

# Nouns and Verbs

Some say that the distinction between nouns and verbs is present in every human language. Some even say that such a distinction must be in every human language. Others give analyses to show that a particular language does not have a noun-verb distinction. By reviewing this controversy we will see how issues of language universals, metaphysics, relativity in language and thought, and methodology of investigation in linguistics are intertwined.

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### **Introduction**

There are two kinds of languages: thing languages and mass-process languages.

In a thing language, the grammar leads speakers to look first for stability in the world: the world is made up of things, individual things, that persist in time. Words that can be used to pick out that stability are nouns. Descriptions of the individual things in time are verbs. There may be words for mass and process in such a language, but they are secondary in that the grammar forces their use into the syntactic role of nouns and verbs, and hence forces speakers to think of them in some way as things and as descriptions of things in time.

In a mass-process language, the grammar leads speakers to see the world as the flow of all. Descriptions are of the flow of all in time and space. There is no idea of change, for there is nothing to change: there are only differing descriptions of the flux. Every base word can serve as a description and as a modifier, and each can be marked for time, or only whole assertions can be marked for time, or assertions can only be compared for time as before or after. Stability can be found but only with secondary grammatical constructions. There are no nouns and verbs, for there are no words for individual things and no descriptions of things in time.

There is good reason for a noun-verb distinction in thing-languages. There is good reason for no noun-verb distinction in mass-process languages. This is what I will show in this paper, along with how linguists and philosophers do or do not take account of such very different grammars.

### **Thing languages**

Languages such as English, German, and French are *thing languages*. The grammar of these directs their speakers to look first for stability in the world as made up of things. For example, in English there are lots of words for kinds of things. We have “dog”, “apple”, “rock”, “chair”. We talk of an apple or the apple: the singular with the article indicates we are meaning to talk about a specific individual thing. We talk of all the apples on the table, indicating with the plural our intention to get someone to pay attention to many individual things of that kind.

We describe things. I take an apple; it’s red, round, shiny, firm. I bite into it and put it on the table. It’s no longer round, and where I bit

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it's an off-white color. I leave it on the table for a couple days, and it is no longer red and firm: it's mushy and brown. We say the apple changed. But what changed? Our grammar insists that we are talking about one thing that has gone through changes: the apple. So the apple is a thing that is supratemporal: it persists in time through its changes. We describe the changes with words and phrases like "was red", "is mushy", "softened", "changed color". The grammar of English directs us first to look for stability in terms of things and then to talk of how those things go through changes.

We say that a word or phrase for a thing we mean to be talking about is the *subject phrase* of a sentence. In "The apple turned mushy" the subject phrase is "The apple". We might say that the subject of the sentence is the apple itself. The comment we make about the subject is called the *predicate phrase* of the sentence. In "The apple turned mushy" the predicate phrase is "turned mushy". But unlike the subject of the sentence, there is no thing, nothing outside the sentence but in the world, that is the predicate. Some say there must be something outside the sentence that is the predicate, claiming that in this example the predicate is the idea or abstract thing correlated to "turned mushy". This is an example of how strongly the thing-view of English directs people to find things for all our expressions: it can't be only a part of language that is a predicate, but just as the subject of the sentence is a thing, so, too, the predicate is some thing "out there", distinct from our talking. To be clear and avoid this controversy, I'll use *subject* and *predicate* to mean parts of a particular utterance.<sup>1</sup>

The subject of an utterance is for that particular utterance. But generalizing, folks talk about *nouns*, being the words, not the particular utterances, that are used in giving a subject. Thus, in the example "apple" is a noun, modified by "the" to create the subject of the sentence. In "Dogs bark", the noun is "dog", modified by the suffix "s" to make the subject of the sentence. In "The person I met last week on the plaza was hungry", the subject is "The person I met last week on the plaza", where "person" is a noun; but also "plaza" is a noun because it can be used as a subject by itself, as in "The plaza is rectangular".

What, then, is the subject of "Mud is brown"? In analogy with "This chair is brown", we say it is "Mud", and call therefore the word "mud" a noun. Yet it is not a word that directs our attention to one or

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<sup>1</sup> Though I say "utterance", I mean to include signs in sign languages and inscriptions in written languages in the discussions that follow.

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several individual things. Mud is a mass: every part of mud is mud, and there is no smallest part of mud that is mud. But the thing-focus of our language has determined our grammar, and hence we say that “mud” is a noun and “is brown” is the predicate in the sentence.

