CULTURE AS PHILOSOPHY: THE CASE OF PIRAHÃ

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ABSTRACT:

This paper investigates the thesis that history, language/semiotics, culture, and philosophy for a symbiotic whole in which none can be understood without the other. Each one of these domains (to the degree that they can in fact be separated) shapes and is shaped by the other in Pirahã. The paper concludes that Pirahã philosophy is in certain ways quite close in spirit to the traditions of Nominalism and Pragmatism in Western philosophy and that recognizing the nominalistic and pragmatic core of Piraha philosophy enables us to explain not only many of the grammatical features discussed in Everett (2005), but also additional components of human language and culture such as the difference between genericity vs. universal quantification, in particular why Pirahã (and arguably all languages) *requires* generics while universal quantification is either not found in all languages or, more radically, is found in no language as it is traditionally understood (Kornai (2010)). Pirahã Nominalism, Pragmaticism, and Stoicism emerge naturally from what Everett (2005) calls their "Immediacy of Experience Principle" and culture value system (Everett 2016).

1. Introduction

1.1. Why this paper?

Over the course of the last forty years or so of research on the language and culture of the people of the Brazilian Amazon, I have argued that numerous features of their language and culture are highly informative for an understanding of the richness and diversity of human experience, in particular for an understanding of how language and culture form a symbiotic whole.

Reflecting in more detail on language and culture, there is a sense, however, in which each of these is connected to another crucial piece of the human puzzle, namely, the philosophy that emerges from, connects, and shapes our group and individual identities.

But to see the connections between language, culture, and philosophy, it is vital to curate our understanding of the roots of philosophical ideas, cultural traditions, and linguistic principles, in order to avoid the error of believing that only a particular nationality or ethnicity is capable of developing deep, rich philosophies.

Other scholars have pioneered in this area, e.g. Maffie (2015), McCloud (2019), Pratt (2002), inter alia. Friedericke Moltmann (2022) has explored in considerable detail the connections between languages and philosophies. But few, if any, previous studies have undertaken to explore the connections between language, culture, and philosophy together, at least not as the current paper does.

Learning from diverse perspectives has always been a core component of any intellectual advancement, from physics (see Rhodes (1987)) to art, language, and other manifestations of human cultural-cognitive output. This is perhaps especially so among anthropologists, however imperfect our results and methodologies might be, infused as they are with an irreduceable taint of ethnocentrism.

It is vital that we do not fall into the error of believing that only a particular nationality or ethnicity is capable of developing deep, rich philosophical perspectives. It is also important to understand the philosophical richness of systems that share many concepts in common even though one or more of those philosophies might lack a written tradition or whose written communication was affected by external conflicts (e.g. Mayans and Aztecs). The vastly different histories of the American Indians (e.g. Aztec, Pirahã, and Iroquois; see Everett (in progress)) show the sophistication of each tradition, while simultaneously illustrating for us the fact that the Western tradition was not the only tradition to have arrived at some universally important ideas - for we find similar ideas in the non-Western philosophies of Native Americans. As Pratt (2002, 9ff) puts it:

> "Rather than seeing Native American thought as irrelevant, I propose that we see it as the starting place of some of the distinctive aspects of the American philosophical tradition, as a way to answer the problem of origin. By tracing the career of the central commitments of pragmatism beginning in Native American thought, through their use in resisting exclusion, racism, and sexism, to their emergence in the work of the classical pragmatists, these ways of understanding and acting in the world can become renewed resources. While alternative stories of the origins of American pragmatism can and will be told, this story of origin serves as both a history and a response to the ongoing problem of the coexistence of different cultures in American society."

To fully comprehend any philosophy, we must study it in its historical, conceptual, cultural, and geographical contexts. Just as one would need to understand 19th century US culture in order to understand the emergence of Pragmatism, we need to understand other people's philosophies in light of the local cultures that incubate these systems.

Often one encounters the ethnocentric myopathy of the phrase "American philosophy" used to refer to merely North American philosophy, or to white American philosophers, to Anglo philosophers descended from the continent, and so on. But it is our responsibility, as inquirers interested in the intellectual roots of science and philosophy, to examine ideas from all sources that have nurtured the roots of American philosophy. Of course, while on the one hand there is no single "American philosophy." Rather, there are different chords of highly sophisticated thought from each of the three Americas (North, Central/Meso, South), and the different peoples of the Americas - from indigenous hunter-gatherers to indigenous civilizations. All of these chords are necessary to establish a pan-American and global perspective on philosophy and culture. Intellectual life in the Americas did not begin with the Puritans (see Conkin 2005) nor the Portuguese, Spanish, or French. It began with first inhabitants of these continents, tens of thousands of years ago, just as world philosophy likely began (broadly conceived) with the first humans to have language, Homo erectus, close to two million years ago (Everett 2017; Barham & Everett 2020).

Before concluding this introduction, we need to ask the question, "What is philosophy?" My personal favorite of the many definitions of philosophy I have read is offered by Moritz Schlick, founder of Vienna Circle: "Philosophy is the activity by means of which the meaning of statements is clarified and defined." Edmonds (2020, p15) This is a culturally-based definition. But it is also a semiotic definition because it goes to the nature of the "interpretant" - we interpret objects (conceptual, physical, etc) by means of substituting one sign for another. And the sign substitution choices, the interpretants in Peirce's semeiotics, are to a nontrivial degree shaped by the culture from which the semiotic system emerges.

1.2. Organization of paper

This paper examines the philosophy of the Pirahãs, a hunter-gatherer, linguistic isolate of the Amazon rain forest of Brazil. I want to emphasize that terms like "American Indian," "First Nations," "Native Americans," and so on can refer to politically useful groupings, but they are large groupings that obscure individual tribal, linguistic, and cultural differences. In fact, each culture so classified is distinct and we should avoid, without significant evidence, lumping these distinct cultures indigenous to the Americas within a singly explanatory framework through labels like those just given, as well as others such as "Amerindian." These obscure the differences and autonomy of ideas, ethnicity, and cultures.

Continuing to ask "What *is* philosophy?" Edmund Husserl (1859-1938) is quoted as judging that the phrase "Western philosophy" is tautologous, while the phrase "non-Western philosophy" is oxymoronic (Maffie (2014, p5)). Maffie goes on to argue that this is likely because of the perceived dichotomy between "having a philosophy" and "doing philosophy," coupled with the bias that only Westerners *do* philosophy. Some (usually white Europeans) seem to even find it offensive to believe that Socrates could have been equalled (or even surpassed), by an African, East Asian, South Asian, American Indian, or philosopher from any other area of the world.[1]

To counter these ethnocentric perspectives, as well as to contribute to a more complete overview of American philosophy, I try to show in what follows that Husserl and anyone who shares his opinion are wrong. There are rich philosophies to be found in American Indian societies which should, therefore, be discussed in a history of American philosophy.[2]

This turns out to have special relevance for linguistics and anthropology if it can be shown that philosophy, culture, and language form close relationships, as I hope to demonstrate

here. So what is philosophy from a Western perspective? Does this differ from the concept of philosophy in indigenous America? Is there a right or wrong way for a culture to conceive of philosophy? One place to begin in understanding indigenous philosophy is found in Wilfred Sellars's assertion that "The aim of philosophy, abstractly formulated, is to understand how things in the broadest sense of the term hang together in the broadest sense of the term." (Sellars 1963, p 1). Similarly, there is the oft-quoted statement attributed to William James that philosophy is "... the unusually stubborn attempt to think clearly." In my own understanding of philosophy, it is unnecessary that a given people have a metaphilosophical vocabulary in order to attribute philosophy - having or doing - to them. Hard thinking about how things hang together is philosophy and all peoples likely have philosophy in that sense.

Again, to understand any philosophy, it is important to examine its history, as well as how it is related to other philosophies. Duns Scotus, Thomas of Erfurt, Thomas Reid, John Locke, David Hume, Immanuel Kant, William James, among many many others helped construct Western philosophy, yet the history of this branch of philosophy is orthogonal to the philosophies of most non-Western cultures, e.g. hunter-gatherers of the Amazon. Therefore if we examine only the roots of "American philosophy," and its interaction with European philosophy, we might be led to the false conclusion that Pragmatism, as well as other schools of philosophy of the Americas, is unique to European or North-American Anglo philosophy. Closer examination says it isn't. However, to appreciate American philosophy at a general level, or what Emerson (1837) called the "American Scholar," in a broader or more inclusive sense (e.g. to indigenous peoples of the Americas), we must understand each context and each philosophy of the American continents (which methodology applies to the philosophy of any region), as in Everett (in progress). Though we focus here on the Pirahãs.

2. The concept of "primitive thought" over the years

To move towards a clearer understanding of the Pirahãs, and thus the distinctiveness of the experience from which emerged their philosophy, we will briefly review their history, culture, and language. Then we look with a finer granularity at their philosophy proper, which includes elements of Nominalism and Pragmatism, as well as developed axiological and ethical systems. The similarities and differences with Western philosophy (see Everett (in progress)), will be highlighted, partially supporting some of the views of Pratt (2002).

It is unfortunate that humans are all too often conceptually handicapped by their own cultural boundaries. But it is a fact that most humans are local and parochial, in spite of the efforts of some not to be. Part of that is due to what William James called our preference for conjunction over disjunction: *"If our intellect had been as much interested in disjunctive as it is in conjunctive relations, philosophy would have equally successfully celebrated the world's disunion."* (James 1975, 68) Pratt (2002, 25ff) takes this as James's commitment to pluralism, a commitment not widely shared among philosophers at any stage of history.

In his 1927 *Primitive Man as Philosopher*, Paul Radin (p xxxiii) stated that "There can be little doubt that every human group, no matter how small, has, from time immemorial, contained individuals who were constrained by their individual temperaments and interests to occupy themselves with the basic problems of what we customarily term philosophy." This statement may be contrasted with Lévy-Bruhl 's assertion that "no primitive people are capable of logical differentiation or of a logical selection of data" (cited in Radin (2017 [1927]), p. xi). Unfortunately, Lévy-Bruhl 's pronouncement has been more typical of research in world philosophies and indigenous thinking than Radin's more optimistic prediction. Although both of

these statements are wrong, they each have some utility in framing (the extremes of) discussion of Native American thought.[3] One of the most well-known ideas about the philosophy of thought of indigenous peoples comes from Lévy-Bruhl 's (1966 [1923], p21ff) famous thesis of "primitive mentality," stated in one form here: "Among the differences which distinguish the mentality of primitive communities from our own, there is one which has attracted the attention of many of those who have observed such peoples under the most favourable conditions - that is, before their ideas have been modified by prolonged association with white races. These observers have maintained that primitives manifest a decided distaste for reasoning, for what logicials call the 'discursive operations of thought'..."

If Lévy-Bruhl considered carefully the thinking of the common citizen of the France or England of his time or he would have included them among the "primitive communities." Either might have fit his concept of "primitive community" better than the indigenous communities he was commenting on. It is unlikely that he intends his remarks to apply to anyone anywhere who exhibits a "decided distaste for reasoning," but possible. Admittedly, this primitive mentality is not the result of intelligence according to Lévy-Bruhl , but results from "general methods of thought." Unfortunately, Lévy-Bruhl took much of his information about indigenous thought from reports by missionaries, which included statements such as (Levy-Bruhl (1923)): "The first people to study the natives of South Africa ... testify that "... they only believe what they see..." [asking questions like] "Can the God of the white men be seen by our eyes?"

Lévy-Bruhl apparently considers a demand for evidence a sign that the "natives" do not reason logically (which would entail, for him, accepting the words of the missionaries). Peirce (1877) refers to the method apparently favored by Levy-Bruhl of "fixation of belief" as the "way of authority" and judges it *inferior* to the "scientific method," which observes and respects

evidence, the view that the missionaries disapproved of. According to C.S. Peirce, contrasting the indigenes' method of empirical verification with the missionaries' "way of authority," the latter would be primitive and the indigenes sophisticated - just the opposite of Lévy-Bruhl's implicit rankings. Thus in refusing to form new beliefs based exclusively on the authority of the missionaries, from Peirce's perspective the native peoples are showing *greater* sophistication of thought. Peirce would judge Lévy-Bruhl 's classification as getting it all backwards.

Lévy-Bruhl also finds statements like the following a departure from logical thinking: [Or the "primitives" might say] "I will go up to the sky first and see if there really is a God... When I have seen him, I will believe in him." [missionaries also said of these people] "... they are boors whose god is their belly." (Levy-Bruhl (1923))

This is very similar to statements made to me by the Pirahãs and questions they have asked me about evidence for God. They are scientific, non-superstitious thinkers. Again, however, contra his objections, peoples who reason as those in Lévy-Bruhl 's examples of "primitive" are actually empirically-minded, an essential component of logical or scientific reasoning. They are thus *less* primitive in their mentality than those who fix their beliefs based on statements of authorities (including religious scriptures), at least in Peirce's philosophy.

Moreover, Lévy-Bruhl commits the common mistake of confusing cultural differences with cognitive superiority or inferiority, due to his failure to understand or appreciate the diversity of valid philosophies and ways of thinking about the world. Moreover these distinct philosophical traditions, e.g. his "primitives" vs. Westerners, can converge in many ways, producing similar views from vastly different traditions. Neither is inferior to the other. Each is evaluated according to the cultural context it serves. Too many people believe that if Native Americans are claimed to not accept ideas that Westerners consider essential that this is a racist

claim, a claim that they are inferior. Ironically, the cultural arrogance of such a judgment itself is difficult to overstate. It complacently uses the West as the standard instead of seeing it as but one tradition among many. Lévy-Bruhl was incorrect and his claims may have emerged from a racist perspective. That different societies produce different philosophies of equal worth should not shock us, however, regardless of how conditioned the population at large is to see themselves as the metric by which to judge others.

His explanation for the existence of "primitive thought" is that it is natural in a simpler material existence (Levy-Bruhl (1923)): "... their life embraces so few incidents, their occupations, their thought, and their cares are confined to so few objects, that their ideas must be equally few, and equally confined."

Everett (2016) strongly rejects this environmental determinism. Different groups indigenous to near-identical environments develop very different philosophies and value systems (see my comments below on Perspectivism, for example).

