answers about language, its origins and nature. Everett also gives his guidebook many very human, personal touches, based on his experiences and observations as an anthropological linguist and former missionary studying Amazonian peoples and their languages, particularly the Pirahã and their language.¹ These personal touches serve to highlight and, in many cases, help clarify, illuminate, and enliven his guidebook.

According to Everett, given the kind of brain that human beings have and given the fact that humans are social animals, language emerged as an instrumental product of

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¹ The Pirahã are an indigenous Amazonian tribe of hunter-gatherers, living in the northwestern region of Brazil (Amazonas state) and numbering between an estimated 400 and 700. They speak the last surviving dialect of the Mura language (Aikhenvald, 2012).

certain cognitive capacities of the human brain, to meet some of the requirements of being the kind of social animal that we are. Among the social problems that language helps solve are those that have to do with communication and maintaining social cohesion; both of which are absolutely essential for a social species.

But language is also more than just a tool to solve the basic needs of a social species. It has allowed our species to gain mastery of the world. Thanks to language, we are problem solvers par excellence. In addition, Everett thinks of language as a kind of cognitive enhancing tool but one that is learned and not innate. Language acts in a way like a steroid (not his analogy) for strengthening mental skills (think reasoning, mathematics, symbolic logic). Perhaps most important of all for Everett is that language is a cultural tool—a tool for shaping the way members of human communities behave, think, and know—a thesis not entirely unfamiliar to behavior analysts (Skinner, 1957, 1969).

Everett's book covers a wide range of subjects related to language, culture, and communication in the presentation of his thesis that language is a cultural tool, too wide-ranging to be thoroughly covered here. The central aim of this review was to write a clear and concise exposition of Everett's position on language, particularly what I consider to be the key elements that form the substance of his stance. This will, hopefully, give readers the perspective needed from which they can evaluate his stance on their own and decide for themselves whether or not to read his book. But frankly, Everett does not always make it easy for a reviewer to describe his stance or to shun criticism of it. In some instances, I found myself having difficulty understanding Everett's position, and in these instances and several others I felt compelled to do some critical and interpretive analysis, as the reader will discover later. Reading, describing, and commenting on the works of another are always exercises in interpretation. So I hope both the reader and Daniel Everett will forgive me for any errors of commission or omission in what follows.

For the benefit of the potential reader, I will first present a brief overview of the content of the book. Following this overview,

I will delve into those key elements that provide the framework for Everett's stance: language as a solution to the communication problem; Everett's conception of language; what makes language possible; how language and culture influence each other.

FORMAT OF THE BOOK

In his preface, Everett foreshadows his emphasis on the idea that human language is a tool, an *instrumentum linguae*, and attributes the modern version of this idea to Lev Vygotsky (1978), but notes that such a view goes back at least to Aristotle (384 BC–322 BC). He justifies his book as an attempt to “weave together” the findings of linguistics, anthropology, and psychology to demonstrate that language is a cultural tool—a tool arising out of a “social need for meaning and community” (p. xi).

The introduction begins with a retelling of the Greek myth of Prometheus, who teaches humans how to make fire and thereby incurs the wrath of Zeus. A retelling of the Hebrew myth of the Tower of Babel follows. The point of these retellings is to show that language, like other tools (such as controllable fire), has been a key element in the human mastering of the world.

The book consists of four parts. The first part: *Problems*, which consists of four chapters: chapter 1: “Language as a Social Tool”; chapter 2: “From Fire to Communication”; chapter 3: “Crossing the Communication Threshold”; chapter 4: “Does Plato Have a Problem?” The first part looks at the evolutionary development of the human species, both biological and social and how language may have arisen to solve many of the problems that our ancestors encountered to survive and flourish.

The second part of the book: *Solutions* consists of chapter 5: “Universals and Faculties”; chapter 6: “How to Build a Language”; and chapter 7: “The Platforms of Language.”² These chapters attempt to explain

² These are the chapters listed under the table of contents for part 2. However, Everett's overview of the book in the introduction has chapter 8 included in part 2, where the table of contents has chapter 8 listed under part 3. Also, chapter 9 is listed under part 4, but Everett describes it as being in part 3.

how nature and the environment provided solutions to the human problem of having a need to communicate and the various solutions to these problems that resulted in the differences and similarities in languages. This part also considers the possibility of there being a language instinct, but rejects it as a working hypothesis (chapter 5), examines the forms (grammar) and functions of language (chapter 6), and the supporting platforms (physical, cerebral, and cognitive) that make language possible (chapter 7).

The third part: *Applications* includes chapter 8: "Aristotle's Answer: Interaction and the Construction of Cultural Signs," which argues that instead of a *language instinct*, there is a *social instinct*, or what has now come to be called by some an *interactional instinct* that is the basis for both culture and language, illustrates how culture influences language, and introduces construction grammar to the reader; chapter 9: "Language the Tool" primarily discusses language as social tool for categorizing social and kinship relations and aspects of the environment, such as color terms, numbers, etc.