What is the subject of “Running is good for your health”? Following the pattern we’ve seen with thing-talk, we say that “Running” is the subject, and then “running” is a noun—even though it can as well be used for a predicate, as in “Spot is running”. Yet running does not direct us to some part of the world or our experience that is a thing, not an individual thing. Running is more like mud: every part of running is running, and there is no smallest part of running that is running. We treat the word in our grammar as we treat “mud”: we talk of some mud and some running, not a mud or a running. Yet running is quite different from mud in that it is not a mass: it is process, for “running” is a word linked to a word that describes changes in things in time, “run”. Still, our grammar forces us to use “running” and “mud” as we do “apple” and “dog” as if they picked out things.

What is the subject of “Justice is desirable”? On the pattern of thing-talk, it is “Justice”, and then “is desirable” is the predicate. We are forced to think of justice as if it were a thing. But then is it real or abstract, an idea or a way of being in the world? We are led to these odd questions by the thing-focus in our language because we use “mud”, “running”, “justice” as nouns following the pattern we have for nouns that are used to pick out individual things.

The predicate of a sentence in English is marked for time. In “The apple was round”, the predicate is “was round” and the part of that which is marked for time is “was”, which is “to be” conjugated to the past tense. In “The apple turned mushy” the predicate is “turned mushy” and the part of that which is marked for time is “turned”, which is the past tense of “to turn”. The part of a predicate that is marked for time, that indicates the when of the description or how the thing changed, we call a *verb*. Verbs embedded in predicates, and process words like “running” that come from verbs, are how we talk of process and change in English. They are as fundamental as nouns, for in English we must mark every sentence for time—the “when” of the description. This is how we place the supratemporal things we talk of into our world of experience.

In “Dogs bark” what is the mark for time? The verb “to bark” is marked not for the present, past, or future but for all time or an indica-

tion of capability, as in “All dogs have the ability to bark”. There can be omnitemporal marking for a verb.<sup>2</sup>

Words for individual things like “Birta” or “this dog” cannot be marked for time. To mark them for time would be to see them not as stable but as process, change coming to the fore. We would have no stability, no thing that continues through its changes, but only another description, like “turned brown”.

The classifications we denote with “subject”, “predicate”, “noun”, and “verb” are clear enough in our use of English as well as in German, French, and Portuguese. They are not some arcane talk of grammarians or linguists but come to us from the thing-focus of our language. We can all recognize them even if we have never been taught grammar in school.

### **Mass-process languages**

There are also *mass-process* languages. The grammar of these directs their speakers to look first at the world as the flow of all, describing but not partitioning. Since few people who are likely to read this paper speak a mass-process language, I will try to lead you to understand their nature by describing an artificial language I devised.<sup>3</sup>

There is flux—as we experience and describe. We have something like this in English when we say “It’s raining”. The subject is “It”, yet there is no thing in the world that is raining. The “’s” part (“is” contracted) is there to indicate just time. We could as well say “Raining” while pointing out the window. Or we could say “Table-ing” pointing in my office. Or we could say “Woman-ing” while gazing around a grocery store. In this view of the world, “raining”, “table-ing”, “woman-ing” are not meant to get you to pay attention to one or many individual things; they are meant to describe the flux of all. To say that Zoe is woman-ing is to talk of Zoe as a process-mass, continuing through time not as a supratemporal object but as a way. But Zoe is not a process-mass, for that is to treat her as a thing again, just a different kind of thing. There are no processes, no masses. There is only the flux of all that we describe in various ways, one of which is “Zoe-ing”. Still, I’ll use the terms “process-mass language” and “process-mass

<sup>2</sup> See my *Time and Space in Formal Logic* for how we take account of time markings in reasoning in thing-languages.

<sup>3</sup> I give more motivation and examples in “The World as Process” in this volume.

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word” because the parts of English that lead us to see this other view are words we use for processes and masses.

We can say “Dog-ing running brown-ing”, and that would be true if you had pointed to my dog Birta chasing a rabbit. But I use the symbol “+ ” to indicate that the descriptions are mixed together and not simply applying at a time and place, so that pointing to Birta it would be correct to say “Running + dog-ing + browning”, while “Running dog-ing browning” without the “+” might be true if there were 17 white dogs in a room where there is a cockroach running across a brown table (note that I have to resort to English for my examples).