Segal (2007, 635) summarizes Lévy-Bruhl 's theses: "In a series of books from 1910 on, Lévy-Bruhl asserted that ‘primitive’ peoples had been misunderstood by modern Westerners. Rather than thinking like moderns, just less rigorously, ‘primitives’ harbour a mentality of their own. ‘Primitive’ thinking is both ‘mystical’ and ‘prelogical’. By ‘mystical’, Lévy-Bruhl meant that ‘primitive’ peoples experience the world as identical with themselves. Their relationship to the world, including to fellow human beings, is that of participation mystique. By ‘prelogical’, Lévy-Bruhl meant that ‘primitive’ thinking is indifferent to contradictions."

But Segal's overly charitable interpretation of Lévy-Bruhl simply compounds the error. Lévy-Bruhl did not empirically earn the right to make his statements. Unsurprisingly, his overall

thesis is aggravatingly misguided, setting back for years adequate appreciation of alternative and parallel ways of thinking and philosophizing.

Lévy-Bruhl 's work further shows not only that missionaries are not always the best sources for acute anthro-philosophical analysis but also that material simplicity and pragmatist philosophy do not make one community primitive nor force it to think illogically. Further, the idea that our physical environment *determines* our philosophy is just wrong.

After all, Peirce did not develop Pragmatism or Semiotics because he was raised in the New England climate. The weather and topography of New England were neither necessary nor sufficient to account for his philosophy. Likewise, neither is environment necessary nor sufficient to account for American Indian philosophy, though, to be sure, environment always exerts an influence of one sort or another on people.

In her book, *American Indian Thought*, Anne Waters (2017, p xvii), herself a Seminole and PhD in philosophy, draws a more thoughtful, somewhat better-informed conclusion, contrasting (North) American Indian philosophy with Western philosophy: "Indian philosophy, ... entertains a way of knowing by direct access, or awareness of experience, i.e. an integrated "how-to" knowing. The Indian philosopher can accept that the world is "turtles all the way down," i.e. that the foundation does not rest on anything else." At the same time, even Waters's view is overly general, lumping together much significant variation under the Western concept of "Indian."

To Lévy-Bruhl, Waters's "direct access" appears to be primitive reasoning. But in fact this type of knowing is quite closely related to Pragmatism. Nevertheless, as we see in what follows, there is *no* single "American Indian" philosophy.[4]

Although I object to overgeneralizations such as "Native American philosophy," Waters's quote may be taken as referring to forms of "indigenous Pragmatism" found in the Americas (see also Pratt (2002)). Knowledge by "direct access" is after all a demand for witnesses and practical application of the knowledge, i.e. her "how-to" knowing. This Pragmatist orientation is, as we see, strongly active in Pirahã thinking about the world as well. Moreover, in the case of the Pirahãs I want to argue that they implement in their lexicon an idea reminiscent of Wittgenstein is "whereof one cannot speak, one must be silent." This is an important lexically ontological investigave tool for probing Pirahã thought: *Their semiotics/vocabulary fits their philosophy*. But why should this be? And how might this possible? English vocabulary certainly does conform entirely to any particular philosophy (so far as we know).

It is worth observing that English currently is spoken within a society of strangers (Everett 2016; Givón (2022)), serving many internal communities simultaneously, communities in which not everyone knows everyone else. On the other hand, Pirahãs' vocabulary is situated within a society of intimates. The former type of society's cultural values tend towards the more pluralistic while the latter tends to be more uniform (Everett (2016); Givon (2022)). Thus if a particular philosophy is shared by an entire society of intimates, it would not be surprising to learn that the topics of discourse and social exchange in this group are constrained by this group-wide philosophy. The need for words that contradict these values, e.g. quantifiers, numerals, and color terms in the case of the Pirahãs, is reduced. Just as English, say, lacks words for some Amazonian flora or morphemes for categories important to the Pirahãs such as an action begun but frustrated at its point of initiation (**-ogabagaí** in Pirahã), every culture will have a vocabulary that suits its cultural needs at a particular moment (languages change).[5]

Because all societies are formed over time, history becomes important to our understanding of all philosophies. Therefore we briefly survey here some relevant facts about Pirahã history, before moving on to discuss their philosophy.

3. History and philosophy

European settlers first arrived in the American hemisphere at the Northern tip of present day Newfoundland, in L'Anse aux Meadows, more than one thousand years ago, led by Leif Erikson (Ingstad and Ingstad (2000)). They were greeted by peoples that had already occupied this hemisphere more more than 25,000 years (Steeves (2022)). This encounter, between Erikson's Norsemen and the Beothuks, is recounted in the Norse "Flat-Island" book of ca. 1387.

In this encounter, the Vikings encountered eight Beothuk men. The Norsemen promptly killed all eight indigenous folk, by the orders of Erikson's subordinate, Thorvald. The practice of "kill first" was not an uncommon reaction of the Europeans on encounters with indigenous peoples around the world. By 1829 the last Beothuk, Shanawdithit, is claimed to have died. The people in general had died of starvation. Though the Beothuk were related to the Mi'kmaq, little is known of their culture, values, social structures or other aspects of their philosophy and culture. But their story is typical. Similar stories were repeated in many of the settlements of the Americas, as with Columbus's genocidal program among the Taíno (Rouse, 1993) and the Puritans of North America (Cave (1996)). American Indian thought was profoundly affected by the genocide and ethnocide they that began after 1492 (see Mann (2005; 2011)) and, for the Beothuk, after 1000 A.C.E.

In spite of tragedy, many groups were studied sufficiently by foreign researchers or produced their own studies and literature such that we are able to discuss their philosophies at

least at a general level. Before discussing these groups, however, it would help to situate the discussion of indigenous philosophies in the reflection of anthropological theory on these topics, beyond the work of Lévy-Bruhl .

In 1962, Claude Levi-Strauss published a collection of his lectures at the College de France, given in 1960-61. The French title given to these lectures was La Pensee Savage, which has been known ever since in English by the mistranslated title "The Savage Mind." This mistranslation has finally been corrected in the excellent new effort by Mehlman and Leavitt (Levi-Strauss 2021) who give the title as Wild Thought (Levi-Strauss himself had much earlier recommended the title "The Mind in the Wild" (Levi-Strauss 2021, p xvi)). Levi-Strauss's book argues that "All human beings, throughout the world and through history, are intellectual creatures..." As Levi-Strauss stated in his prefatory note to the 1962 original edition of the book, it is about "'Wild thought' and not 'the thought of wild men.'" He argued that we find similar thought in Western societies in poetry and art. There is "nothing disorderly or confused" in wild thought. Rather it is based on understanding and integration of the natural, intellectual, and cultural.

As we saw earlier, four decades prior to Levi-Strauss's book, French philosopher-anthropologist, Lucien Lévy-Bruhl had published his La mentalité primitive (English translation The Primitive Mind). In this latter book, although there are many interpretations of what he meant overall, Lévy-Bruhl contrasts "mystical thinking" with "rational thinking." Like Levi-Strauss, Lévy-Bruhl was (somewhat) misinterpreted based on the title of his work. He did not necessarily intend to communicate that primitive minds were inferior to rational minds, but that these represented two types of thought. The person who prays and meditates is exercising aspects of their "primitive" mind while the very same person may go to work and use data and numbers

to calculate actuarial tables, using their "rational" mind. Neither is inferior or superior to the other, for Lévy-Bruhl . Yet in spite of their apparently good intentions (and in Lévy-Bruhl's case, lack of an empirical warrant for his speculations), these French intellectuals were interpreted by many as meaning, say, that hunter-gatherers of the Amazon are likely to have an entirely different level of thinking about the world from the suited denizens Wall Street, across the board. This is false. While there are profound differences, one finds sophisticated reasoning and philosophy throughout all groups of the Americas. We cannot fairly investigate the thought of native Americans solely from the vantage points of either Levi-Strauss or Lévy-Bruhl. And yet there are other anthropologists who have "lumped" distinct cultural traditions and ideas together.

The Pirahã people belong to what once was the great Mura nation, which included the Muras, the Pirahãs, and likely also the Bohuras and Yahahis (Loukotka 1968). In their work "Alguns aspectos da ergologia Mura-Pirahã," Rodrigues and Oliveira (1977) cite Amazonas (1852) who claims that the Muras and the Pirahãs originated in Peru, from where they migrated to avoid the control of the Incas. If this is correct, they would have traveled from the Madre de Diós River in Peru (called the Madeira in Brazil), east to the area of modern day Manaus in Brazil. But however they arrived, the Muras came to control the Madeira River and its banks, some 900 miles in length.

In the nineteenth century, however, Mura rule was disrupted by a devastating war led by the Portuguese and their indigenous allies (especially the Mundurucu), known as the "cabanagem" (1835-1840). Results of this war relevant to our current discussion were the eventual extinction of the Bohurás and the Yahahis, the assimilation of the Muras, and the permanency of the Pirahãs along the Maici.

Much of what has been observed about the Mura nation since the 19th century therefore reflects at least in part the war-induced disruption of the nation. Today, for example, the Muras tell what are claimed to be traditional stories, though exclusively in Portuguese, while the Pirahã culture manifests characteristics that might be a result of the effects and crises they fled (e.g. distrust of foreigners). There are few overt cultural correspondences today between the Muras and the Pirahãs, though they look very much alike physically. They went down separate cultural paths following these conflicts.

The Pirahãs and the Muras are subgroups of the Mura linguistic family (Loukotka 1968; Everett 1979). The Mura language, according to Nimuendaju (1883-1945; originally Curt Unkel, born and educated in Germany), was a mutually intelligible dialect of Pirahã (Nimuendaju (1948); also Everett 1979). The Pirahãs have apparently resided along the banks of the Maici since before the arrival of Europeans in the area, according to Nimuendaju (1948), and my own thirty-two years of field research and nearly ten years of village living among them. The Pirahãs have always been monolingual, as reported during in recorded visit by outsiders for nearly three hundred years. Moreover, all descriptions of them (from Anonymous (1984) to the present) describe them physically in terms similar to Nimuendaju (1948, 268): "The men wore a belt of raw fibers with fringe down the front, covering and holding the penis up against the abdomen. The women, at least in the camps, were nude. The women's ears and the lower lips of some of the men were pierced. The young women, from puberty until marriage, wore two fiber strings, sometimes braided, across the shoulders. Over the biceps the men wore fiber bands with long fringe. The women had necklaces of seeds and animal teeth. Though they had rustic wooden combs, their hair was always more or less unkempt. They did not remove the body hairs. In spite

of their river habitat, the Pirahã, especially the children, were very dirty and untidy. Use of urucii and genipa bodypaint was rare."[6]

After more than two centuries, however, regardless of any trauma in its history, Pirahã culture must be considered stable, self-sufficient, and worthy of understanding in its own terms, rather than as a collection of impoverished remnants of its past glory. Thus what we find among them represents functioning culturally-ranked values, social structures, and hierarchical knowledge structures emerging from a well-adapted culture of an entire and healthy society (Everett 2016).

Accepting the conclusion that Pirahã culture and society are not currently deformed by trauma, however different from that of their culture in the eighteenth and nineteenth centuries, how might we go about studying and understanding their philosophy as one with their culture? One way is to examine the ontology and metaphysics expressed in their language (Moltmann (2022)).

4. Lumping - The Case of Perspectivism

One such endeavor to homogenize segments of the native populations comes from the work of Brazilian anthropologist, Eduardo Viveiros de Castro. In his work, Viveiros de Castro (1998) develops a view that is at once interesting and disappointingly simplistic. It is a concept he labels "Amerindian perspectivism." Viveiros de Castro begins by expounding characteristics which many American Indian cultures appear to share - in their views of nature, culture and the supernatural.[7]

As he puts it (1998,): "This study discusses the meaning of Amerindian 'perspectivism': the ideas in Amazonian cosmologies concerning the way in which humans, animals and spirits

see both themselves and one another. Such ideas suggest the possibility of a redefinition of the classical categories of 'nature', 'culture' and 'supernature' based on the concept of perspective or point of view. The study argues in particular that the antinomy between two characterizations of indigenous thought - on the one hand 'ethnocentrism', which would deny the attributes of humanity to humans from other groups, and on the other hand 'animism', which would extend such qualities to beings of other species - can be resolved if one considers the difference between the spiritual and corporal aspects of beings. ... la reciprocite de perspectives ouij'ai vu le caractere propre de la pensee mythique ... (Levi-Strauss 1985: 268)" (Viveiros de Castro (1998 p 469)

The concept is further clarified as: "... that aspect of Amerindian thought which has been called its 'perspectival quality' (Arhem 1993): the conception, common to many peoples of the continent, according to which the world is inhabited by different sorts of subjects or persons, human and non-human, which apprehend reality from distinct points of view. This idea cannot be reduced to our current concept of relativism (Lima 1995; 1996), which at first it seems to call to mind. In fact, it is at right angles, so to speak, to the opposition between relativism and universalism. Such resistance by Amerindian perspectivism to the terms of our epistemological debates casts suspicion on the robustness and transportability of the ontological partitions which they presuppose. In particular, as many anthropologists have already concluded (albeit for other reasons), the classic distinction between Nature and Culture cannot be used to describe domains internal to non-Western cosmologies without first undergoing a rigorous ethnographic critique." (Viveiros de Castro (2015, 195)

But Viveiros de Castro's concept of perspectivism, when applied to Amazonians or others as a group, ignores similar distinctions found in many non-Native American cultures as well as

distinctions not uniformly distributed throughout Native American (including Amazonian) societies and philosophies (the latter term being neglected by most anthropologists and historians of philosophy). After all, William James (2020 [1902]) wrote extensively about European-descended North American beliefs in ghosts and "varieties of religious experience," that would fit perspectivism in many ways. Viveiros de Castro's homogenization therefore misses the distinctive aspects of individual cultures, as well as linguistic-historical phylogenetic relationships and similar views among Westerners. This leads me to conclude that such simplifications and over-generalizations produced by lumping distinct ethnicities together, at least without clear historical analysis of the origins of areal characteristics, should always be avoided.