The fourth part: *Variations* includes chapter 10: "Language, Culture, and Thinking," which treats issues of the relation between language and thought, such as the theory of linguistic relativity; chapter 11: "You Drink. You Drive. You Go to Jail: Cultural Effects on Grammar," which deals with issues of how culture affects grammar, particularly recursion; and chapter 12: "Welcome to the Freak Show," which deals with linguistic and cultural diversity, its impact, and the effects of the encroachment of other languages and cultures. The book ends with a conclusion entitled "Grammars of Happiness," which is a note on how living with the Pirahã has affected Everett personally and how the death of a language or culture results in human race losing something of value that cannot be replaced.

HOW LANGUAGE SOLVES THE COMMUNICATION PROBLEM

Communication

A search on Google or some other search engine is likely to come up with many

definitions of the term *communication*. For example, here is a biological definition of communication that I am particularly fond of by E. O. Wilson (2000):

the action on the part of one organism (or cell) that alters the probability pattern of behavior in another organism (or cell) in a fashion adaptive to either one or both of the participants.

The simplicity and conciseness of this definition makes it unambiguously clear that communication is a functional relationship between the behavior of one organism and the behavior of another, whose genesis may be phylogenetic, ontogenetic, or cultural (Catania, 2001a; Skinner, 1981).

For Everett this definition would probably be too broad and insufficiently nuanced. His conception of communication is only concerned with social communication (communication between conspecifics, particularly human beings) and the nature of the *message* or meaning that the action bears for both of the participants. Everett seems to use the term *information* for, in general, knowledge or more specifically, a message, and the term *signal* for the form in which the information is transmitted. The *transfer* of this information is said to involve an *exchange* that results in the sharing of this information. Furthermore, Everett seems to assume that the message and the signal bearing the message are intentionally or consciously selected ones. He spends part of chapter 3 (pp. 56–59) discussing a model of communication, based on Shannon and Weaver's *The Mathematical Theory of Communication* (1949). Everett's characterization of an act of communication can be summarized briefly this way: The *information source* (human being) selects a unit of information (the message) and *encodes* it into a (speech) signal, which is then detected (sensed) by the *receiver* (another human being) who *decodes* the message. Thus, through this process, the information is transferred to the receiver. The information source replies on its brain to select and encode a message and its body (particularly its vocal apparatus) to transmit the signal. The receiver senses the signal with its sensory apparatus and transmits it (in a different mode) to its brain where the

“biological and cultural platforms” are involved in the decoding.³

The Problem and Its Solution

According to Everett, human beings have a need to communicate and a need to maintain social cohesion in order to survive as social animals. Our brains have satisfied both these needs by having the capacity not only to invent language but also by having the capacity to learn the language of the individual’s community. Exactly what is it about the brain that gives it the capacity to invent language? Everett presents the reader with a formula to summarize his answer to this question: Cognition + Culture + Communication = Language (p. 35). There is something puzzling about this formula. Following Everett, if certain cognitive preconditions must be in place before a species of animal can have language and given that language was invented by human communities and reflects a particular community’s culture, then it makes sense that cognition and culture are prerequisites for language. But according to Everett, language *was* the solution to fulfilling our need to communicate and the need of a community to maintain social cohesion. So how can communication be a precondition for language? Perhaps by including “Communication” in the formula Everett just meant that without a need to communicate, language would be totally unnecessary and not that communication in the sense he discussed it was a precondition for language. But now another problem arises. On what grounds does he claim that human beings prior to the invention of language had a need to communicate that required language to be invented? We know that all of our distant primate relatives have ways of communicating with each other that seem to have survival value, given their natural environment. We evolved from primate ancestors who quite plausibly com-

municated in very similar ways. A need to communicate suggests recognition of something lacking, but what was lacking in the communication of our primate ancestors that they didn’t recognize, but our human ancestors did? In his book Everett never discusses these issues.

EVERETT’S CONCEPTION OF LANGUAGE

The Language System

Like the term *communication*, *language* is another term that has been defined in many different ways. Everett’s definition is one that is fairly conventional in linguistics. In chapter 2 he juxtaposes four definitions of language: one from the Merriam-Webster Dictionary, a second from Henry Sweet, a late 19th-century phonetician, a third offered by the early 20th-century structural linguists Bernard Bloch and George Trager, and a fourth by Noam Chomsky. It seems the only reason he chose the last three definitions to discuss was to eliminate them for being too narrow in scope (did not include gestural [sign] language), too broad in scope (included animal systems of communication), and too formal in scope, respectively. The Merriam-Webster definition is as follows:

a systematic means of communicating ideas or feelings by use of conventionalized signs, sounds, gestures, or marks having understood meanings.