In “dog-ing + brown-ing” there is no subject or predicate, no noun or verb in the sense we saw for thing-languages. An equivalent description is “brown-ing + dog-ing”. The words “dog-ing” and “brown-ing” have equal status, and there is no individual thing, not even abstract, that is meant as the subject and no comment on “it” as a predicate. There (pointing) is dog-ing and brown-ing mixed together.

Equally, we could say “Brown-ing” while pointing in the direction of my old dog Birta. That would be true. Brown is not a color that attaches itself to a thing; “brown-ing” is a description that applies in the flux at that time and place. Similarly, looking out the window, I can say “Running”, and that would be true whether it is one dog running or many people running in a marathon. Running, in this view, is not a thing; “running” is a description that applies to the world of our experience.

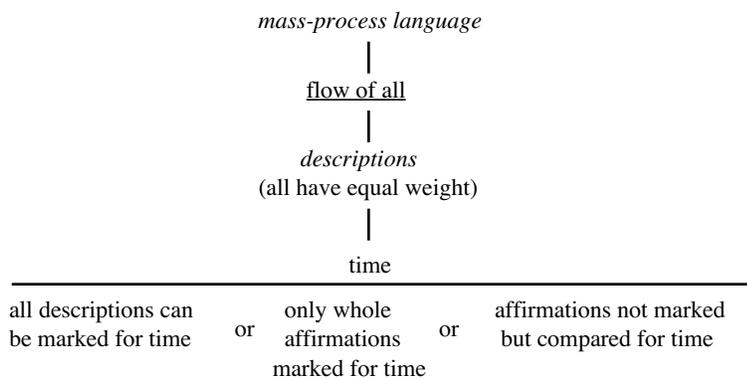
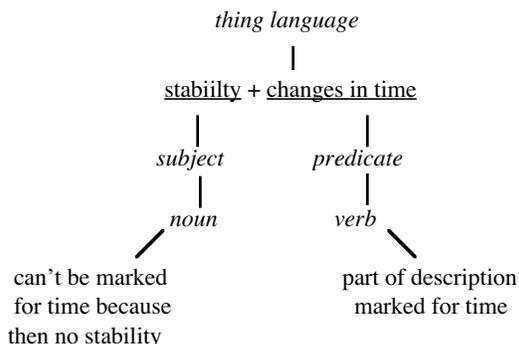
We can mark a sentence for time and place, like “Raining (yesterday, here)” or “(Running + dog-ing + browning) (today, there)”, where the markers are made clear by context. Any of the mass-process words (or combinations of them) can be marked for time. This suggests that each is a verb. But how can there be verbs without nouns? We could use time marking just for an entire sentence, as in “Yesterday [ (dog-ing + running) and (raining) ]”. Or we could use only comparisons for temporal ordering, as in “(bark-ing + dog-ing) before (rabbit-ing + run-ing)”. In these last two no part is marked for time, so we have no temptation to classify a part of the expression as a verb.<sup>4</sup>

In this artificial language, it is not simply that there is no noun-verb distinction and no subject-predicate distinction. There is good reason why there should not be such distinctions, at least in the sense of those

<sup>4</sup> I work out the details for these options in *Reasoning about the World as Process*.

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notions given for thing-languages.



Curious, some say, but there could be no human language that does not focus primarily on things with a subject-predicate distinction and consequent noun-verb distinction. They're wrong.

**Some mass-process languages**

I cannot prove to you that there are ordinary languages that people speak or have spoken which are mass-process languages. I speak none, and I suspect that you, too, do not. What I will do here is present descriptions of some languages by those who have studied them. I will let you judge the aptness of the descriptions for justifying the claim that the language being considered is a mass-process language.

*Wintu*

In the 1930s and subsequently Dorothy Demetracopoulou Lee studied Wintu, a Native American language of a tribe living in California along

the upper reaches of the Sacramento, McCloud, and Pitt rivers. The language is now extinct. Here are some extracts from her papers.

There is evidence that the Wintu Indians recognize or perceive first of all humanity, human-being-ness, and only secondarily the delimited person. They make no distinction between singular and plural, and a cardinal number is never used with this generic, primary form of the word. They individuate, however, making a particular out of the original generic form of the word; out of *nop*—deermeat or venison—they derive *nopum*—(a) deer; out of *se*—handness, hand—they derive *semum*— finger. Yet here also, unless the Wintu chooses to use a separate word meaning one or several or giving the definite number, there is nothing to show whether the word refers to a singular or plural; *nopum* may be one or many individual deer; *semum* may be one or several fingers.