Not that there is no empirical content to Amerindian Perspectivism. We can certainly find evidence among Native Americans for some similarities to perspectivism. For Viveiros de Castro, the essence of perspectivism is that (from Arhem 1993) "... according to which the world is inhabited by different sorts of subjects or persons, human and non-human, which apprehend reality from distinct points of view." As we see below, the Pirahãs in fact do categorize and populate their world differently than Western cultures do, especially as it comes to the Western distinction between fact and fiction.[8] Thus Pirahã ontology does not match up well with more familiar Western ideas (Everett 2016). The problem with Perspectivism is not that it is entirely wrong, but that it obscures significant distinctions and therefore over-simplifies indigenous cultures by focusing on very superficial similarities (that could fit almost any culture), even in those beliefs that purportedly fall within Perspectivism's scope.

In the discussions of Pirahã philosophy which follow, the focus is on how the Pirahãs illustrate philosophy in their culture. But when we consider the philosophy of agraphic

indigenous groups or those who, like the Aztecs and many others, had their writings destroyed by conquerors, we must augment our approach the study as pragmatists, looking for the practical effects of philosophy in day-to-day life.[9]

To understand an indigenous philosophy, e.g. that of the Pirahãs, we need to understand their history, their culture, and their language. Philosophy emerges from experiences and cultural formation. Knowing about the historical foundation upon which their philosophy rests is therefore important to an understanding of that philosophy.

5. From Culture to Philosophy

Several points draw our attention immediately in this regard. In Everett (2005) I argued that the Pirahãs lacked universal and existential quantifiers; that they had extremely complex and highly non-Western verbal morphology; that they lacked terms for abstract terms and universals; but that they did have generic expressions and nouns (see below). Moreover, I discussed an "Immediacy of Experience Principle" - a cultural value that constrains Pirahã discourses, conversations, and sentences to focus on actual lived experiences, rather than on speculative talk about the distant future or distant past. Also, this principle, as I described it in Everett (2005; and how I still understand it) requires that the Pirahãs experience things directly or hear about them from a reliable witness, before talking about them or believing them (much as the South African people misinterpreted by Lévy-Bruhl):

"Pirahã cultural constraint on grammar and living:

a. Grammar and other ways of living are restricted to concrete, immediate experience (where an experience is immediate in Pirahã if it has been seen or recounted as seen by a

person alive at the time of telling).

b. Immediacy of experience is reflected in immediacy of information encoding – one event per utterance."[10]

In what follows it is argued that, based on these characteristics, the known philosophical frameworks that best corresponds to Pirahã philosophy are Nominalism and Pragmatism. This does not mean that the Pirahãs see the world exactly as Charles Peirce or William of Ockham might have. It simply means that their philosophy corresponds in many ways to the technical philosophies just mentioned. That is, Pirahã philosophy is iconic of Western philosophy and vice-versa. Again, however, the similarities observed do not mean that the Pirahãs are Scholastic Nominalists or New England Pragmatists. They simply are what they are - bearing similarities to equally respectable philosophical-cultural systems, along with profound differences.

To pursue an understanding of this iconic philosophical correspondence, let's explore then just a bit more the methodology of philosophical field research. How does one study the philosophy of hunter-gatherers without a written form of their language, i.e. without a written exposition of their philosophy? After all, there are no full-time philosophers or intellectuals among the Pirahãs. But everyone reflects, questions, and discusses around their fires at night, walking together in the jungle, eating together and in myriad other social activities. And they often report to me that "I was thinking by myself today."

Well, one studies a people's philosophy in much the same way that one studies their language or their culture (see Sakel and Everett (2012) for a methodology for field research). Observation, collection and study of spoken discourse, examination of the lexicon - presences and absences - and so on are crucial. One cannot interview subjects in any language or culture

directly about their philosophies (or their linguistic structures), though one can ask questions about time, existence, and other philosophical topics that can provide valuable information.

The participant-observer role is crucial. Someone with specific questions about diverse philosophical frameworks and ideas of philosophical ideas of a variety indigenous cultures ideally lives among the people being studied and look for evidence of philosophy in a broad sense in their daily practices, conversations (which requires that the philosophical researcher learn to speak the language and understand the whole culture under study), analyzing also stories, teachings, and other cultural activities. Second, the researcher interviews subjects, based on specific questionairres to probe philosophical subjects. Third, one makes predictions as to their beliefs, based on an understanding of their philosophy and then interviewing them where one thinks those beliefs, or actions based on them, perhaps should have been observed, but were not. Figuring out a philosophy is a massive inferential puzzle. Additionally, as mentioned above, the field researcher must test their theory of the indigenous philosophy against the speakers' "natural language ontology" (Moltmann 2022; Bricker 2016).

Incorporating all of the above along with study of the semantics, organization of texts, and sentential syntax of indigenous languages we can develop a reasonable theory of their philosophy, at least expressed in their ontological categories. It is important to recognize however that relevant ontologies may be expressed in both the categories the speakers use and those that they avoid, i.e. that have not made it into their lexicon. There is of course no one-to-one correlation between ontology and the presence or absence of words. Language and culture provide data, not analyses, whether the data are used for philosophical, linguistic, or anthropological objectives. Analyses and conclusions are reached by inference from the data -

abductive inference subsequently tested by induction and deduction, in Peirce's methodology of scientific discovery.

The Pirahãs have a strong, implicit philosophy of life that includes axiology, epistemology, ontology, and metaphysics. Moltmann (ibid) expresses the relationship between language and ontology, supporting this particular descriptive philosophical methodology as follows:

> "The ontology of natural language is to be distinguished from the ontology a speaker accepts on the basis of philosophical or naïve reflection or reasoning using language, as well as from the ontology that is reflected in cognition in general. The ontology of a natural language is thus best characterized as the ontology competent speakers implicitly accept by way of using the language." (Moltmann 2022, p1)

In this quote Moltmann cautions against conflating the ontologies of natural language with the ontology of naive or even professional philosophical reflection. This is a pragmatic definition of ontology in the sense that it takes what people do to be the basis for inferring their ontology - i.e. from the forms of speech acts in "use" rather than contents of speech acts in which the philosophy is "mentioned."

Moltmann (2022) urges here that we therefore carefully study natural language as a key to understanding the ontology (and other aspects of philosophy): "It is a guiding assumption of natural language ontology that natural language reflects ontology. That is, the semantics of natural languages involves entities of various ontological categories, ontological structures, and ontological notions on the basis of syntactic roles of expressions, syntactic categories and features, and lexical words. The following will elaborate some of the ways in which natural language reflects ontology." (p16)

Then finally, the statement below presents the language-philosophy connection as a principle: "The ontology of a natural language is the ontology speakers implicitly accept by way of using the language." (Moltman ibid) So what I propose in this section is an overview of Pirahã philosophy based on the study of their linguistically-expressed ontology and ontological commitments.[11] This is all predicted by semiotics - without an ontology there can be no objects for cultural semiosis (on ontology more generally see Van Inwagen (2014; 2023).

The Pirahã language, wherein resides much of their philosophical and cultural uniqueness, has been a mystery for most who have looked at it. This "mystery" has been exacerbated by some over the years who have even mistakenly believed that they are hearing Pirahã when they are hearing the Pirahãs speak (in my experience a tonal version of) a local pidgin, Nheengatu. As Nimuendaju (1948, 257) comments on one case: “Martius’s contention that most of the words of the Mura language are of Tupian origin has remained unsubstantiated [it is false, DLE]. Even the number of elements adopted from the Lingua Geral is strangely small. Most noticeable are the regular use of the first and second singular personal pronouns and first person plural of the Lingua Geral.”

Two important observations from this quote are that Martius was hearing the Pirahãs attempt to speak Nheengatu and erroneously believed that Pirahã itself was a Tupi-Guarani language (in my early days of field research among the Pirahãs, I was similarly confused because they still will often answer newcomers with Nheengatu words (that they know - their vocabulary in this moribund language is very limited) when asked for Pirahã words. The thinking seems to be that the Pirahã words are too hard for a non-Pirahã). The other important observation from this citation is the first suggestion that Pirahã's pronouns were borrowed from Nheengatu (Lingua Geral), confirmed in later studies by myself and linguist Sarah Grey Thomason

(Thomason and Everett (2007)). Methodologically, these are both very surprising and potentially confounding facts and could easily lead the novice (or perhaps even seasoned) field researcher to classify the language incorrectly as Tupi-Guarani, when we now know it is a language isolate (all other languages of the Mura family are extinct and there is no other related family known).

This raises a caveat for the investigation of philosophy or other topics - speakers may, with the best of intentions (especially in monolingual field research), not be giving the researcher the information that the researcher has asked for, offering instead what they believe is more useful. Thus some stories might be things that one group has heard from another group or a linguistic example may not be natural, instead sculpted to fit perceived expectations of the field researcher. If the group under investigation wants to be helpful and don't feel that they have such stories, they might simply pass off another group's stories as their own. I have observed this more than once in my fieldwork in different languages. It is thus vital that the field researcher speak the language well and understand the culture as a whole reasonably well before embarking on detailed expositions of findings from difficult and esoteric areas such as philosophy (or linguistics).

Another description of the Pirahãs that still fits them is the following description of their relationship to rivers, described by Nimuendaju (1948): "The Mura never expanded very much on land. Even during the time of their greatest extension they always sought the low floodlands of the shores of the Amazon-Solimoes River and its tributaries and similar lands … They settled only where they could move about in canoes, choosing spots where they could build their villages, plant their crops and hunt… Throughout their known history they can be characterized

as a canoeing and fishing people." The perspective is that of a group at one with the fluid lifeforce that sustains their existence.

Another apt description from Nimuendaju's visit in the 1920s that still matches my own experiences with the people (Nimuendaju 1948, p266): "Serviço de Proteção aos Indios established a center to give them aid but, apparently content with their present state, these Indians have shown little inclination to acquire European culture. Except for a few implements, they show almost no sign of any permanent contact with civilized people. They showed no interest in the utensils and clothing given them by the Serviço de Proteção aos Indios. Neither did they steal. In fact, no two tribes offer a more striking contrast than the Pirahã and their neighbors, the Parintintin. The latter were active, clever, greedy for new things, ambitious, and thieving."

The Pirahãs were known, but little-studied at this time. Nimuendaju (ibid) further says that: "The Pirahã (Pirianaus, Piaarhaus, Piraheus, Piriahai, Piriaha, Piriaha, Pinyaha, Iviridyarohu, "lords of fiber rope," i.e., armbands, Ivirapa-poku, "long bow," and Tapii, "strangers") is a subtribe of the Mura, which speaks a distinct dialect. It has evidently always occupied its present habitat between lat. 6°25' and 7° 10' S., along the lower Maicy River and at Estirao Grande do Marmellos, below this river's mouth." [12]

Further: "The Pirahã have remained the least acculturated Mura tribe, but they are known only through a short word list and unpublished notes obtained by the author during several brief contacts in 1922, when efforts were being made to pacify the Parintintin."[13] And finally: "The dialects of the Pirahã and Mura of Manicoré are mutually intelligible, and differences in these dialects appearing in the author's vocabulary may be partly attributable to informant difficulties."

Nimuendaju, was one of if not the principal founder of Brazilian anthropology. He conducted field research among many of the indigenous groups of Brazil over the course of his career. In 1922 he visited the Pirahãs. The descriptions he provided from that visit are still largely accurate. Nimuendaju's credibility from my perspective is further strengthened by the accurate word list he collected and his insightful comments on the language (which I discuss in Everett (1979)).

Many early anthropologists and no doubt many modern philosophers would be surprised to learn that people like the Pirahãs, described in such terms, are capable of serious, sophisticated philosophy. Some have even bizarrely suggested that many of the unusual characteristics of Pirahã described in what follows (from Everett 2005) are the result of trauma from culture-contact (or even "low IQs"). But as we saw earlier the evidence fails to support such hypotheses. All the descriptions of the Pirahãs as we have seen describe their surface cultural traits in roughly similar ways, descriptions that fit them fine today (aside from the value judgments of earlier explorers). The only changes I can see are the lack of penis-tying and ear and lip-piercing.

As mentioned, the Pirahãs way of life was affected by the "cabanagem" (the name comes from a type of simple hut used by inhabitants of Amazonia), a war of the 19th century (Scaglione 2019; Cleary (1998); Scopel (2007); Ricci (2007)), discussed above. But the Maici river was not affected as much by the war as were populations along the Madeira, e.g. the Muras. On the other hand, there is a long-term distrust of foreigners among the Pirahãs, along with their reticence to leave the Maici. This indeed may have resulted from the cabanagem.[14]

Many of the Muras, because of the wars, made the decision to move farther from the Madeira River. Thus today the bulk of the population lives in the area of the Rio Autazes, near the modern city of Manaus. The Muras moreover completely replaced their language with

Portuguese, though according to many claims have kept (Portuguese versions of) their traditional stories. There is currently no way to verify how old the current Mura stories are nor whether they preceded the substitution of Portuguese for the Mura language. The Pirahãs have no traditional stories, merely vestiges, based on the earlier accounts (A Feroz Nação do Gentio Mura, 1784-1786 (Anonymous); von Martius (1821); Gondim (1938); and Nimuendaju (1948)). The Pirahãs are more traditional, by comparing earlier descriptions to my own, whereas the Muras are more assimilated to Brazilian society culturally and linguistically, though with a distinct literature (some of it now written), which is claimed to be traditional. We thus have a case of two related groups, the Muras and the Pirahãs, undergoing very different linguistic and cultural outcomes as a result of contact with Europeans.

With this background, let us proceed to an examination of some proposals on Pirahã philosophy. There are many studies of the cultures of societies from around the world, but fewer of philosophies across non-Western, non-Asian cultures. Unsurprisingly, however, given the goals and training of the anthropologists and linguists who conduct the majority of field research on indigenous groups, there are far fewer studies of the philosophies of indigenous groups. The methods are largely the same, however, as those for other field research.

6. Nominalism and Pirahã Grammar

Much as a Pirahã child learns the manufacture of material objects through observation of their parents and peers, so do they learn their semantic ontologies, taboos, culture, philosophy, and language in the broadest sense from participation in their culture, language, and philosophy, i.e. by languaging, culturing, and philosophizing.

In Everett (2005), the relationship of Pirahã culture to the Pirahã language was discussed. In that paper I listed the following surprising facts about Pirahã: "... the absence of numbers of any kind or a concept of counting and of any terms for quantification, the absence of color terms, the absence of embedding, the simplest pronoun inventory known, the absence of "relative tenses," the simplest kinship system yet documented, the absence of creation myths and fiction, the absence of any individual or collective memory of more than two generations past, the absence of drawing or other art and one of the simplest material cultures documented, and the fact that the Pirahã are monolingual after more than 200 years of regular contact with Brazilians and the Tupi-Guarani-speaking Kawahiv."