Everett’s preference (with reservations) for this definition is that it highlights the fact that language is systematic (just in what way will be discussed below) and a means of communicating shared meanings, using conventional signs in the form of sounds, gestures, or writing. For the most part, the definition meets his formulaic requirement that *Language = Cognition + Culture + Communication*.

The core aspect of Everett’s working definition is that language is a system of signs. This concept is attributed to the Swiss linguist Ferdinand de Saussure (1857–1913). The concept can be found in notes taken by some of his students at a series of lectures he gave and then collected and published after

³There is an inconsistency here in Everett’s wording. In chapter 7 Everett only mentions three platforms: physical, cerebral, and cognitive. It may be that “biological” is lumping together the physical and cerebral platforms. However, culture is listed as a component of the cognitive platform and not as a separate platform. See pp. 8–13 of this review.

his death (de Saussure, 1956).⁴ These lecture notes had a great influence on 20th-century linguistics. Language as a system of signs is based on Saussure's definition of a *linguistic sign*. According to Saussure, each linguistic sign has two associative mental entities: the *signifier* and the *signified*. The signifier is a mental sound image and the signified is a mental concept or meaning. The association between the signifier and signified is determined by social conventions and is said to be an arbitrary one, unlike *iconic signs*, which resemble what they represent and *indexical signs*, where the association between the signifier and the signified is a cause-effect or effect-cause relation. (See Everett's discussion, pp. 117–121.) There are various kinds of interrelations among signs, which together constitute the system. For example, there are interrelationships among the mental sound images and among the mental concepts.

In chapter 6, Everett elaborates on what he calls the *T-model of language*. The T-model of language is a model of the *system of linguistic signs* that underlies speech activities. His exposition of this model is somewhat vague and rambling, but there are three things that are clear about it: (1) it is hypothetical and only warranted inferentially; (2) it is a fairly orthodox model; (3) it is a conceptual model and not a model of what the brain actually does in carrying out linguistic activities. The model contains a phonological, morphological, and syntactic component, and a mental dictionary of words. Everett discusses each of them in various places in this chapter, but I will not be able to describe all of them here due to length limitations. The reader is invited to read these sections on his or her own.

If the T-model constitutes a description of language as a system of signs and if language is what makes linguistic activities, at least speech activities, possible, and if language is embodied somehow in the brain, it is only natural to ask how did it get there? As previously mentioned, Everett presents arguments against an innately embodied language instinct and concludes that this language system is learned by each individual in the

setting of an already established social community with its own cultural and linguistic practices. Everett does not go into much detail about this learning process, but does present a sort of schema for it.

The Interactional Instinct

First, Everett assumes that several things must be in place for language to be learned: (1) there has to be a need to communicate; (2) there has to be a social instinct or what Everett, following Lee, Mikesell, Joaquin, Mates, and Schumann (2009), calls an *interactional instinct*. Quoting Lee et al., Everett defines the interactional instinct as “an innate drive among human infants to interact with conspecific caregivers” (p. 183). While this instinct may also be present in other species of social animals, Lee et al. contends that it is more powerful an instinct in human beings and Everett seems to agree with them.

Accordingly, learning to talk begins with this instinct. Everett asserts that the interactional instinct is a simple reflex out of which language naturally develops, and much more plausible than a language instinct. This shows a misunderstanding on Everett's part of what a reflex is. A reflex is a behavioral response elicited upon the presentation of a certain external stimulus that is phylogenetically based. Such responses can be conditioned by other (conditioned) stimuli, but only after being presented in association with the (unconditioned) stimulus that triggers the phylogenetic response. While it was once thought that this process (respondent conditioning) led to all complex behaviors, years of experimental analysis and the discovery of the selection of behavior by its consequences in the form of operant conditioning have shown this theory to be inadequate to explain the ontogeny of complex behaviors, such as verbal behavior (see Skinner, 1957, particularly, chap. 8). If the interactional instinct really is a reflex, it is hard to see how it could have engendered complex linguistic behavior. Everett spends very little time discussing the nature of the interactional instinct. Is the instinct triggered by the recognition of a human being? If so, what kind of behavior does it elicit and how does this behavior lead to language learning?

⁴ Some of de Saussure's original manuscripts were discovered in 1996 and have now been translated into English. See de Saussure (2006).

The claim for the ontological status of this instinct is based on the fact that human infants are more dependent on their mothers and other caregivers than any other mammal. But it is also the case that human beings take longer than any other mammal to mature sufficiently enough to survive on their own, if the circumstances warrant it. Of course, in human societies today most human beings remain dependent on others throughout their lifespans. It seems to me that the ontological status of an interactional instinct is not very compelling. One could just as well argue that our dependency from birth to death is what drives us to interact with conspecifics. Also the fact that all human beings are born into communities where various kinds of linguistic activities are part of the practices of the community may set the occasion for learning language. In fact one could also argue that the social pressure of being in such a community is what creates the need to communicate. The postulation of an in-born need to communicate and an instinct to interact with others seems rather unparsimonious.