“Symbolization and Value”, pp. 80–81

To the Wintu, the given is not a series of particulars, to be classed into universals. The given is unpartitioned mass; a part of this the Wintu delimits into a particular individual. The particular then exists, not in nature, but in the consciousness of the speaker. What to us is a class, a plurality of particulars, is to him a mass or a quality or an attribute. These concepts are one for the Wintu; the word *red*, for example, is the same as for *redness* or *red-mass*. Plurality, on the other hand, is not derived from the singular and is of slight interest to him. He has no nominal plural form, and when he does use a plural word, such as *men*, he uses a root which is completely different from the singular word; *man* is *wita* but *men* is *gis*.

“Linguistic Reflection of Wintu Thought”, p. 122

To the Wintu, generic concepts are primary and the particular is derivative. I use the term *generic* rather than *universal* advisedly. To the Wintu, the given is not a succession of particulars, to be conceptualized and classified under universals. Rather, it is immediate apprehension of qualitatively differentiated being. For the Wintu speaker, the phrase *there-is-fog*, with a separate word for the subject and the predicate, is only a grammatical alternative for his other expressions, *it-fogs*. He prefers an expression such as *it-roes* to *roe exists*, *it darks* to *it-is dark*; he will say *she-soups* instead of *she-makes soup*. *Round* is derived from *to-be-round*, *thunder* from *to-thunder*, *nest* from *to-build-a-nest*. Actor and result are one with the act. Substance is one with existence; it cannot be said to be particular, as it is conceived of in European thought. Substances, as for

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example roe, fog, deer, are originally differentiated but since they are not delimited, the particular is a secondary concept.

“Categories of the Generic and the Particular in Wintu”, p. 362

### *Salishan languages*

Salishan languages comprise a family of Native American languages of the Pacific Northwest of North America. In “Salish Evidence against the Universality of ‘Noun’ and ‘Verb’ ”, M. Dale Kinkade says:

. . . they are predicates in the Salishan languages rather than either nouns or verbs. They are rather like gerunds in English, which are both noun and verb at the same time. Any such simple form may be translated into English either as a simple noun or an equational sentence with a dummy ‘it’ as subject, with the whole indicating a state rather than an entity. It is difficult for speakers of English to conceive of forms such as *p’oxít* as complete sentences because English requires a subject and predicate in every sentence, but there is no logical reason why one cannot perceive of ‘father’ (and other nouns) as a state such as ‘being a father’ (cf. Kuipers 1968). Words such as ‘father’, ‘deer’, ‘shoe’ may even be given imperative inflections in Salish, in which case they mean ‘be a X!’ p. 28

It is readily demonstrable that any full word may constitute the main predicate of a Salishan sentence. p. 27

Even names are predicative, although they usually occur as complements or adjuncts rather than as main predicates. But they *may* occur as main predicates. p. 29

It would appear that everything in Salish may be considered a state.

p. 31

### *Mayan*

Mayans are native to the Yucatán peninsula in Mexico, Belize, and Guatemala, as well as in parts of Honduras and El Salvador. Michael D. Coe in “Breaking the Maya Code” says:

As English-speakers, we take it for granted that one can speak of, say “four birds” or “twenty-five books,” but this kind of numerical construction is impossible in the Mayan languages—between the number and the thing counted there has to be a *numerical classifier*, describing the class to which the object, animal, plant, or thing belongs. We have a glimmering of this sort of construction when we talk of “two flocks of geese” or “a pride of lions,” but this is pale stuff compared to the richness of the Mayan classifiers. Colonial Yucatec dictionaries list dozens of these, but only a handful are still

in use in today's Yucatán, yet even these have to be interposed even when the number itself might be in Spanish. If I see three horses in a pasture, I would count them as *ox-ytul tzimin* (*ox*, “three”; *-tul*, classifier for animate things; *tsimin*, “horse” or “tapir”). However, if there were three stones in the same pasture, I would have to say “*ox-p'el tunich* (*ox*, “three”; *-p'el*, classifier for inanimate things; *tunich*, “stone”). p. 53

Stephen C. Levinson in “Relativity in Spatial Conception and Description” talks of “the Mayan (Tzeltal-speaking) Indians of Tenejapa” in Mexico.