Anthropologist Brent Berlin (2005) commented on the published result that: "Everett's proposals make his paper one of the most controversial to be published in anthropological linguistics in many years, perhaps since the appearance of Swadesh's The Origin and Diversification of Language (1971). However, his general hypothesis has a long history that can be traced to much of the nineteenth- and twentieth century literature on the languages of so-called primitive peoples. Lévy-Bruhl 's chapter on numeration in How Natives Think, for example, opens with the observation that "in a great many primitive peoples ... the only names for numbers are one and two, and occasionally three. Beyond these, the native says 'many, a crowd, a multitude'" (1926:181). The multiple cases he cites closely mirror the system described by Everett for Pirahã and confirmed by Gordon (2004)."

But Pirahã has no numbers, not merely 1 and 2 (Frank, et. al. 2008). And, as I discuss in detail in many of the references to my work in the bibliography, this is by no means a sign of cognitive inferiority. It follows instead from Pirahã Nominalism (see below) and their culture more generally. There is nothing "primitive" here.

Moving now to a consideration of specific components of Pirahã philosophy, let us begin with axiology, i.e. the basic ethical values of the Pirahãs. We can group these into interpersonal relationships and authority, familial responsibility, personal property, and economic responsibility within the community (this list does not exhaust Pirahã ethics, but it includes the differences that have most attracted my attention over the years).

A people's axiology is a special subset of their values and practices. One of the most noticeable values in this regard among the Pirahãs is seen in their interpersonal relationships and political authority. The cornerstone value here is the *independence* of the individual and their *freedom* from coercion. This can be summarized as a simple imperative: *Do not tell others what to do*. Pirahã society is anarchist libertarian - there are no authority figures (other than parents for the first couple of years, though even this is not universal) nor leaders in the society. Thus no one has any authority on which to give commands to others (though rare cases of personal intimidation through physical threats have been observed). If one member of the group desires another member to do something, they ask. If necessary they pay them, either in food or other culturally useful products. And this includes parents and children from adolescence onward, with minimal coercion compared to, say, Western cultures, of parents by children.

Another axiological value is that everyone has responsibility for others in the village, in a concentric (Everett (2014)) arrangment: take care of yourself, then your family, then the village, then the Pirahã people as a whole. Thus if a man goes fishing and is successful, he will stop to eat his fill before bringing what is left back to his family. If there is fish left after his family eats, he will share it with the village, with reciprocity and unspoken expectation, i.e. that others will give him and his family food the next time they have excess. If there is a medical emergency in more than one village, each resident will take action (e.g. canoe for help) on behalf of their

village. But if only one village is affected, concern and help from other villages will still be given in some way.

Nimuendaju (1948) says that the Pirahãs, unlike their Parintintin neighbors, do not steal. The Pirahãs do not in fact steal as a rule (i.e. this is a generic statement, not a universal one), they can steal under certain circumstances. So Nimuendaju's generic statement is largely accurate. If an item belonging to one Pirahã is left unattended, however, it can be taken without fear of reprisal or remonstration, for most objects. Is this stealing? Not to the Pirahãs, though it can seem so to Westerners.[15] On the other hand, one would never take another's bow and arrows or occupy their hut or hurt or take their children or dogs or food. But minor objects, especially non-Pirahã objects such as plastic children's toys are taken (as I discovered with my children's toys) if they appear discarded or unused.

The morality of sex is another category among the Pirahãs that doesn't, at least superficially, match up with Western views. For example, as a result of the Pirahãs' laissez faire attitudes towards sexual relations, it is likely that, at some point, most adults in a village will have had sex with most other adults of the opposite sex (and for many of the men at least, with several of the same sex) in the village. There is no culture-wide prohibition or moral approbation against promiscuous sex. I myself have been propositioned many times by married and unmarried Pirahã women with an attitude reminiscent of borrowing a cup of sugar. Each couple establishes its own (usually permeable) boundaries. No married couple is wildly promiscuous, but if one partner has sex with someone else, that is resolved either by separation or by no action (beyond words). The latter is a common response. Disappointment and personal anguish over unfaithfulness can be shown, but it is not always manifested. There are few age limits. Pedophilia (though this word doesn't really fit well here since the practice carries no stigma in

Pirahã) occurs among the Pirahãs and children as young as 5 or 6 talk and laugh openly about sex. On the other hand, forced sex of any kind is against Pirahã ethics.

A further and vital ethical commitment expected from every village member is that all will develop the skills appropriate to their gender (regardless of sexual orientation). Men must be good providers of fish and meat and they must clear fields and plant them. Women must gather vegetable food from the jungle (e.g. nuts and fruits), and they must harvest food from the gardens planted by their husband, father, or brother, depending on their marital status and age. These are ethical obligations, not merely cultural practices. People in violation of these standards may be refused food, live alone, or experience some other form of village ostracism.

But what of other philosophical categories, such as metaphysics? Do hunters and gatherers like the Pirahãs have a metaphysics? Yes, it turns out they do. Everett (2005) argued that the Pirahãs lack both universal and existential quantifiers, that they had extremely complex and highly non-Western verbal morphology, that they lacked terms for abstract concepts and universals, but that they did have generic expressions and nouns (see below). Moreover, as stated earlier, I discussed an "immediacy of experience" principle in which the Pirahãs' discourses, conversations, and sentences focus on actual lived experiences, rather than on speculative topics in the distant future or the distant past. Also, this principle, as I described it in 2005 (and how I still understand it) requires that the Pirahãs experience things directly or hear about them from a reliable witness, before believing or telling others about them (as though they were real). Things exist if I can experience them or be told about them by someone who did experience them. We may think of this as the "chain of evidence" requirement. Otherwise, outside of such a chain of evidence, existence and reality are not applicable. This is the foundation of Pirahã metaphysics and ontology. When I argued in Everett (2005) that the Pirahãs

avoid generalizations insofar as possible, anthropologists, linguists, and psychologists criticized this statement because, they claimed, it portrayed the Pirahãs seem simple-minded. What I failed to include in my 2005 discussion was an attempt to situate the Pirahãs in larger philosophical traditions. If I had described them as "nominalist empiricists" - which I believe best describes them in terms of western labels, a confluence of old and respectable positions in Western thought, perhaps readers would have reacted less emotionally. And that is what I should have argued. Therefore in this section I attempt a better description of the Pirahãs' philosophical basis for their view of immediacy and its effects in their culture. Here are my conclusions on their nominalist empiricism:

Western empiricism: "The theory that all knowledge is derived from sense experience."

Pirahã empiricism: "The view that valid knowledge only comes from direct experience or testimony from a direct experience (non-recursive?)."

Western nominalism: universals and general ideas are mere names without any corresponding reality. What we take to be universals are just ways of talking about things that exist.

Pirahã nominalism: Generalizations and abstract categories cannot be directly experienced, therefore they violate empiricism and thus Nominalism (due to the "chain of evidence" requirement - see below).

The Pirahãs, like all of us, experience things only in the present. Unlike most of us in western societies, however, they for the most part ignore (in their conversations, stories, linguistic structures, and cultural values), the past and the future (Everett 1986; 2005) of things.

Although this seemed to shock readers at the time my article was published, it is very similar to Stoic ideas (of the third century and later; the Stoics being early Nominalists): “Wild

animals run from the dangers they actually see, and once they have escaped them worry no more. We however are tormented alike by what is past and what is to come. A number of our blessings do us harm, for memory brings back the agony of fear while foresight brings it on prematurely. No one confines his unhappiness to the present." — Seneca (4 BCE-65 ACE)

And also: "Leave the past behind, let the grand design take care of the future, and instead only rightly guide the present to reverence and justice. Reverence so that you'll love what you've been allotted, for nature brought you both to each other. Justice so that you'll speak the truth freely and without evasion, and so that you'll act only as the law and value of things require." — Marcus Aurelius (121 ACE - 180 ACE)

Therefore Pirahã ontology recognizes only objects that are verifiable via the culturally-approved chain of inference.

Pirahãs also have a philosophy of knowing, harmonious with their ontology. And these two fit together in a Peircean pragmatic sense, as we have seen: *"Consider what effects, that might conceivably have practical bearings, we conceive the object of our conception to have. Then, our conception of these effects is the whole of our conception of the object."*Peirce (1878)[16]

The Pragmatist view is that only by understanding the effects - experimental, practical, discursive, mathematically, etc. of our concepts can we be said to understand an object. In other words our conception of an object just is the practical effects it has for us (for discursive effects, as in Brandom ((1994) (2007) (2008)). This is reminiscent of the Pirahã view that reality is experience, direct or witnessed (and interpreted) in the chain of evidence.

Pirahã verbal structure is harmonious with their philosophies. For example, when the Pirahãs talk about the world, they keep it limited to their immediate experience, in the sense

defined in Everett (2005). A man might come in and talk about the day's fishing, describing the fish that got away or the fish that he caught. He will use one of the evidential suffixes that are found on the Pirahã verb (this type of morpheme is not uncommon in the languages of the world; see, interalia, Papafragou, et. al. 2007; Aikhenvald 2015; Ünal and Papafragou 2020). These include: **-sibiga** "inference;" **-híai** "hearsay, among others, as described in Everett (1986).

(1)	**xigí**	**ai hi**	**ab -op-ái**	**abaip**	**-í**	**-sibiga**
	comitative	to be: 3p	turn-go-atelic	sit	-epenthetic	-inference

"OK, he is arriving. He will sit (I infer)."

-sibiga is not limited to inferences based only on the immediate linguistic context (Everett 1983, 177ff). For example, upon seeing someone enter a canoe and paddle away, a speaker might say:

(2)	**kaogiái**	**xis**	**ibá**	**-boí**	**-sibiga**
	proper name	animal	hit	-vertically	inference

"I infer that **Kaogiái** is going fishing."

On the other hand, a weak conclusion, based on something overheard or a commentary offered by the speaker can be indicated by the suffix, **-híai** "hearsay."

(3)	**gahió**	**hi**	**xabaipí**	**-sai**	**-híai**	**pixái**	**xíga**

airplane 3p sit -old information -hearsay now immediate

'The airplane is landing right now, according to what they tell me.'

(4) **hi gáí -sai ti tiooi i xob -í -sogi**

3p say -old 1p rubber 3p throw epenthetic -desider

-sai -híai

old information hearsay

'He spoke. I want to throw the ball, or so I heard.

There are other evidentials and related affixes in Pirahã. (See Everett (1986).) What is important here is that these affixes all play a role in the pragmatist evidential requirements of Pirahã culture.

As I discussed in Everett 2005, the Pirahãs conversations are based on their experiences. The closeness of their conversations to experience (directly experienced, told by others about their experiences) is marked by these evidential suffixes. Pirahã is not by any means the only culture to use evidential affixes. But evidential affixes (like all affixes, lexical items, etc) are always the result of the prominence that a given culture, at least at one time in its history, gives or gave to evidence. In the case of the Pirahãs, this is still a very active philosophical priority.

Evidence of Pirahã Pragmatism is easily found. For example, if someone expresses a new idea, as I did several times in my early years among the Pirahãs, the response is very interesting.[17] For example, after they heard about Jesus many times a group came to me with questions, of which the most prominent were:

"What does Jesus look like?"

"Did Jesus look like you? Did he look like us?"

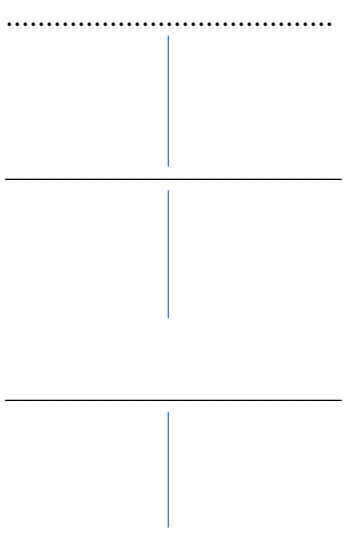
Following my answers that I have neither seen Jesus nor do I know anyone who has, the common response is something like:

"Why are you telling us about Jesus? You did not see him. You know no one who saw him."

The last question above (just one of many, many questions) is illustrative of the importance of practical experience for the Pirahãs in understanding new ideas.

Another example comes from my attempts to elicit information about Pirahã creation beliefs. I might ask a Pirahã "What was the jungle like long ago? Before there were people? Before there were trees? Before there were animals?" Or I might ask "Can you tell me a story about the Pirahãs coming to this jungle?" They would reply "Did you see the jungle without trees?" Did you see a jungle with no people? No animals?" "The Pirahãs have always been here."

The Pirahãs understand the stories of others, their own observations and stories, and, inter alia, what we might call "Truth" in terms of practical effects. The same goes for the different beings that we might call fictional, but that would fit under Viveiros de Castros perspectivism. Two such entities the Pirahãs see in the jungle are called **Kaoáíbógí** and **ʔitaisi**. Both of these look like humans but are not. The former can be good or bad and live under or above the ground and speak in high falsetto voices. They are usually naked. The latter are primarily badly behaved towards the Pirahãs, have big teeth, wear palm leave skirts, and talk in deep voices. To see these in a fuller Pirahã context, consider the diagram below:



This diagram is intended to shows the "layering" of the universe according to the Pirahã conception. What in English are "sky" and "ground" are in Pirahã the same word, which I interpret to represent natural barriers of the **ʔooí**, which can be translated as either "jungle" or living environment, biosphere. The Pirahãs talk about other biospheres above and below each **bigí**. The biosphere is occupied by different kinds of creatures. Some of the most salient creatures, i.e. most talked about in natural conversations and narratives are these:

Inhabitants:

ʔísi fauna (non-human animals)

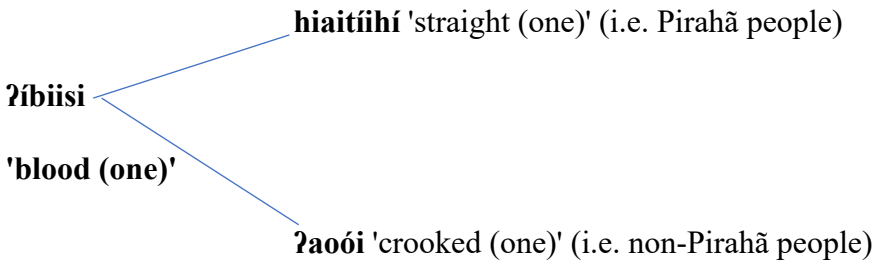
ʔii flora

ʔítiiʔisi fish

kao áibógí 'fast mouth' (lives in lower ground in jungle; some say in holes)

ʔaítoii 'big tooth' (lives in jungle and upper ground)

The latter two creatures are among several humanoid creatures that the Pirahãs recognize. They appear in the village frequently. While they look like Pirahãs, there will always be something about their appearance and presentation that is atypical for Pirahãs, e.g. grass skirts for 'big tooth,' and nakedness and deep voices for 'fast mouths.' The most important category of creature for the Pirahãs are human beings, which divide into two parts (the fast mouths and big teeth are not considered human).