Language Is Learned

In any case, Everett follows his discussion of the interactional instinct with a discussion of how words and syntactic patterns are learned. This discussion is heavily influenced by scholars whose work falls under the rubrics of *cognitive-functional linguistics* or *usage-based linguistics* (Langacker, 2008; Tomasello, 2003). In Everett's view learning words entails a process of storing in long-term memory the phonological form (the signifier) of words, the word's meaning (the signified), the word's morphological structure, and the "syntactic quirks" of words, which I take to mean the restrictions on their arrangement with other words to form larger linguistic constructions. In addition, the meanings of words are somehow cross-linked to other word meanings in the brain.

In the case of learning syntactic constructions, Everett follows the general view of usage-based linguistic scholars (Tomasello, 2003), who treats the learning of these constructions basically in the same way as words. Unfortunately, Everett's discussion is not particularly easy to follow and I recommend that readers who are interested in this

topic read Tomasello (2003) to get a better idea of both what a usage-based theory of language is about and its stance on language acquisition. Basically what I could get out of Everett's discussion is that initially children learn speech utterances as holistic or holophrastic single sign entities and through a process that involves attending to the form-meaning co-variation of these entities learning the elements and their arrangements that form various kinds of linguistic constructions from words to sentences. Instead of the children formulating rules that govern the formation of constructions, children are establishing templates for these constructions, learning what words or other units can fill these templates, and how these templates function to achieve intended aims in interacting with other people.⁵

WHAT MAKES LANGUAGE POSSIBLE

Everett, particularly in chapters 4 and 5, rejects as a useful working hypothesis that language is an innate capacity. In chapter 7, he presents his reasons for believing that if language is not innate, then there must be supporting individual human capacities that make it possible. This chapter is really the central core of his thinking about language. Everett bundles these capacities into three types: the physical, the cerebral, and the cognitive, which he refers to as *platforms*. Each platform is made up of a set of what he regards as basic capacities, specific to humans but not to language. Briefly the physical platform is the human body. The cerebral and cognitive platforms are actually subplatforms of the brain. Although Everett does not elaborate on this, he also thinks that the cognitive and the cerebral may eventually be found to be the same. Exactly what he means by this is not entirely clear. Some of these capacities may or may not also be capacities of other species and although these capacities are necessary for language, none of them alone is sufficient. Thus, it is the peculiar combination of these capacities that make language possible, as well as, as we shall see, culture possible too. The reader may find some of this rather confusing

⁵ These templates sound somewhat similar to what Skinner (1957) called *autoclitic frames*.

because if language is a tool, then how do these other capacities come together to create it? Is there some kind of additional glue required to do this? Or are these capacities, which seemingly are independent, actually interdependent in some ways?

The Physical Platform

Everett does not say very much about the human body itself, although he does discuss how necessary it is for *normal* communication, particularly the organic and anatomical vocal apparatus needed for speech. But he neglects other parts of the body, such as the hands, face, neck, torso, and maybe even legs, and their associated musculature, that might be useful in *non-normal*, gestural communication. Everett also in this context seems to have nothing to say about the sensory apparatus necessary for the listener side of communication. Nevertheless, it should be clear to anyone that having a *living* body is prerequisite for any kind of communication. In other words, without the appropriate *bioware*, such as sensory equipment for sensing and discriminating things in the environment and responding to the affordances of the environment, especially the behavior of others, the prospects for communication would be rather moot. At least this is my interpretation of the necessity for a physical platform. Also what Everett seems to want to emphasize is that the physical platform for language in the human species is unique and that language as we human beings know it would be quite different if embodied in some other species of life. By focusing on the body as a whole, Everett further distances himself from the notion of a genetically wired-in "language organ" that is embodied in the brain (Anderson & Lightfoot, 2002).

The Cerebral Platform

This platform is the brain itself, its anatomical, physiological, and functional organization. Once again this particular platform is not discussed in detail in chapter 7. However, in chapter 4, he does discuss aspects of the brain, but largely for the purpose of presenting evidence against an innate language organ. He also points out

that not all nativists think that there is a single part or region of the brain that is the control center for linguistic activities, but rather they claim that there are many innately specified areas throughout the brain that carry out the functions required for linguistic activities. He counters these claims with evidence that the areas so claimed, such as Broca's Area and Wernicke's Area, perform a multitude of other functions. He also counters with the possibility, as suggested by others, that those areas of the brain involved in linguistic activities have become specialized as a result of the individual interacting with others in a verbal environment, that is, as a result of learning.