Why does Tzeltal force the speaker into such an arbitrarily detailed geometry of the figure? One answer may be, as just hinted, that the main function of the locative expressions is to provide a means of successful reference. In that case, Tzeltal emphasizes an alternative strategy for achieving successful reference—English does it by telling you where to look, Tzeltal by telling you what to look for. (The Tzeltal locative construction provides equally good answers to ‘Where?’ questions as to ‘How does it look?’ questions.) However, another intriguing suggestion has been made by John Lucy<sup>5</sup> on the basis of work on the related language Yucatec Maya. Like Tzeltal, Yucatec has a developed set of numeral classifiers. The motivation, Lucy claims, is that nominals in Yucatec fail, by themselves, to individuate entities. It is only by collocation with a numeral classifier or some other shape-discriminating phrase that such nouns can come to designate countable entities. This thesis, carried to its logical extreme, would amount to the claim that all nominals in Yucatec are essential *mass* nouns and that the language makes no ontological commitment to *entities* as opposed to material, essence or “stuff” at all. In order to individuate entities, a numeral classifier or some predicate is required to impose individuation on the material, metaphorically in much the way that a cookie-cutter cuts up undifferentiated dough.

If the thesis held even partially for Tzeltal, it would help to explain the Tzeltal insistence on specifying the geometrical nature of the figure. Consider, for example, the fact that the Tzeltal nominal *lo'bal* could be glossed ‘banana stuff,’ because it refers equally to all the parts of the natural kind: to the fruits, to a single fruit, to clusters of fruit, to the trunk of the banana tree, to the leaves of the tree, and so on. Now, given a nominal of such nature, the kind of geometric

<sup>5</sup> *Grammatical Categories and Cognition: A Case Study of the Linguistic Relativity Hypothesis*, Cambridge University Press, 1992, pp. 73ff.

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and shape information encoded in the stative locative predicates we have examined is not as redundant with the information contained within the subject noun as first might seem. Consider the examples in (3).

- (3) a. *jipil ta laso lo'bal*  
 hanging AT rope banana  
 'the banana(-fruits) are hanging from the rope'<sup>6</sup>
- b. *k'atal ta s-ba s-k'iyobil kaipej te lo'bale*  
 lying-across AT its-top its-drying coffee the banana  
 'the banana(-trunks) are situated across the top of the coffee-drying patio'
- c. *palal lo'bal ta xujk na*  
 attached-in-bunches banana AT its-side house  
 'the banana(-bunches) are against the inside side-wall of the house'

The figure in these three examples is designated by the nominal *lo'bal*. In each case, the 'banana-stuff' to which it refers gets formed up, as it were, by the positional predicate which indicates the nature of the individuated entities involved. Thus, Lucy's conjecture would go rather a long way to explain why it is that Tzeltal and languages like it have such a wealth of locative (and other) predicates, making such fine discriminations between shapes and dispositions of the figure. pp. 185–186

*Maori*

Maori is the language of the native people of New Zealand. In a textbook for learning Maori, *Maori Language: Understanding the Grammar*, David Karna-Holmes struggles to describe Maori grammar in terms of English grammatical categories.

In Maori there are no words which are used exclusively as adjectives. The word 'big' may be exclusively an adjective in English, but the Maori word *nui* is used as a common noun (*te nui*— 'the greatness'), as an adjective ('big' or 'great'— as in *te tangata nui*) or as a verb, with the sense of 'to be big or great'. p. 25

But sentences, complete without any verb, may be constructed in Maori simply by using two or more noun phrases in sequence, as illustrated by the examples:

*Ko Tamahae ahau.*

<sup>6</sup> Levinson says that Tzeltal has only one preposition, which he translates in these examples as "AT".

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Tamahae            I            ('I am Tamahae.')

*Ko tenei    te pukapuka    a Tamahae.*

This            the book            of Tamahae

('This is Tamahae's book.')