Are the **kao áibógí**s and other humanoid jungle entities fictional or real to the Pirahãs? The answer is somewhere in between, a distinction that seems compatible with Peirce's pragmaticist distinction (CP 6.495) between what is real and what exists. A unicorn or god is real if we can talk about it, but there is no evidence that it exists. As Peirce puts it: "reality means a certain kind of non-dependence upon thought, and so is a cognitionary character, while existence means reaction with the environment, and so is a dynamic character; and accordingly the two meanings... are not the same" (5:503,1905). This distinction between what is real and what exists means that Dickens's characters can be real, though they do not exist. And this in turn somewhat

blurs that fast and hard distinction that westerners like to draw between fact (what really exists) and fiction (what does not exist and is not real).

For example, the Pirahãs talk about these creatures sincerely, even though they themselves embody these creatures in public. A Pirahã man might go into the jungle, remove his clothes, and walk back into the village talking like a **Kaoáíbógí**, in a high falsetto. People respond to him as a different entity. And yet if you talk to him (myself or a Pirahã) about his known, existent children, he will switch voices and talk to you as an **ʔíbiisi** a "blood one" (Homo sapiens). These "manifestations" are thus somewhat a cross between reality through acting and reality through existence, at the boundary of what is real and what exists, just along the lines, or so it seems to me, that Peirce draws in Pragmaticism (see Gilmore (2006) for more detailed discussion of these distinctions and what Peirce has to say about the reality vs. existence of the Judeo-Christian God, for example).

Pirahãs do not state a Pragmatic Maxim, since such a statement would violate their Nominalism, but few western ideas better capture their understanding of truth and reality than Pragmati(ci)sm. However, there is much more to the Pirahãs' philosophy than Pragmati(ci)sm. They also share important characteristics with Stoicism and Nominalism, to which we now turn.

In Everett 2005, I explained the sui generis aspects of Pirahã culture in terms of the cultural value of "immediacy of experience," as we have seen. Later, however, while working on Peirce's philosophy, I realized that Pirahã beliefs in this regard, while starkly contrasting with Peirce's own realism, bear a resemblance to ideas of the Western world dating back to the Stoics (ca 300 BCE to 300 ACE), and the Scholastics of the Middle Ages. As Rodrigues-Pererya (2015) summarizes Nominalism (see also Gosselin 1990):"Nominalism, coming from the Latin word nominalis meaning "of or pertaining to names", is the ontological theory that reality is only made

up of particular [emphasis mine, DLE] items. It denies the real existence of any general entities such as properties, species, universals, sets, or other categories. Only things that are concrete or individual (or perhaps both) exist. One example that is often used to motivate nominalism is the property of "being green." Many things are green such as the grass, my shirt, and Kermit the frog, but what do they have in common? A realist would say that the color green is a universal entity and that the aforementioned objects are all a part of green things in the world. The greenness is repeatable because it is one universal that shows itself wherever green things appear. A nominalist would deny this fact and even the existence of universals. She would ask, where is this universal? Can I see it? Would it exist even if all particular green things ceased to be? Another argument supporting nominalism is that if the universal is a single thing, how can it show up in multiple places at the same time?"

Apropos the passage above, Everett (2005) observed that the Pirahãs lack color words. The explanation, according to my analysis here, is that color words do not fit the cultural world view of Nominalism (a form of immediacy of experience since only particulars of actual experience are believed to exist), just as Rodrigues-Pererya states it. "Red" is a universal in a way that, say, "dog," is not. Red is a property - it transcends object types. It (in some versions of Nominalism) is simply a thought we have to describe different, otherwise unrelated objects or types. "Dog" is a type such that each manifestation is a dog. Manifestations of "red," on the other hand vary depending on the object they are found in and only are considered manifestations of the same property by cultural convention. Red is unisensorial. Dog is multisensorial.

As per Everett (2005), Pirahã "manifests" a surprising list of "absent" (only from a western perspective are they absent) categories. (It implies nothing negative about the people, no more so than the fact that the average North American lacks words for games they do not play.

The question is what motivates the absence of these categories? In Everett (2005), this is accounted for in cultural terms, where I claimed that to "fill" these "gaps" in the culture would require the violation of what I labeled the "immediacy of experience principle: "Any of these properties is sufficiently unusual in itself to demand careful consideration, but their manifestation in a single language suggests the existence of a common unifying generalization behind them. They are sufficiently disparate formally (i.e., in terms of potential phrase-structure realizations) that any unifying principle is almost certainly to be found in their meaning, and that in the broadest sense of a constraint on cultural function. What I propose, again, is that Pirahã culture avoids talking about knowledge that ranges beyond personal, usually immediate experience or is transmitted via such experience. All of the properties of Pirahã grammar that I have listed will be shown to follow from this. Abstract entities are not bound by immediate personal experience, and therefore Pirahã people do not discuss them."

In this section we will reanalyze the absence of numbers, colors, and the universal quantifier "all" in terms of Pirahã philosophy.

Peirce described the perception of color as "attending to the immediate quality independent of classification and explanation." (Short (2007,76) Peirce (5.44) There is a sense then in which we might say that Pirahã talk of color is largely at the level of firstness.[18] They can compare colors in experimental situations, however, so Pirahã understanding is not limited to firstness.

Everett (2005) argues that Pirahã lacks color terms, though colors can be described. For example, Sheldon (2011 (in Kay, et. al.)) offers the following color expressions.

(5) a. ***bio^{3}pai^{2}ai^{3}*** 'blood is dirty'

b. ***bii -o^{3}pai^{2} ai^{3}***

blood -dirty/opaque be/do

(6) a. ***ko^{3}biai^{3}*** 'it sees'

b. ***k -o^{3}bi ai^{3}***

object -see be/do

(7) a. ***bi^{3}i^{1}sai^{3}*** 'blood-like'

b. ***bi^{3}i^{1} -sai^{3}***

blood -nominalizer

(8) a. ***a^{3}hoa^{3}saa^{3}ga^{1}*** 'temporarily being immature' (ahoa –s –aag –a)

b. ***a^{3}hoa^{3}s aa^{3}ga^{1}***

immature be:temporary

My conclusion that Pirahã lacks color words is not intended as an indictment of Sheldon's analyses. It is easy enough to see how someone looking for color terms would find them in Pirahã. When one is armed with a set of categories (e.g. the Berlin and Kay (1969) on one model for color terms) and no other, as Sheldon was, then it is understandable that one finds what one can talk about – i.e. that a degree of linguistic relativity colors the research of linguists and anthropologists alike. And I remind the reader that, as described in Everett (2004), linguistics research among the Pirahã is monolingual. There is no way to get translations from the Pirahã of any precision whatsoever for color terms, number words, verb-suffixes, etc. All meaning has to be worked out by correlating context with utterance (in a most extreme form of Quine's (1960) *gavagai*-confronting fieldresearcher) and by simply learning enough of the culture and language

oneself to develop incipient intuitions that guide further testing and reasoning.

Now let us consider the absence of numbers in Pirahã (C. Everett & Madora (2012), Gordon (2004), Everett (2005), Frank, et. al. (2008).[19]

As Everett (2005) puts it, "There are three words in Pirahã that are easy to confuse with numerals, because they can be translated as numerals in some of their uses.[20] These are listed in (9)-(11):

(9) a. **hói** 'small size or amount'

b. **hoí** 'somewhat larger size or amount'

c. **bá** **a** **gi** **so** 'lit: cause to come together (loosely 'many')

touch -causative associa-tive nominalizer

Some examples which show how Pirahã expresses what in other cultures would be numerical concepts:

(10) a. **tí** **'ítíi'isi** **hói** **hii** **'aba'áígio** **'oogabagaí**

I fish small pred. only want

'I only want a small amount of fish.'

b. **tiobáhai** **hói** **hii** 'a small child or one child or a couple of children

(11) a. **tí 'ítíi'isi hoí hii 'oogabagaí**

I fish larger pred. want

'I want {a few or a larger } fish.'

b. **tí 'ítíi'isi báagiso 'oogabagaí**

I fish many/group want

'I want {a group of/many} fish.'

c. **tí 'ítíi'isi 'ogií 'oogabagaí**

I fish big want

'I want {a big/big pile of /many} fish.'

There are likewise no ordinal numbers in Pirahã , e.g 'first', 'second', etc. Some of the functions of ordinals are expressed via body parts, in a way familiar to many languages:

(12) **ti 'apaí káobíi 'ahaigí hi tíohió'ío/gaaba káobíi**

1 head fall same generation he towards me/there stay fall

'I was born first then my sibling was born.' (lit: *'I head fall sibling to me/there at fall.')"*

Subsequent studies (Everett & Madora (2012), Frank et. al. (2008)) have confirmed the absence of numerals and counting in Pirahã, so I refer the reader to those for further discussion.

Everett further claimed that "There are no quantifier terms like 'all', 'each', 'every', 'most', 'few' in Pirahã. This is crucial in understanding the Pirahãs' philosophy. There are also no 'WH-quantifiers' per se.[21] To appreciate this, let us consider the examples below, to see the closest expressions in Pirahã for words reminiscent of quantifiers:

ALL

(13) ***hiaitíihí hi 'ogi -'áaga - ó pi -ó***

Pirahã people he big -be (permanence) -direction water

-ó kaobíi

-direction entered

'All the people went to swim/went swimming/are swimming/bathing, etc.' (literally: "a lot" or "the bigness of the people" went swimming.")

MOST

(14) **ti 'ogi -'áaga -ó 'ítii'isi 'ogi -ó**

I big -be(perm) -direction fish big -direction

'i kohoai-baaí,

she eat -inten.

koga hói hi hi -i kohoi -hiaba

nevertheless small amount intens. intens. -be eat -not

'We ate most of the fish.' (lit: 'My bigness ate (at) a bigness of fish, nevertheless there was a smallness we did not eat.'

'We ate most of the fish.' (lit: 'My bigness ate (at) a bigness of fish, nevertheless there was a smallness we did not eat.'

'agaoa ko -ó

canoe gut -direction

'There were (a) few cans in the foreigner's canoe.' (lit: smallness of cans remaining associated was in the gut of the canoe')

There are two words, usually occurring in reference to an amount eaten or desired, which by their closest translation equivalents, 'whole' **báaiso** and 'part' **gíiái**, might seem to be quantifiers:

(15) *a.* ***tíobáhai hi bá -a -i -so***

child he touch -causative -connective -nominalizer

'whole'

kohoai -sóog -ab -agaí

eat -desiderative -stay -thus

'The child wanted/s to eat the whole thing.' (lit: 'Child muchness/fullness eat is desiring.')

b. ***tíobáhai hi gíi -ái kohoai -sóog***

child he that -there eat -desiderative

'part' (in the appropriate context)

-ab -agaí

-stay -thus

'The child wanted/s to eat a piece of the thing.' (lit: 'Child that there eat is desiring.')

In (15) **báaiso** and **gíiái** are used as nouns. But they can also appear as postnominal modifiers:

(16) *a.* ***tíobáhai*** ***hi*** ***poogaíhiaí*** ***báaiso*** ***kohoai***

child *he* *banana* *whole* *eat*

-sóog ***-ab*** ***-agaí***

- desiderative *-stay* *-thus*

'The child wanted/s to eat the whole banana.' (lit: 'Child banana muchness/fullness eat is desiring.')

b. ***tíobáhai*** ***hi*** ***poogaíhiaí*** ***gíiái*** ***kohoai*** ***-sóog***

child *he* *banana* *piece* *eat* *-desiderative*

-ab ***-agaí***

-stay *-thus*

'The child wanted/s to eat part of the banana.' (lit: 'Child banana piece eat is desiring.')

Aside from their literal meanings, there are crucial reasons for not interpreting these two words as quantifiers.[22] First, their Truth Conditions are not equivalent to those of real quantifiers. For example, consider the contrast in (17) vs. (19):

Context: Someone has just killed an anaconda. Upon seeing it, (17a) below is uttered. Someone takes a piece of it. After the purchase of the remainder, the content of (17a) is reaffirmed as (17b):

(17) a. **'áoói** **hi** **paóhoa'aí** **'isoí** **báaiso**
foreigner he anaconda skin 'whole'

'oaboi **-haí**
buy *-relative certainty*
'The foreigner will likely buy the entire anaconda skin.'

b. ***'aió*** ***hi*** ***báaiso*** ***'oaob*** ***-áhá;*** ***hi*** ***'ogió***
affirmative *he* *whole* *buy* *-complete certainty* *3* *bigness*

'oaob ***-áhá***
buy *complete certainty*
'Yes, he bought the whole thing.'

Now, compare this with the English equivalent, where the same context is assumed:

(18) *a.* *STATEMENT: He will likely buy the whole anaconda skin.*

b. *OCCURRENCE: Piece is removed (in full view of interlocutors).*

c. *STATEMENT: %He bought the whole anaconda skin.*

It simply would be dishonest and a violation of the meaning of 'whole' to utter it in (18b). But this is not the case in Pirahã, (17b).

Next, there is no truly quantificational-abstraction usage of **báaiso** 'whole':

(19) ****Ti 'ísi báaiso 'ogabagai, gíiái 'ogi -hiaba.***

1 animal 'whole' want, piece want -negative

'I prefer whole animals to portions of animals.' (lit: 'I desire (a) whole animal(s), not piece(s).')