The Cognitive Platform

A large part of chapter 7 is devoted to a discussion of the cognitive capacities on which language is founded. As one reads through this chapter, it is like being in a labyrinth with lots of blind alleys and miscues for getting out. The cognitive platform consists of "a set of crucial abilities that distinguish humans from other species" (p. 158). Again, as I mentioned in my introductory remarks to this chapter, it is important to note that what Everett is claiming is that the particular configuration of abilities, not just any one of them, is what distinguishes us from other species. This will be important to keep in mind as we discuss Everett's cognitive prerequisites for language. The five cognitive components that form the basis for language are: (1) intentionality, (2) the background, (3) figure and ground, (4) Contingency, and (5) culture.

(1) Intentionality. The human mind is said to have a number of cognitive capacities. As recounted by Everett, philosophers, such as Jeremy Bentham, Franz Brentano, Edmund Husserl, and particularly John Searle (1983) have claimed that one of the hallmarks of our minds is that our thoughts, beliefs, desires, and other properties and qualities are about, directed to, represent, stand for (mean) objects and relations in the world. This directedness is called *intentionality*. Everett does not try to explain how the objects and relations in the world get into our minds, but it is not really necessary to do so.

One only has to see how intentionality is necessary to make language possible.⁶

As discussed earlier, Everett, following Ferdinand de Saussure describes language as consisting of a system of linguistic signs, entities with forms that direct listeners, upon perceiving the form of the linguistic sign, to its meaning or function, that is, to objects and relations in the world that have somehow been embedded in the mind. It is in this way that language builds on intentionality. The signs are useless unless they can direct the mind to their meanings. Likewise, speakers must be able to direct their minds to the mental objects and relations of the world and evoke the appropriate form, which must also be represented in their minds. Everett does not delve into how the relation between signifier and signified are established. But it is quite likely that the establishment of this relationship rests on phylogenetic, ontogenetic, and cultural factors.

Intentionality, as Everett is quick to point out, is not unique to the human species. Other species too exhibit intentionality as when “a squirrel that stops eating to look around when it hears a noise is directing its thoughts” (p. 161). Everett also wants his readers to know, perhaps in case they may think that the relation between intentionality and language might be the other way around, that intentionality is exhibited by human beings without the aid of language, as when a person might suddenly stop what he/she is doing and listen to a noise in the middle of the night, a sure sign that “we clearly can have directed actions and thoughts without language” (p. 161).

(2) The Background. Another philosophical concept that Everett has as a cognitive ability is that of the *background*. This idea also comes from John Searle (Searle, 1983, 1992, 1998, 2010) who claims that it is necessary for the functioning of intentional-

ity. Basically, the background is whatever is necessary to have in order that the mind/brain might be directed to certain thoughts, beliefs, intentions, desires, and apparently, even actions. The background seems in general to be whatever knowledge and capacities, whether phylogenetically, ontogenetically, or culturally derived, that are required not only for intentionality to function but for language as well. Everett gives several examples of the background at work both in linguistic and nonlinguistic situations. One nonlinguistic example is that as everyone knows when given food, we put the food in our mouth and not in our eyes or ears, or nostrils, or navels, or other body cavities. One amusing linguistic example of the background that Everett gives has to do with the theory of mind, that is, the attributing of beliefs, desires, intentions, and other mental states to others (pp. 164–165). When Everett began living among the Pirahã, his skill in communicating in that language was next to nil. Yet gradually he became more and more skillful and began visiting other Pirahã villages where he would usually end up asking the villagers questions. When he did so, they would not respond directly to him but instead talked to each other, expressing their surprise that this outsider spoke and sounded like a Pirahã. Everett was abashed at this turn of events and wondered why they were so rude to him. He later came to believe that the way they responded to his speaking in their language was due to the fact that they had a theory of mind that made them believe that he, being an outsider, did not have a mind like theirs. For Everett, the Pirahã’s theory of mind was part of the background necessary for using their language.⁷

(3) Figure vs. Ground. Everett spends only about two paragraphs on this ability. This is the ability that all living things have, given their sensory-motor modes of interacting with their environment, to distinguish a specific object in or aspect of one’s environment from all the other objects in or aspects of one’s environment. Only in this way can

⁶ It is not clear whether Everett treats intentionality as an innate/phylogenetic capacity or an ontogenetic/learning-based capacity. One could possibly make the case that it is the physical and social environments that direct the mind. This would certainly explain, as Everett points to throughout the book, why the thoughts, beliefs, desires, and so forth, of peoples from different physical and cultural environments often seem to be directed to different things.