It should be noted that the English translations of these sentences require the use of the words 'am' and 'is' respectively (parts of the verb 'to be') for which there are no corresponding words in Maori. The meaning of each of these Maori sentences, however, is fully and unambiguously communicated in the Maori constructions. pp. 31–32

Because the sense of 'being' (in some state or other) is expressed in Maori by using words such as *pai* and *nui* as verbs, a case could be made for classifying such words as VERBS OF BEING rather than adjectives. That is, the base words *pai* may be considered to convey the verb sense of 'to be good or fine', rather than the adjective sense of 'good or fine', and *nui* may be taken to mean 'to be big' rather than 'big'. p. 26

*Chinese*

Currently there are three main languages that are called "Chinese": Mandarin, Wu, and Cantonese.<sup>7</sup> There is also ancient Chinese prior to the Han Dynasty. And there is Chinese of 1,300 years ago in which was written the most admired Chinese poetry. Authors are not always specific about which of these they are considering, though all are written using (mostly) the same characters or "graphs".

It is generally accepted that the base words in Chinese are mass words. Xu-Ping Li says in *On the Semantics of Classifiers in Chinese*:

All nouns in Chinese behave like mass nouns that cannot be counted by numerals directly without the help of a classifier. p. 9

Chad Hansen discusses pre-Han Chinese in *Language and Logic in Ancient China* (the symbol ¶ indicates a Chinese character, which I cannot reproduce).

In most modern Chinese dialects the syntactical parallel with English mass nouns is almost exact for all nouns. Chinese nouns have no ordinary plural. They cannot be directly preceded by numbers or indefinite articles or demonstratives. Each noun is associated with appropriate sortals (called classifiers or measures

<sup>7</sup> These are not dialects but distinct languages, more different than French and Portuguese are from each other. Søren Christian Egerod calls them "Sinitic" in "Sino-Tibetan Languages".

in most language texts). Thus in (Mandarin) Chinese, one says <one *pen* book>, <three *ko* persons>, and <this *chih* pencil>.

The nouns by themselves are complete term expressions.

Another characteristic distinction between the two groups of nouns in English is their association with either *much* or *many* (or the opposites, *little* versus *few*). Mass nouns go with *much* (e.g., much wood, much money); count nouns go with *many* (e.g., many trees, many dimes). Chinese *to* 多 ‘many-much’ and *shao* 少 ‘few-little’ go with all nouns (and adjectives). Classical Chinese is slightly different from modern Chinese in a few of these respects. p. 32

Briefly, we can characterize Chinese semantic theories as a view that the world is a collection of overlapping and interpenetrating stuffs or substances. A name (term or predicate—*ming* 名) denotes (refers to, picks out—*chü* 指) some substance. The mind is not regarded as an internal picturing mechanism which represents the individual objects in the world, but as a faculty that discriminates the boundaries of the substances or stuffs referred to by names. This “cutting up things” view contrasts strongly with the Platonic philosophical picture of objects which are understood as individuals or particulars which instantiate or “have” properties (universals). . . . Chinese philosophy has no theory either of abstract or of mental entities. The “individuals” in Chinese theories of language are “unit parts” of the “stuffs” picked out by names. p. 30

But others note that even the division of Chinese base words as nouns and adjectives and verbs is wrong. Here is what Marcel Granet and Th Ribot say in “*Quelques Particularités de la Langue et de la Pensée Chinoises*”:

. . . one cannot set out any particular rule about the different parts of speech; more precisely, there is not, so to speak, any differentiation of the parts of speech. The only distinction that one can make is that which the Chinese make between empty words, *Hiu tseu*, simple oral punctuations and the full words, *Che tseu*, which, alone, connote concepts. The full words (like the empty ones) are invariant monosyllables and no variation of verbal forms indicate if they are employed as verbs, substantives, adjectives or adverbs. Apart from some very specialized words in the use of pronouns or possessives, all the words are susceptible of every use and, rigorously speaking, the fundamental distinction between verbs and substantives does not exist at all.<sup>8</sup>

<sup>8</sup> . . . on ne peut énoncer aucune règle particulière aux différentes parties

A. C. Graham says in the introduction to his book of translations *Poems of the Late T'ang*:

With some misgivings, since the only thing sacrosanct is the image, one strengthens '(is) white(r)' to 'shines whiter', partly to keep the verbal force of the Chinese adjective, which acts like an intransitive verb . . . . p. 15

And Perry Link says in "A Magician of Chinese Poetry":

The advantages of Chinese characters in avoiding grammatical specificity (advantages to poets, not necessarily to scientists or lawyers) can be analyzed primarily as absences of subject, number, and tense. Each of these three is worth a look.