Sentences like (19) are based on experience. They can be used apart from specific experiences as generic projections, but always with exceptions expected. It is of course more difficult to say that something does not exist than to show that it does exist, since in the former instance a skeptic can always reply that you have not looked hard enough. Nevertheless facts like those discussed in this discussion, in the context of more than three decades of research on Pirahã, lead me to the conclusion that there is no strong evidence for the existence of universal quantification or any generalization intended to be exceptionless in Pirahã.

Given the lack of number distinctions, any nominal is ambiguous between singular, plural, and generic interpretation. This can lead to interpretations which seem quantificational, so we should discuss them here. Consider the examples in (20)-(21):

(20) ***tí*** ***'iíbisi*** ***hi*** ***baiai*** ***-hiaba***

1 *blood-one* *he* *fear* *-negative*

'I am not afraid of beings with blood.'

kaoáíbogi ***hi*** ***sabí*** ***'áagahá***

evil spirit *he* *mean* *is (permanent)*

'Evil spirits are mean.'

On the surface, examples like these might appear to indicate that Pirahã does have quantificational phrases. They are of course ambiguous between singular readings, e.g. 'I am not afraid of that being with blood' or plural readings 'Those evil spirits are mean', in addition to the generic, more quantificational readings given here. Although there is no word 'all' in Pirahã, it could be countered that perhaps it is the construction itself that produces the universal quantifier reading. Superficially, this seems appealing. But I think it is another manifestation of the translation fallacy (the idea that any sign in one language can be translated into a sign or signs of another language). Even though there is a certain 'quantificational smell' here, the truth conditions, again, are not the same as for a real quantificational reading. In fact, I, along with anthropologists and others who have visited the Pirahã, have misunderstood statements like these and/or their literal translations, because we do translate them into Western languages as universal quantification. These never mean that all beings with blood, for example, fail to inspire fear. There are always exceptions. This is understood by the utterer and the hearer. Each member of

the set has to be inspected to see if s/he is an evil spirit or being with blood and, if so, whether s/he is like other beings like that or not. Thus these are not quantificational but generic.

Linguist Anna Wierzbicka's disagrees with the analyses above. She has built a theory in which the quantifier "all" must be present in all languages. Thus the claim that a particular language lacks this quantifier is a counterexample for her theory, so must be rebutted immediately. She comments: "Can one say things like "All the men went swimming" in Pirahã? The answer is clearly yes, as Everett's examples (10) and (12) show. Concepts such as "every," "most," and "few" are far from universal, but "all" does occur in all languages, and Pirahã is evidently no exception. Everett does not see this: his interlineal gloss for hiaitíihí hi 'ogi `all the [Pirahã] people' is "Pirahã people he big." The fact that the same segment used in one syntactic frame can mean "big" and in another "all" misleads him into thinking that there is no word for "all" in Pirahã a conclusion clearly contradicted by his own data. The concept of polysemy is a basic tool in semantic analysis, and rejecting it altogether leads to ludicrous results such as the following "literal" gloss:

Apart from the question of how Wierzbicka knows that "all" occurs in all languages (no one can know this in practice), the truth conditions of Pirahã sentences simply do not support her assertions here or her statement that its obvious presence "clearly contradicts" my statement that Pirahã lacks this quantifier (in fact Kornai (2010) argues that perhaps no language has a word logically equivalent to "all").

> Wierbizcka (2005) further objects to my literal translations of Pirahã: "My bigness ate [at] a bigness of fish, nevertheless there was a smallness we did not eat." In using such glosses, Everett exoticizes the language rather than identifying its genuinely distinctive features. To say that ti 'ogi means, literally, "my bigness" (rather than "we") is like saying

that in English to understand means, literally, "to stand under." To deny that hi 'ogi means "all" is to make a similar mistake.

However, "exoticization" is often a charge leveled by people with minimal field experience, because of lack of exposure to dramatically different ways of thinking. In fact, it is an explicit claims in much of my work that *most languages do not translate well into others*. It can *appear* that the languages say similar things in similar ways because a good translator works to create exactly that effect. The translator takes a natural-sounding sentence in one language and makes it natural-sounding in another language. This is basic, dynamic translation theory. But a linguist focusing on analysis must ignore such temptation. They should give both a literal "gloss" as well as a free translation. The free translation should sound natural. The gloss should not (except fortuitously). Indeed it *cannot* in many cases. To have a literal translation sound natural in the target language will almost always do a disservice to the individuality of the source language and to the semantics and level of inferential reasoning used by the source and target languages independently. In other words, the "natural" translation that Wierzbicka calls for would be a *mis*translation. The tendency to create translations in which target and source languages match up better than warranted is a form of the "smoothing problem" in statistics (Wiener 1949). One wonders if linguistic theories are based too often on this kind of hyper-translation and this "smoothing away" of "exotic" facts while that they should instead be explaining, removing them without analysis via an over-translation. As for the claim that my translation would confuse "understand" with "stand under" if applied to English, this is incorrect. The English relationship is diachronic. My claim for Pirahã is that the translation is synchronic and this is based on the morphemes' behavior elsewhere in the language.

From this Wierzbicka goes on to conclude that: "In claiming that Pirahã has no word for "all," Everett is joining the long tradition of "primitive-thought" scholars such as Hallpike (1979), who also claimed that, for example, Australian Aborigines had no word for "all" and, accordingly, were not capable of making generalizations. Everett insists that the Pirahã language is not in any way "primitive," but the fact of the matter is that without a word (or wordlike element) meaning "all" speakers could not make generalizations. Accordingly, despite his protestations, Everett is presenting Pirahã as "primitive" language."

Before discussing Wierzbicka's objections, notice that her criticism is based on a profound confusion, relating Universal Quantification to the ability to make generic or general statements. These are not at all the same concepts and there is a large and robust literature distinguishing generics from quantification (especially Carlson and Pelletier (1995)).

There are two claims here. First that I am incorrect and Pirahã does have a word for all (ignoring the truth conditions). Second that if I am right Pirahã is a primitive language in spite of my protestations. I have addressed both of these concerns earlier, but because of the persistence of the objections I offer just a few more comments on methodology here.

Consider again the truth conditions of Pirahã words that are candidates to be quantifiers. Pirahã has two words that can refer to the entirety of entities, **xogió** and **báaiso**, and a form of **xogió, xogiáagaó**, can also be used in a way reminiscent of the universal quantifier 'all'. Suppose that we wanted to test the truth conditions of their containing sentences to see if these words were in fact quantifiers, as discussed above. There are many tests available, from showing pictures to enacting situations. I find it more useful in some field settings to act things out because this avoids problems with foreign or unfamiliar objects and it uses three dimensions

rather than only two. Hence the anaconda skin story I provided in Everett 2005 and restated above.

Or let's imagine that you tell someone "I can't believe I ate the whole thing." Then they find part of the food you claimed to have eaten still on your plate. So they tell you that you did *not* in fact eat the whole thing. You only ate part of it. Any native speaker of English knows that whole means the entire object (unless of course eater and watcher agreed in advance that this or that would not be counted in a determination of the whole). Of course, a native speaker of English could reply "I didn't literally mean I ate the whole thing." But to this the literal-minded could still insist "Yeah, well, you said 'the whole thing,' but you didn't really eat the whole thing." This disagreement is only possible because both speakers do know that the world "whole" means 'the object in its entirety'. But this is exactly the lacking in Pirahã. **Báaiso** never refers exclusively to the entirety of an object nor does it have identical truth conditions of the English words 'whole' or 'all.'

Or take an example of selling merchandise, another test I tried among the Pirahãs. They say that they want to buy a piece of cloth. They say that they want the "whole cloth" (literally the "bigness" of the cloth which could be translated 'all', as per Everett 1983, 1986, or 'bulk of per Everett (2005). How can we choose between these two alternative translations?

Well, to try to distinguish these, I ran tests like the following. I would take the cloth out and let them you want it 'all' (xogió)? If they said yes, then I would say 'OK, then all (xogió) of it'. Then I always cut off a smallish piece and gave them I would ask, 'Did you buy **xogió**?' The answer always would be something like, "Yes, I bought the whole thing." And with subject after subject this is repeated. It seems highly unlikely, therefore that **baaiso** or **?ogio** means 'all' in the universal-quantificational sense.

For **xogiáagaó** 'the bulk/bigness of the individuals', one test was to go into the village in the morning after most men had left to fish and ask "Did **xogiaágaó** of the men leave to fish?" I would be sure that a man who was with me when I asked this. The answer would always be 'Xogiáagao went fishing'. There is no contradiction - ever - between saying **xogiáagaó** even with obvious exceptions. This is not so for universal quantifiers. Though they occasionally allow sloppy readings, the strict quantificational reading is always available.

Now, of course in most languages quantifiers can be used sloppily or strictly. So if a child says, "But, Mom, everyone is going to the party," they rarely mean that literally everyone is going. A parent can easily get them to agree, however, that not everyone is going by replying "Not *everyone* is going, because *you* are not going." The child is confronted with the literal meaning of the word and recognizes the sarcasm intended because they know the literal meaning and how this contrasts with the sloppier/metaphorical sense that they were using with their parent. Therefore, truth conditions provide one source of evidence that Pirahã lacks a universal quantifier (or any interpretation corresponding to universal quantification).

Nominalism is not primitive. Nor are views which give particulars priority over generalizations as some pragmatists, such as William James believed. Here is a quote from a non-Pragmatist scientist (and friend of C.S. Peirce's father, Benjamin): "No one sees farther into a generalization than his own knowledge of details extends."[23] The Pirahãs offer no support for "primitive minds" or "wild thoughts."

Philosopher Donald Davidson (1917-2003) would, however, agree with Wierzbicka. Davidson believed that quantifiers were necessary conditions for any language. He claimed that to be an effective communication system: "requires a leap; it introduces quantification, the concepts expressed by the words "some" and "all." Once we advance to this stage, we have

arrived at languages that match, or begin to match, our own in complexity. ... It is here, in my opinion, that we reach the degree of expressive sophistication that we associate with thought, for it is only at this level that there is positive evidence that the speaker of the language can predicate properties of objects and events." (Davidson (1999, 17))

But this is mistaken. Davidson is making an empirically unwarranted claim. Languages like Pirahã violate it and yet are no less fully developed languages for doing so. Moreover, Davidson places the linguistic cart before the cultural horse. Concepts precede words. Words can be invented or co-opted as we need them. Murray Gell-Mann, for example, discovered a particular concept of physics for which there was no word. He borrowed the random word "quark" from James Joyce and voilá, the quark particle was born. Words come after concepts, not before. Davidson misses this crucial fact. A language without lexical quantifiers might still have ways of expressing quantification, if that concept is needed. In the case of Pirahã, the concept is not yet needed. Concepts arise as they are useful to a particular culture, not because of some a priori theory of what a language is. This sentiment is what led some Pragmatists, e.g. James (1975), to be suspicious of generalizations. It is also related to Goodman's induction problem, discussed in Everett (in progress). To repeat, truth-conditional considerations lead us to reject the existence of a universal quantifier in Pirahã and Nominalism leads us to reject the idea that the language is therefore primitive in any sense.

Of course, the absence of universal quantification or other types of words ultimately imcompatible with Nominalism are not necessary entailments of Nominalism. Nominalism can easily allow talk of abstract items and universals without believing that they are real. Quine, for example, could certainly have uttered the statement "All red things are red." But this sentence

does not commit him or anyone else to the belief in "redness." (though Peirce would have argued that this was a deep error on their part.) Or he could have said "Redness is non-existent."

In the case of Pirahã, as a society of intimates affected fairly uniformly by cultural norms and values of ethnography of communication (Hymes (1974)), we ought not be surprised that a shared culture-wide philosophy (implicit for the most part, Everett (2016)), can affect the vocabulary and concepts used in their everyday speech, both what they choose to use and what they avoid.

I conclude that Pirahã philosophy includes not only the epistemological and linguistic constraint of immediacy of experience, but that this constraint is founded on a Nominalistic and Pragmatist, empiricist perspective of the world. This is interesting because, if I am correct, it illustrates the confluence of two philosophical currents that Peirce himself found incompatible. Yet for the Pirahãs they provide a harmonious philosophy of life.

The Pirahãs, not having encountered Peirce, nor he them, have developed a cultural nominalism in which universals and abstract objects do not exist. However, unlike other forms of Nominalism, the Pirahãs' philosophy not only denies the existence of universals and abstract objects, but it also excludes names for these categories.

So far as I have been able to determine, the Pirahãs also lack abstract terms, like "love," "hatred," "five," (I consider number words abstract in English, though in their use as determiners, e.g. "five horses," they are neither abstract nor concrete). They also lack words for universals. But they do have words for generics, e.g. dog, mammal, birds, indigenous peoples, and so on.

This also follows directly from Nominalism applied to the Pirahã lexicon, as we will now see.

How can generics exist in a language that prohibits universal quantification?

> "Nominalism solves the problem of many things being green by giving a name to certain objects that resemble one another. An object such as a table, which can be seen in more than one place, is given the name "table" to represent a group of objects. The main concept to remember when dealing with nominalism is that there are no universal concepts outside the mind, as is assumed to be true for realism." (Rodriguez-Pereyra, G., (2011).

Pirahã does have generic nouns. But although these words do not seem superficially so different from universals or other abstract nouns, generics crucially differ from universals in that they entail inference from individuals to sets based on direct observation, making it convenient to discuss elements with family resemblances. Universal statements entail deduction from *un*observables to observables. Generic statements entail induction from observables and any member of the generic class serves as direct evidence. A generic statement is not intended to be exceptionless. Universals qua universals have no exceptions. Therefore the former, but not the latter, are therefore compatible with Nominalism.[24] (Again, nominalists, usually cross-linguistically and cross-culturally use universal quantifiers as a manner of speaking, without committing to universals in their ontology. But Pirahãs are stricter in this regard.) Kornai (2010) discusses this in depth and concludes that perhaps no natural language in fact has universal quantification.

To understand the distinction I am attempting to draw here, consider the examples below. The first example's translation illustrates the ambiguity of all of the Pirahã sentences that follow it in this set. It could mean "A dog is over there/in that part of the jungle." Or "Dogs are over there/in that part of the jungle." etc. The exact meaning is conceptually and contextually inferred

(see Atkins (2023) and Everett (in progress) on inference in Peirce's ideas and linguistics, respectively).

(22) **Giopaí xaoxaagá gaihi**

"Dogs are over there/A dog is over there/Dogs are found in that area/the dog is over there/etc."