⁷ The background seems very much like what linguists call pragmatics, particularly the physical, linguistic, epistemic, and social context of language, or what behavior analysts refer to as repertoires of behavior arising from past contingencies of reinforcement.

we direct our attention and intentions toward whatever is important to survival for any living thing. In addition, figure vs. ground is crucial for consciousness and communication. Although Everett does not specially mention how figure vs. ground distinctions are important for language, the implications of this ability are fairly obvious. If language is a system of signs, as he believes, then it is useless to human beings unless they are able to discriminate both the signifier and signified of a sign from those of other possible signs⁸

(4) Contingency. Everett describes Contingency as "[an] ability to see links of causality or correlation between objects" (p. 166). Everett also claims that our ability to theorize, particularly our ability to theorize about other minds, is dependent on Contingency.⁹ Everett uses the phrase *contingency judgments* to indicate the process of forming a belief about the relation between two or more objects. An interesting example he presents has to do with the belief among many poor Brazilians that if one eats a mango and pineapple and then drinks a glass of milk, it will lead to terrible abdominal pains and vomiting, followed by death within 72 hours. Everett's discussion suggests that this is an incorrect contingency judgment, but offers no explanation for it. Of course, if the belief is not contingency-governed in the behavioral sense, then it seems clear that the belief, however it got started, is socially controlled or rule-governed.

So in what respect is Contingency a necessary cognitive ability for language? Everett does not seem to be very clear on this. Certainly language can express cause-effect relations and contingency judgments. Languages express these relations in many formal ways, for example, "if $x = y$, then" sentences and " x because y " sentences do in

English. But one could imagine a language that did not express such relations but simply stated one event and then another event without any grammatical linkages to indicate, or even imply, a Contingency relation between them. If language is a system of arbitrary signs, then it has the potential for expressing, or not expressing, many things, as Everett himself points out in various places in his book.

The only connection that Everett shows between contingency (in his sense) and language is a formal one, not one of dependency. The words of sentences arrange themselves in recurrent and orderly patterns. As a result there are certain degrees of likelihood (probabilities) that given the appearance of one word or one type of word in a sentence, we can expect a certain word or at least a certain type of word to follow. Everett presents several examples of this. One such example is that given the appearance of a definite article ("the"), we can expect that some noun will follow, if not immediately, then soon after. Everett thinks these kinds of expectations are useful. This may be so in certain contexts, but one doubts their utility in any particular verbal episode. If a speaker begins a verbal episode with "the" and then hesitates, will that in anyway aid the listener in figuring out what the speaker is going to say next? I doubt it. Or will it aid the speaker himself in figuring out what he is going to say next? Again, I doubt it.

(5) Culture. Everett's discussion of culture as a part of the cognitive platform is very difficult to interpret. So for the reader's benefit, I'll start with a fairly extensive quotation and then try to render an interpretation of it based on my reading of the entire book.

The final component of the cognitive platform I will discuss here is in a way a by-product of these other features. Culture is essential to language, in the sense that it results from networked knowledge and behavior with others, and brings meaning from the world. This is a crucial component because these features of culture are what motivate and enable us, but are also shaped by the growth of language among groups of our species. So, culture is both a product and producer of language. Likewise, language is a

⁸ *Ground* seems close to the behavior analytic concept of stimuli (the sensory phenomena that constitute the environment of an organism) and *figure* seems close to the behavior analytic concept of discriminative stimuli (stimuli that are in a functional relationship with some behavior of an organism). Everett, however, seems to treat them in a more mentalistic and philosophical way.

⁹ Since Everett uses the term *Contingency* in a special way, I capitalize it to distinguish it from how a behavior analyst might use the term.

product and a producer of culture.
(p. 169)

Language, according to Everett, is founded upon the cognitive abilities/features of intentionality, the background, figure vs. ground, Contingency, and culture. Now he seems to be saying that culture is derived in part from the other abilities/features making up the cognitive platform. He particularly emphasizes that for culture to exist there must be a *shared* background, which he calls *networked knowledge*. And although, he is not entirely clear on this, what I think he is saying is that having a shared background requires *behavior with others*, which seems to mean in particular, communicative behavior. Through these two elements, culture “brings *meaning* from the world.” But brings meaning from the world to what or to where or to whom? Perhaps he means bringing meaning from the world to the individual. Thus, culture is the vehicle for making shared knowledge possible, thanks to communicative behavior. But isn’t the bulk of the communicative behavior of human beings done through language? And if culture is “shared values and knowledge,” as Everett claimed earlier (p. 46), then isn’t it simply part of the background, rather than a separate cognitive ability? From this perspective, culture seems to be simply a subset of the background that is shared by members of a community. Members of a community acquire this shared background in a number of ways, such as through observation, imitation, and other forms of contingency-governed nonverbal learning. But an enormous amount of this shared background is learned through language or actually through linguistic activities. Either way, following Everett’s stance, both culture and language depend on intentionality, figure-ground distinctions, the background, and Contingency. Thus, it’s not so much that culture is both a product and a producer of language and vice versa, but maybe it would be better to consider that both language and culture would not be possible without these four cognitive abilities. To put it another way perhaps, both language and culture are social tools. Note that this conceptualization does not preclude some kind of interaction between them. In any case, Everett’s brief discussion of culture as a component of the cognitive platform lacks clarity and coherence.