*Subjectlessness.* It is the norm in classical Chinese poetry, and common even in modern Chinese prose, to omit subjects. The reader or listener infers a subject. . . .

*Numberlessness.* Nouns have no number in Chinese. Weinberger notes that "a rose is a rose is all roses," but that formulation still leaves us too far inside Western-language number habits. "All roses" in English means the summation of individual roses, whereas in Chinese *meigui*, or "rose" is more like "roseness" or "rosehood." (If you want to talk in Chinese about one rose, you may, but then you use a "measure-word" to say "one blossom-of-roseness.") . . . (It is worth noting that Western views of Eastern expression as quaint have often originated not in Eastern languages but in the awkwardness that results when rules of Western languages are applied.)

*Tenselessness.* There are several ways in Chinese to specify when something happened or will happen, but verb tense is not one of them. For poets, the great advantage of tenselessness is the

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du discours ; plus précisément, il n'y a, pour ainsi dire, aucune différenciation des parties du discours. La seule distinction qu'on puisse faire est celle que font les Chinois entre les mots vides, *Hui tseu*, simples ponctuations orales et les mots pleins, *Che tseu*, qui, seuls, connotent des concepts. Les mots pleins (comme les vides) sont des monosyllabes invariables et aucune variation de formes verbales n'indique s'ils sont employés comme verbes, substantifs, adjectifs ou adverbes. À part quelques mots assez bien spécialisés dans l'emploi de pronoms ou de possessifs, tous les mots sont susceptibles de tous les emplois et, rigoureusement parlant, la distinction fondamentale entre verbes et substantifs n'existe point.

pp. 31–32 of the online version.

ambiguity it opens up. Did I see no one in the hills? Or am I now seeing no one? Am I imagining what it would be like to see no one? All these, and others, are possible. Weinberger's insight about subjectlessness—that it produces an effect “both universal and immediate”—applies to timelessness as well.

*Navajo*

Navajo is a language spoken by the native Diné people who live mostly in central and northwest New Mexico and northern Arizona. Here is what Gary Witherspoon says in *Language and Art in the Navajo Universe*:

. . . the astonishing degree to which the Navajo language is dominated by verbs. There seem to be few, if any, nouns that are not either passive forms of verbs or derived from verbal forms. Particles, prefixes, and postpositions are used primarily as verbal modifiers. The dominance of verbs in Navajo also corresponds to the Navajo emphasis on a world in motion. . . . the principal verb in the Navajo language is the verb “to go” and not the verb “to be”, which is the principal in so many other languages but is of relatively minor importance in Navajo. This seems to indicate a cosmos composed of processes and events, as opposed to a cosmos of facts and things.  
pp. 48–49

[Harry] Hoijer [1951] concludes . . . that Navajo verb categories “center very largely about the reporting of events, or better, ‘eventings.’ These eventings are divided into neuters, eventings solidified, as it were, into states by the withdrawal of motion.” p. 52

Rik Pinxten, Ingrid van Dooren, and Frank Harvey in *The Anthropology of Space* say:

Navajos seem to stress both process rather than substance and cohesion rather than segmentability of reality. p. 3

A basic characteristic of the Navajo world view, inherent in all particular phenomena it distinguishes, is the fundamentally dynamic or active nature of the world and anything in it. This feature is indeed fundamental and difficult to grasp, at least in the conceptual framework of the Westerner. It can be illustrated best through its practical, visible consequences. For example, with the static Western view it proved easy and dependable to divide space into segments, to structure the world according to types of objects, units, even atoms, all of which enjoy a certain “objective” status. The segmenting or “slicing” of reality (or at least the continuous stream of phenomenal

reality) into chunklike, static units is possible in an easy, intellectually unsophisticated way, only within a static world; only within a world of objects, so to speak. The Navajo world, on the other hand, is essentially dynamic, and in consequence is much less suited for the kind of segmenting required by this part/whole logic which we consider “natural,” as it were. pp. 15–16

The notion of “being” or “existing” is similarly a dynamic concept. In contrast to the Western static and segmentable reality represented in the distinction between “being” and “becoming” or “growing,” the Navajo view of “being” implies an essentially dynamic perspective. In this way, “existing” should be understood as a continuous manifestation (or “manifesting”), a series of events, rather than states or situational persistences through time. p. 18

### *Hopi*

Benjamin Lee Whorf in “Grammatical Categories” describes Hopi, a native American language spoken by people living in an area contiguous with where the Navajo live:

In Hopi there is no distinction in the simplex (bare-stem) forms between nouns and verbs, and sentences are possible in which there is no distinction in the sentence. p. 94

Though the descriptions of these languages exemplify what I said a mass-process language would be, some of these writers continue to use the grammatical categories of noun, verb, adjective, subject, and predicate in their descriptions. Is that justified?