(23) **Tíi Americáano xi baaiaagá**

"I fear Americans/that American/an American."

(24**)** **Tíi kohoaibaáí xísigíhií**

"I eat (intensively) meat (i.e. nonfish)/I love meat/I eat a lot of meat."

(25) **Xigihí kohoaibaáí xísigíhií**

"Men eat (intensively) meat (i.e. nonfish)/men love meat/men eat a lot of meat."

(26) **Xogiáagaó kohoaibaáí xahoiigío**

'A lot/most eat a lot in the evenings."

(27) **Hiaitíihi hi xoóíkabáo xabiíhaí**

'Pirahãs aren't going anywhere.'

How can we characterize Pirahã generics? Roughly speaking they can indicate kinds, vague collections, and the like, much as they can in English. What is crucial to recognize, however, is that whereas some understandings of Nominalism include the idea that universals are no more than names, linguistic devices, Pirahã not only does not recognize universals, they do not have words for them. It seems highly unlikely that the absence of such words along with the complete absence of universal interpretations and quantification is coincidental. Rather it seems

to reflect a deep cultural-philosophical principle a form of Nominalism (of course, we are not authorized by this to refer to Pirahãs as nominalists without qualification nor to their philosophy as (a form of) Nominalism. We may simply note the similarity and that the Pirahã position is no more "primitive" than William of Ockham's ontology). Although Peirce argued strenuously against Nominalism as an inhibitor to science, not everyone agrees (philosophers e.g. Quine and Goodman certainly would not (Gosselin 1990)). In particular, the Pirahãs are uninterested in theoretical science but focus on the pragmatic science of predicting and expecting certain phenomena in the natural world. They make no scientific pronouncements, except statements and predictions about the natural environment that directly affects them. The generic vs. universal distinction is an interesting issue philosophically and scientifically.

Thus Leslie (2015, 2) argues from data from other languages such as English, that the generic vs. universal distinction is theoretically important:

> *"The interpretation of sentences containing bare plurals, indefinite singulars, or definite singulars can be either generic as in (1) respectively or existential/specific as in (2):*
>
> *(1) Tigers are striped*
>
> *A tiger is striped*
>
> *The tiger is striped.*
>
> *(2) Tigers are on the front lawn A tiger is on the front lawn*
>
> *The tiger is on the front lawn."*

So how is it possible from this perspective that a language could have generics but not universally quantified NPs? Well, the answer is that the two are not the same. Liebesman (2011, 1) puts it this way (cf. also Sterken (2014):

"... the theory of simple generics– generics express monadic predications. On the theory of simple generics, "Dogs bark" has the the same type of logical form as an atomic sentence like "Homer is drinking": each contains a single predicate and a single argument and each lacks a quantifier or similar operator."

Teichman (2006, 16ff) lists three differences between generic vs. quantificational sentences:

"*First, generic sentences do not contextually domain restrict. That is the most important contrast: contextual domain restriction is the hallmark of natural language quantification, from determiner quantifiers to adverbial quantifiers and even modal auxiliary verbs. If generic sentences don't domain restrict, that should give the quantificational analysis serious pause."*

Second, "generic sentences are more selective than quantified sentences about what kind of predicate can go in subject position. Quantifiers will accept more or less any predicate with a denotation, but generic sentences seem to require something more, which I will give the nickname cohesion."

Third, "generic sentences exhibit a variety of context sensitivity that quantified sentences do not—they can vary as to whether they are interpreted artifactually or non-artifactually."

The debate about generics vs. universal quantification (Carlson and Pelletier 1995; Pelletier (2009); Lawler (1973); among many others) has not in general considered these issues directly related to Nominalism vs. Realism or larger philosophical concepts of this type, so far as I know. One of the main foci has been on whether there even is a difference between generics and universal quantification. The Pirahã data indicate that this is a valid distinction. One is about

abstractions and universals and the other is about everyday assertions and the like. Leslie (2007), however, argues for a more exotic conclusion, i.e. that the difference between generics and universals is that generics draw on a special innate faculty of generalization.

So Leslie (2007, 44) argues that: "The central thesis of this essay is that our understanding of generics reflects our default mechanism of generalization. If this claim is correct, then we have an explanation of how children can grasp these apparently complex sentences before they grasp the theoretically more tractable ones, such as those containing 'all.'" She continues that "... generics are not linguistically based pieces of knowledge that the child must string together, but rather are features of the child's innately given faculty of generalization - the oddness of generics derives from the cognitive system itself."

She fails to consider that "all" deductively refers from non-observables to observables, while generics statements are formed by induction from observables and always allow exceptions. From a Peircean perspective, the "faculty of generalization" is simply the faculty of inference, in this case induction, shared across many species. It is not specifically innate to language but is a by-product of general intelligence. I see multiple exemplars of object x and I infer (induce) that there is a set of x's (whether intensional or extensional). I am not convinced by Leslie's explanation that generics represent a special, innate, "primitive form of generalization," therefore. The Pragmatist inferential necessity of generics as opposed to universal quantification can be summarized as:

A. (i) No generics --> No terms (rhemes).[25]

(ii) No terms --> No language.

B. No universals --> no problem.

Terms are generics and without them we cannot build sentences or discourses, because we must insert unsaturated predicates into sentences in order to saturate them, as in a verb like "see (x,y)." Until we have used "see" in a sentence x and y are unsaturated - i.e. not linked to any referent, lacking interpretation. But without generic "terms" (in Peirce's sense) each sentence would require a unique predicate. All languages are built on generics in Peirce's sense (I don't expect exceptions).

Generic statements entail inductive inference from exemplars to sets with observable members. Universal statements entail inferences from unobservables to exemplars. And universal statements are by design exceptionless.

In "dogs have four legs" the generic term is exemplified by any dog. And exceptions are allowed. In "all dogs have four legs," no exceptions are allowed and "all dogs" is exemplified by no single dog or group of dogs. Pirahã builds its models of general statements inductively - built up by experience, rather than deductively via analysis, for the most part. They build via synthesis. They also inductively generalize about individuals and their behavior.

One early reader of this paper pointed out a potential problem for my distinction between universal quantification, generics, and experience: "... the evidential base for generics is not particularly different from that of universals. When I say "crows are black" I will not know whether this statement was a generic or a true universal until I meet my first albino crow. Even at that point the distinction boils down to my reaction of this fact: if I say, "yes, but crows are still black" this means I had the generic reading in mind all along, and if I say "okay, okay, I was wrong" this means I had the universal reading in mind."

This observation is reasonable, but in fact generics and universals are different not only in their endpoints but all along from the perspective of the "chain of evidence." When I say "All crows are black," what I mean is that I am intentionally making a statement that my experience

cannot back up. I am asserting that there are no exceptions, but I have no way of knowing this except theoretically. Universal quantification whether it is every used in everyday language or not with its purely logical sense, is vital for theory-construction. Generics, however, are used with the implicit caveat that "there might be exceptions - experience will tell." Thus although generics may look like universal quantification, the assumptions using them are that they must obey experience, while universal quantification in effect asserts that "experience will not falsify this statement nor is this statement based on experience."

However, as Teichman (above) explains, one of the contrasts between universals and generics is that the domain of universal quantification can be limited. If I say, for example, "All men are mortal" the "all men" here is an abstraction, something that I can never experience myself. However, if I say instead "All men in this room with me are mortal," this produces no abstract entity. I can in fact personally see, touch, and hear every man in this room. This would seem to contradict my earlier statement that the Pirahã language lacks universal quantification because the latter creates abstract objects beyond the "chain of evidence." There is nothing in these special, limited uses of the quantifier that ranges beyond the cultural chain of evidence. So why don't the Pirahãs have quantifiers limited to contexts like this? Because they do not need to.

And that is because there is a way to refer to universal-like sets, without running afoul of our earlier analysis. As we saw, Pirahã possesses an adjective that means "the bulk of the objects." Pseudo-universal quantifications such as "The bulk of men are mortal" or "The bulk of the men in this room are mortal" convey the loose idea of all, but like generics (which they still are) always allow exceptions. No need for a special "limited" universality and the truth conditions are always those of generic statements.

This absence of universal quantification is not limited to Pirahã, however. In his article "On the absence of certain quantifiers in Mohawk," Baker (1995, 24) argues that not only does

Mohawk lack words like "everyone," "everything," "nobody," and "nothing," but that the word "all" is never a quantifer: "In the spirit of Reinhart (1983), I interpret Vendler's differences between all and every as showing that every is a true quantifier but all is not. In a sentence like "Every man loves his beer," every functions as a distributive universal quantifier whos range is restricted by the N' man. Its LF [Logical Form, DLE] representation is roughly:
(10) ∀x, x a man, x loves x's beer. This explains why NPs including every are treated as a singular: each value that the variable assumes is itself singular."

But for reasons already given, Pirahã lacks both 'all' and 'every.' Thus in terms of metaphysics, Pirahã philosophy is quite far from, say, Peircean Realism. However, when it comes to concepts of truth and knowledge, they are much closer to Peirce, because their philosophy turns out to be, in my interpretation, an indigenous form of Pragmatism, as discussed above.

Thus Pirahã philosophy shares characteristics with Nominalism and Pragmatism and from these philosophical postures many of Pirahãs' characteristics follow - a case of abductive inference reducing surprise (see Everett (2023) on inference in Pirahã temporal interpretation).

Before leaving this section, two crucial questions must be addressed. It is all well and good to describe the Pirahãs as "having" a philosophy that is classified as some version of Nominalism. But why or how we are justified in attributing a Western philosophical concept, Nominalism, to a non-Western group that has written no philosophy? And how do we know that the Pirahãs' Nominalism isn't just a superficial similarity, a label applied without capturing any deep fact about the Pirahãs' way of thinking about the world?

Take the first question. Anthropologists, linguists, and others who do field research among non-Western, especially endangered, groups have a special responsibility to avoid the

guilt of Procrustes, forcing the practices and beliefs of these groups to fit the researchers' own biases about what the world is like. And the guilt of belittling must be avoided, however disguised. Lévy-Bruhl 's theses about "primitive minds" were largely based on biased and unscientific statements by missionaries - who by definition believe that nonChristian groups are heathens and condemned in some sense unless the embrace Christianity. Field workers who are some of the few or only to ever describe a particular group bear a huge responsibility.

For example, if a linguist describes a language as having this or that property that fits or doesn't fit a particular theoretical perspective in the West, readers will associate that group with the linguist's analysis or description and the question of whether that linguist is right or wrong will usually only be raised to the degree that they conform to the audience's present beliefs about language or not. One can say that "this language allows violations of weak crossover" and give evidence. But even on a point so otherwise insignificant to the public, the linguist has thereby labeled this group in some small way and the linguist thus must bear personal responsibility for that. And that responsibility is underscored by the ever-present possibility that the descriptions or analysis was wrong all along. Responsibility is never detachable from claims made.

Thus if I say that the Pirahãs "have" some sort of Nominalism among their cultural values or "dark matter" (Everett 2017) this label is something I bear responsibility for. So how does one discharge that responsibility? To offer descriptions that are as accurate, truthful, and well-argued as one is able. So here are the claims:

Rather than claim that the Pirahãs are Nominalists in the sense of the Scholastics, what I am claiming is that their ontology, as expressed through their vocabulary, fits common descriptions of Nominalism. For example: "Nominalism comes in at least two varieties. In one of them it is the rejection of abstract objects; in the other it is the rejection of universals.

Philosophers have often found it necessary to postulate either abstract objects or universals. And so Nominalism in one form or another has played a significant role in the metaphysical debate since at least the Middle Ages, when versions of the second variety of Nominalism were introduced. The two varieties of Nominalism are independent from each other and either can be consistently held without the other." (G Rodriguez-Pereyra 2008)

In my analysis of the Pirahã lexicon, culture, and values, the cultural value of, loosely, both of these forms of Nominalism explain numerous features I described in Everett (2005) of Pirahã culture.

The limitation to concrete experience (I originally proposed in Everett (2005)) has been interpreted by some as a continuation of Lévy-Bruhl 's primitive thought hypothesis applied to the Pirahãs. I have even had colleagues assert that "Even if what you say is true, you do not have a right to say it." This seems to be an irrational fear of describing highly different systems honestly and, again, seems to be based on the ethnocentric view that Western ideas of cognition are standards by which to measure all other cultures. Nevertheless, no doubt due to its Western origin, no one to my knowledge sees the labels "Nominalist" or "Pragmatist," as condescending or condemning (outside of some personalities in philosophy). Therefore, the evidence that Pirahã culture produces a form of Nominalism should not trouble anyone any more than they might be troubled by William of Ockham's or Willard Van Orman Quine's Nominalism (see Parsons (2011) and Gosselin (1990) for discussions of Quine's Nominalism). The Pirahãs lack words for abstract objects and they lack words for universals. This "lack" follows directly from their metaphysics and cultural values as I have described them here and elsewhere (Everett 2005; 2009; 2017). Nominalism has long been a debated, but intelligent and respected, position in

philosophy. The Pirahãs are no more "exotic," "primitive," or "cognitively aberrant," than many of the greatest philosophers in Western history.

If one is a Nominalist, whether one is WVO Quine, William of Ockham, or a Pirahã, one's ontology excludes abstract and/or universal objects. A universal quantifier creates such objects. One could still consider such quantifiers useful for talking about fictional universals of course. So Nominalism in general in general does not prohibit quantification. But what I have argued here, however, is that the vocabulary of Pirahã more strictly reflects its Nominalistic and Pragmatist philosophies because of both the uniformity of the society of intimates and its culturally constrained topics of discourse (Everett (2005)).

Let us move on now to a brief consideration of Pirahãs lack of religion.

I have claimed elsewhere (Everett 2005; Everett 2009) that the Pirahãs have no concept of God, other than what outsiders have attempted to introduce, and that they have no religions beliefs, no myths, and no belief at all in the supernatural. (See Purzycki and Sosi (2019; 2022) for an alternative take on the Pirahãs and Caldwell-Harris and Everett (2022) for a reply.)

Religion is often assumed to be a human universal—all groups of people develop complexes of symbols, rituals, and beliefs that connect their own experience to the essential nature of the universe. But this amounts to little more than saying that all people have some philosophy, a statement that seems more likely than saying that they have religion. But at this level of utterly watered-down vagueness, one could argue that the Pirahãs' philosophy just is their religion. Crucially, though, the Pirahãs believe in nothing supernatural. They are pragmatic empiricists, nominalists.