HOW LANGUAGE AND CULTURE INFLUENCE EACH OTHER

The relation between language and culture constitutes the major focus of Everett’s book. For him culture is not only reflected in the form of language but is a factor in determining the form of language. On the other hand, language is the primary means of transmitting much of culture from one generation to the other. Everett offers many examples of how culture affects language; the gamut runs from vocabulary to idioms to grammatical categories to syntactic constructions. There is little doubt that vocabulary does reflect both the material and conceptual differences between different cultures. For example, the word “chocoholic” has no equivalent word in Pirahã, while Pirahã has no color word equivalent to the English “orange.” An English idiomatic expression like “kick the bucket” could not be translated literally in another language without creating some confusion. Some languages have very subtle grammatical tenses that may not found in other languages, and some syntactic constructions or sentence forms might seem very strange to a speaker of another language. Also a very important issue for Everett concerns the linguistic process of recursion¹⁰ and how dependent it is on culture (pp. 280–298). But exactly how do the shared values and ideas he takes as constituting culture determine language structure? Is there a set of well-warranted principles that govern this relationship? Or is it the task of empirical research to uncover that a specific cultural value or idea governs a particular type of linguistic form? Also are all aspects of grammar subject to the influence of culture or only some aspects? And if so, which ones and why? Answers to these questions are not to be found in Everett’s book. But let’s take a look at just two examples: one which claims that a cultural value governs language structure and one that

¹⁰ Recursion is said to be a natural process in human languages, which allows grammatical structures of one type to be embedded or nested in grammatical structures of the same or different type, hypothetically allowing a grammatical structure to be infinity long. A good example of a text that contains recursive structures is the English nursery rhyme “This Is the House That Jack Built.”

makes no claim to culture as a determinant of language structure to see how problematic such explanations are.

Amele is a Papuan language spoken on the eastern half of New Guinea. Everett discusses the discovery by researcher John R. Roberts¹¹ that the Amele language has no verb for giving. In other words, an Amele sentence that expresses that someone (the donor) gave something (an object) to someone (the recipient) only expresses the donor, the recipient, and the object, in that order.¹² According to Everett, researchers—the researchers' names are not mentioned—claim that there is a cultural reason for this, namely that the concept of giving is so basic to the culture that it need not be specified in a sentence. The problem with this explanation is that it is an inference with no warrants other than that in a sentence expressing an act of giving no verb for giving is manifested. But the biggest problem with this explanation is that in many other societies, such as those of Japan and Korea, giving is a fundamental value, yet their languages have verbs for giving. How can this difference be explained?

Linguists typologically divide languages according to the typical word order of the subject (S), object (O), and verb (V). The possible orders are SOV, SVO, VSO, VOS, OVS, OSV and all possibilities are found among the languages of the world. Everett does not discuss them in terms of culture. Instead he discusses them in terms of their frequency of occurrence and why some occur more frequently than others (for details see Everett, 2012, pp. 112–116.) The reason why he does this seems obvious: there is absolutely no way in which one could possibly find a shared cultural value or concept that determines the commonality in word order. It almost seems as if Everett's operating principle for deciding whether it is culture that determines a particular piece of grammar is that if you cannot find a plausible cultural explanation, look elsewhere, which sounds

like a rather ad hoc way to do science. This opinion might be too harsh on Everett as he does admit that his proposition, culture shapes grammar, is a difficult one to test (p. 262). But until such tests become available, Everett's position on the relation between culture and language must be considered speculative.

Early in the book Everett briefly presents a working definition of what he characterizes as *living culturally*. "[L]iving culturally is sharing a similar set of ideas and values" (p. 48). It is not always entirely clear what Everett means by "values" or "ideas" or how a researcher might determine what they are. As to values, at times he seems to use the term in the sense of the worth of something (object? idea? behavior?) and at other times the value is the object or idea or behavior itself. Sometimes for "ideas" he substitutes "meaning" or "knowledge." One example of values has to do with his book. He wrote it in order to share his ideas with the reader. The wanting to share is a value for him. Reading his book shows that both he and the reader share the value of "increasing our mental store of new information." Thus, living culturally seems to mean exchanging information in order to share that information—a value shared by both he and the reader.

Everett realizes that not everyone in the same culture will necessarily share the same values or possess the same information or value the information in the same way. This, of course, explains why we live culturally, for if everyone had the same values and the same ideas, there would be no point to living culturally. Notice, however, that in his characterization of living culturally he uses the word "similar." On the next page he clearly points out that what he means is that to live culturally all one needs is to have overlapping cultural ways, that is, an overlap in ideas and values. Then the idea of culture as an overlapping set of shared ideas and values among the members of the culture makes some sense. But whether such a conceptualization is scientifically useful is another matter.

But now another problem arises. How do we distinguish one way of living culturally from another? What degree of overlapping is necessary for two or more people to be said

¹¹ No work of Roberts is referenced in Everett's book.

¹² Everett omits noting that in the example he gives "Naus [donor's name] Dege [recipient name] houten" ("Naus [gave] Dege [a] pig" that "ho" [pig] is followed by what would normally be the verb suffixes –ut-en, which mark person agreement and past tense (p. 198).

to be living culturally in similar ways? The dividing line seems rather arbitrary. For example, let's consider Japanese and Americans. We recognize that there are some ideas and some values that they both share. To that extent it can be said that we have overlapping cultural ways. But would we identify their cultures as being the same on that basis?

The basic problem with Everett's conception of culture is that he sees culture and language as mental things in our individual heads that are shared fully or partially with other individuals, whether they are values, ideas, meanings, knowledge, or a system of signs. Such entities are only hypothetical inferences. We cannot get into the brains of individuals to see what they are and to what extent they are shared. We can only observe the behavior of individuals and only by comparing the behavior of individuals can we determine what is shared, namely behavioral repertoires. A more scientifically useful conception of culture is that it is the socially learned behavioral practices within a community.¹³ These are practices that have been handed down from generation to generation and that change over time due to historical contingencies. Viewed this way, language, actually, our socially learned linguistic practices, is/are as much a part of culture as socially learned customs, manners, religions, economic exchange systems, and so forth. And just like these other socially learned practices, they are subject to whatever internal or external selectional contingencies are acting upon them over time.

Everett recognizes that the learning of cultural practices starts soon after birth. In fact he presents a lengthy list of practices or what he calls cultural values that he claims are learned, such as hygiene, food selection, and manners (p. 240). The point he is trying to make is that the acquisition of culture, as he sees it, starts even before language acquisition. But this is doubtful. Learning to communicate through gestures or through speech by means of the mechanisms of social learning (such as imitation, modeling, and selection by reinforcing and shaping contingencies) is absolutely necessary for learning

cultural values. Acquiring culture thus requires communication (in E. O. Wilson's sense). We see the beginning of this right after a child is born. Mothers and other caregivers start gesturing at and talking to, singing to, making noises at, and touching the infant in order to prompt the infant to respond in some way, and when they do, this leads to the caregiver responding in turn. Caregivers are constantly doing things that affect the behavior of infants. Caregivers reorient infants' bodies, move their arms and legs, put things in their mouths, wash and bathe them, change them, show them objects, put objects in their hands, and do myriads of other things that have consequences for the infant. This is the start of communication and eventually leads to the child acquiring cultural practices, including those linguistic behaviors I discussed in the introduction. Unfortunately, Everett seems to have failed to see this.

CODA

Everett's book is a collage of recent and not so recent work on language, culture, and communication from such fields as anthropology, biology, linguistics, philosophy of mind, and psychology, and seasoned with his own personal experiences living among Amazonian peoples and doing field work on their languages and cultures. But by covering such a vast amount of material, a price has been paid in its coherence. Also his style of writing and the way in which each chapter is structured makes the reading of this book somewhat difficult. Scholars may be put off by the fact that Everett often discusses the research of other scholars without providing any references, or in a few cases without even naming the scholars. Furthermore, in some cases claims are made without providing sufficient warrants or references to check these claims.

A behavior analyst might well ask how Everett's stance on language informs an environmental approach to understanding language behavior. Certainly his view of language as a cultural tool might superficially suggest a certain resonance with an environmental approach, as well as his criticisms of the nativist approach. But his mentalistic and cognitive mechanisms for

¹³ This definition is broad enough to include other animal species, if warranted.

explaining language behavior are far from compatible with such an approach. Nevertheless, the issues that he brings to the reader's attention are certainly food for thought, whether one agrees with his handling of them or not. Many of the linguistic issues he surveys have been largely left unattended by behaviorists, such as linguistic relativity, change in language over time, linguistic diversity, the basis for recursive structures in the form of language, etc.¹⁴ But this is understandable, of course. Behaviorists aren't linguists and what intrigues linguists may not necessarily overlap with what intrigues behaviorists about language behavior. If it does nothing else, I hope that Everett's book will stimulate behaviorist readers to think more deeply about our species' claim to fame: language.

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¹⁴ One area that behaviorists have not entirely ignored is the origin of language. For example, see Catania, 1985, 1991, 2001b, and Skinner 1957, 1986.

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