So what is the evidence that the Pirahãs lack religion? They do not believe in magic, nor do they have "spirituality," in the sense of supernatural beliefs of any kind, nor do they believe in

any other authority than themselves. They do not believe in spirits. They have no spiritual/religious specialists, e.g. a shaman. They classify the entities in the world in a way that includes real and existent creatures and real but non-existent (to us) creatures. They have a cosmology unlike ours, but this has nothing to do with religion. It is astronomy and geology to them.

It is true that the Pirahãs wear necklaces and when they are ill they paint their faces red (men wear jewelry far less frequently than women, which I take to be related to their quick moving in tight spaces and desire to remain quiet while hunting). The red indexes illness and its location on the body indexes where they are feeling ill. The color is iconic of blood. The people sometimes say that the red dye replaces the blood loss that is making them sick (most common explanation of sickness - and malaria, for example, causes a lot of blood loss through the urine). This use of red dye (from the urucum plant) is very unlike the geometric symbols painted on bodies by the Ge peoples and many others of the Amazon. Many government employees who have visited the Pirahãs have in fact asked me "Why don't these people paint themselves like other Amazonians?"

The necklaces are at once decorations and noise makers. With regard to noise making, anyone familiar with the jungle or hostile natural environment knows that there are many dangerous creatures in the jungle. And it can be fatal to surprise them. Making noise (and the Pirahãs talk loudly, clap hands, and in general make lots of noise when they walk - unless they are closing in on an animal to kill) is healthy and necessary. Necklaces contribute to this. Especially for women and children who are not hunters. Unfortunately, when I was 26 and describing all of this for the first time, I chose incorrect words like “spirits” and such and related

this to religion. But at my more impressive current age, I know a lot more and concluded based on countless hours of discussion in all villages, that they have no religion, etc.

One description of Durkheim's work on religion is that he considered religion a projection of the social values of society, a different semiotic channel for semiotic statements about the containing society. The one part of his definition that jars, but might be right, is that "religion is society worshiping itself"

Pirahã culture and society may therefore be described by my analysis, from a Western perspective, as an atheistic, anarcho-libertarian culture. One of the more important distinguishing characteristics of the absence of religion is the very low ranking of "authority" in its value system (Everett 2016). Simply put, Pirahãs do not order each other about or assume authority over others in the normal functioning of society (as often accompanies religion). So consider some areas in which authority might arise:

(i) Kinship authority

(ii) Religious authority

(iii) Skills authority

(iv) Intellectual authority

With regard to item (i), kinship authority, husbands do not order their wives about, by and large (occasionally they do, but this is not considered "correct" behavior). Parents do not order their children about (though disobedient children will be scolded in a deep voice). No one ever strikes anyone else unless they are out of control - behaving very badly relative to shared cultural values. Item (ii) never arises since there is no religion or supernatural belief among the Pirahãs. Item (iii) can arise in limited ways. Someone who speaks Portuguese a bit better than other Pirahãs might be indicated or naturally place themselves in the position of interpreter when

Brazilians or other foreigners enter the village. The best fisherman might take the lead when a group of men go fishing together. The best hunter might go in front and direct others in a group hunt. But none of the items of this category are hard and fast. To the degree that there is any authority devolving from differential skills and abilities, this is fluid and flexible. No one *always* takes the lead in hunts, interpretation, fishing, and so on. But often for convenience those recognized as more skillful will lead certain activities. Outside of those activities, however, they have no more authority than anyone else (i.e. none).

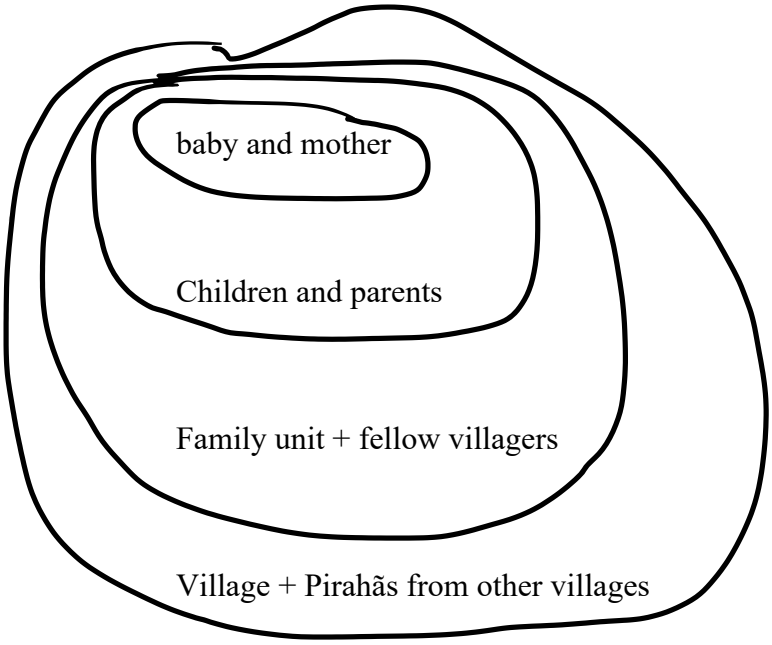
Pirahã behavioral expectations are partially summarized in the statements below, where the society's expectations are the enforcers, rather than people or religious ideas:

(i) Do not harm or endanger other Pirahãs.

(ii) Do not tell others what to do.

(iii) Share what you have with as many Pirahãs as you can, via the concentric circles of attachment (Everett (2012)).

The groupings of the concentric circles are:


baby and mother
Children and parents
Family unit + fellow villagers
Village + Pirahãs from other villages

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EP *followed by page number refers to The Essential Peirce. Ed. the Peirce Edition Project. Indianapolis, 1998.*

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Notes

[1] I first encountered this attitude as a twenty-something years ago watching the old Phil Donahue talk show from my Southern California living room. One of the guests was a philosopher. When this guest was asked by a member of the audience about African philosophy, the guest expressed Husserl's, apparently common view, when he replied that "there is no such thing as African philosophy."

[2] Moreover, as I argue in Everett (in progress), there are Latin and African-(pan)American philosophers that should not be neglected in such a survey. American philosophy is not exclusively white and Anglo.

[3] Radin is wrong simply because not all cultures have specialists. Individuals may very well reflect deeply, but this does not require a specialist.

[4] Native Americans express a wide variety of opinions as to what they would like to be called. Some prefer their particular group's name, e.g. Apache, Comanche, etc. Others prefer "first nations." Others "Native Americans." But it still seems as though the majority of indigenous communities in the USA prefer to be called "American Indians." (https://americanindian.si.edu/nk360/faq/did-you-know)

[5] As a new concept becomes important we can create or co-opt words to label these concepts.This is basic semiotics.

[6] The Pirahãs are largely the same in appearance and behavior today, more than a century later, though women wear dresses when they have them, there is no piercing, and men were shorts instead of penis sheaths.

[7] The term "Amerindian" is dispreferred by most North American linguists as implying a linguistic and cultural unity that is at best ephemeral and at worst incorrect.

[8] The problem with such application of ideas such as "perspectivism" to all peoples of a certain type is that (i) the term is not sufficiently distinctive and (ii) the term is a poor fit. With regard to (i), the term is too strong. Consider the fact that many religious people of European descent believe in angels, demons, ghosts, and so on. William James (2020 [1902]) after all dedicated a significant amount of research to New Englanders' beliefs in ghosts. So believing in supernatural or different types of entities that do not match biological classifications is hardly limited to Amazonians. Further, the term is too weak because it fails to capture nuanced distinctions between Amazonian peoples. Pirahã beliefs in different types of entities fails to match beliefs held by other Amazonian groups, even those, e.g. the Tenharim and Parintintin, which are found in near proximity to the Pirahãs.

[9] A question that intrigues me is "what would world philosophy look like if the primary traditions were Native American instead of European?" If the entire history of Western philosophy had never been, what would Western hemisphere philosophy look like if it had emerged exclusively (and faithfully recorded) from Native Americans, instead of the imperialistic Europeans that arrived so very late in American history?

[10] The notion of 'event' used here comes from the standard literature on lexical semantics, i.e. a single logical predicate. Such predicates can be modified, but are represented as a solitary events. See Van Valin and LaPolla (1997) for one model of lexical semantics. Note that this constraint does not say that a single event cannot be expressed by more than one utterance, merely that multiple events are not expressed in one utterance/sentence.

[11] If the reader is interested in pursuing Pirahã contact history further, discussion is found in Drummond (1784); von Martius (1821); Nimuendaju ([1922] 1948; Gondim (1938); Heinrichs

(1964); Sheldon (1974); Oliveira e Rodrigues (1975); Sampaio (1978); Everett (1978, 1980; and many more).

[12] There is no basis for any of Nimuendaju's suggested etymologies so far as I can tell and they should be disregarded. The term "Pirahã" seems to come from a Mura word for Pirahãs, corrupted via Portuguese transmission. The Pirahãs' autodenomination is **hiaitíihí** "he is/they are straight," i.e. the "straight ones."

[13] Nimuendaju here fails to cite von Martius, who visited the Pirahãs and took equally accurate words lists from them in 1821. (von Martius (1821))

[14] But in recent years, this changed when one village of Pirahãs moving from the Maici to the Madeira ca. 1999).

[15] For example, my children often left their toys lying about. Pirahã children would take them from our house, sometimes even Pirahã parents, to play with at their homes, seeing that we had "abandoned" the toys. My children, however, saw this as theft. When I would go to the Pirahãs in search of the toys, the Pirahãs thought I was behaving strangely - why take what is now my child's toy, one that your children had tossed aside?

[16] *Popular Science Monthly* for January, 1878 (xii. 287)

[17] I went to the Pirahãs for the first time in December 1977. I visited them for the last time in July of 2009. I was a missionary and Bible translation from 1977-1988. In 1989 or so I became an atheist, the end of a long, gradual process during which my relationship with the Pirahãs evolved and I came to reject the colonialist enterprise of missionizing, remaining among them as scientist, supported by research grants from various governments and universities. During this time I was employed by the Universidade Estadual de Campinas, the University of Pittsburgh,

the University of Manchester (UK), and Illinois State University. My total village fieldwork totals in Pirahã communities (roughly 111 months/over nine years living in the village):

1977- 10 days (in December. First-ever visit)

1978 - 3 weeks in December

1979 - Malaria year (Keren and Shannon nearly dying) - 6 weeks in village; Pirahã speaker living with us for 5 months outside the village while Shannon and Keren recovered

1980 - 8 months

1981 - 4 months

1982 - 4 months

1983 - 4 months

1984 - 4 months

1985 - 4 months

1986 - 1988 - 12 months

1989-1999 (academic years; working at Pitt) - 36 months

1999-2001 in Brazil - 20 months

2001-2009 (Manchester; Illinois State) - 3 months

[18] In Peirce's phenomenology, there are three levels of experience or perception. Firstness - a low-level awareness of something without being able to say exactly what it is, being unable to compare it clearly to anything else. Secondness is the next phenomenological level, wherein we can perceive things clearly and recognize that they are distinct from other things, a perception based largely on the "resistance" or contrast between one object or another. Finally, thirdness is the level at which generalizations are possible.

[19] My attention was drawn to the lack of numbers in part because my family's experiences. As I reported in Everett (2005): "In 1980, at the Pirahã' urging, my wife and I began a series of evening classes in counting and literacy. My entire family participated, with my three children (9, 6, and 3 at that time) sitting with Pirahã men and women and working with them. Each evening for eight months my wife would try to teach Pirahã men and women to count to ten in Portuguese. They wanted to learn this because they knew that they did not/do not understand non-barter economic relations and wanted to be able to tell whether or not they were being cheated (or so they told us). After eight months of daily efforts, without ever needing to call the Pirahã to come for class (all meetings were started by them with much enthusiasm), the people concluded that they could not learn this material and classes were abandoned. Not one Pirahã learned to count to ten in eight months. None learned to add 3+1 or even 1+1 (if regularly responding '2' to the latter is evidence of learning – only occasionally would some get the right answer. This seemed random to us, as indeed similar experiences were shown to be random in Gordon's research ...)." (Everett 2005, --)

[20] The 'translation fallacy' is well-known, but field linguists in particular must be ever-vigilant not to be confused by it. Bruner, Brockmeier, and Harré (2001, 39) describe it as the supposition that there is only one human reality to which all 'narratives 'must in effect conform – be they fiction or linguistic theories, say. Throughout this paper, I will urge the reader to be on guard against this – the mistake of concluding that language x shares a category with language y if the categories overlap in reference.

[21] It has been suggested that these Pirahã words *are* quantifier words, but have different truth conditions from their English counterparts. But having different truth conditions just means have

different meanings in this context so if it could be shown, as I do here, that they have different truth conditions then they are different words, not quantifier words in the logical sense, Q.E.D.

[22] Any counterargument to this analysis must account for these, though none of the attempts to argue for Pirahã quantifiers ever has.

[23] "... as Agassiz says, as I begin to use my eyes a little every day, I feel like an entirely new being. . . I have profited a great deal by hearing Agassiz talk, not so much by what he says . . . but by learning the way of feeling of such a vast practical engine as he is. No one sees farther into a generalization than his own knowledge of details extends, and you have a greater feeling of weight and solidarity about the movement of Agassiz's mind, owing to the continual presence of this great background of special facts, than about the mind of any other man I know (Letters of William James, vol. 1, p. 65).

[24] In Peircean semiotics, *terms* represent possible characters (e.g. 'man', 'dog'), including generics. There cannot be a sign system without generics, because no sign system is possible without terms. Universal quantifiers are not terms, however, they manifest themselves as dicisigns, arguments or discourses. This reinforces what Everett (2012b) discusses briefly, namely, that generics are a communicative essential - one must be able to talk about, for example types of animals, e.g. fish, cats, dogs, timbó, etc, for hunting, for gathering, for warning, for cultural festivals, for conversing in general. Generics cannot be eliminated from human communication. A term (i.e. a generic) specifies a class. We can contrast other terms and generics with quantifiers easily.

[25] In Peirce's semiotics (see Everett (in progress)), a term is an unsaturated predicate - all verbs to be sure but also for Peirce including nouns of all types.