### **Nouns and verbs: What are we looking for?**

An early crystallization of the view of noun and verb as basic was given by the linguist Edward Sapir one hundred years ago in *Language: An Introduction to the Study of Speech* (pp. 125–126):

It is well to remember that speech consists of a series of propositions. There must be something to talk about and something must be said about this subject of discourse once it is selected. This distinction is of such fundamental importance that the vast majority of languages have emphasized it by creating some sort of formal barrier between the two terms of the proposition. The subject of discourse is a noun. As the most common subject of discourse is either a person or a thing, the noun clusters about concrete concepts of that order. As the thing predicated of the subject is generally an activity in the widest sense of the word, a passage of existence from one moment

to another, the form which has been set aside for the business of predicating, in other words, the verb, clusters about concepts of activity. No language wholly fails to distinguish noun and verb, though in particular cases the nature of the distinction may be an elusive one. It is different with the other parts of speech. Not one of them is imperatively required for the life of language.\*

\* [footnote] In Yana the noun and verb are well distinct, though there are certain features that they hold in common which tend to draw them nearer to each other than we feel to be possible. But there are, strictly speaking, no other parts of speech. The adjective is a verb. So are the numeral, the interrogative pronoun (e.g., “to be what?”), and certain “conjunctions” and adverbs (e.g., “to be and” and “to be not”; one says “and-past-I go,” i.e., “and I went”). Adverbs and prepositions are either nouns or merely derivative affixes in the verb.

Sapir is claiming that the thing-perspective of the world is basic in language, building his definitions around that. Yet his description of Yana, an extinct language that was spoken by the Yana people who lived between the Pit river in the north and the Feather river in the south in what is now California, does not show that there is a noun-verb distinction in that language.

In 1986 in “Noun and Verb in Salish”, Jan P. van Eijk and Thom Hess give a fuller account of nouns, verbs, and predicates:

So many different definitions and descriptions have been given for ‘predication’, ‘predicate’, ‘complement’, ‘noun’, and ‘verb’ that it is necessary to explain what is meant by these terms in this article. The definitions which follow are brief but (we hope) uncontroversial in that they encapsulate the basic consensus for the scope of these terms.

*Predication*: a construction in which new information is introduced about a given entity: ‘the man works’ is a predication.

*Predicate*: that part of a predication that contains the new information: ‘works’ is the predicate in ‘the man works’.

*Complement*: the given entity in a predication: ‘the man’ is the complement’ in ‘the man works’. Instead of ‘complement’, some authors prefer ‘argument’ or ‘term’.

‘Noun’ and ‘verb’ can be defined on three levels, the morphological, the syntactic, and the semantic. The following definitions hold for most if not all Indo-European languages and for a great many other languages as well. In our definitions we use

English examples.

*Noun*

- (a) Morphological: a noun is a word that formally distinguishes singular from plural, as in ‘box’—‘boxes’, ‘foot’—‘feet’. (We ignore cases like ‘sheep’ or ‘deer’.)
- (b) Syntactic: a noun is a word that can serve as the head of a complement to a predicate.
- (c) Semantic: a noun is the name of a person, place, or thing.

*Verb*

- (a) Morphological: a verb is a word that formally distinguishes aspects and/or tenses, as in ‘work’—‘worked’, ‘run’—‘ran’.
- (b) Syntactic: a verb is a word that can serve as a predicate.
- (c) Semantic: a verb is a word that indicates action or being.

Van Eijk and Hess’ definition of predication does not apply even in many English sentences. For example, in “Snow is white” what is the “entity” about which new information is introduced? Snow is not an entity. An entity is some part of the world (of our experience) that we can identify, re-identify, and distinguish from other parts that can be identified and re-identified. My dog Birta is (was) an entity; this rock is an entity; my table is an entity. But snow is not an entity; it is mass. Further, it’s not clear what “new information” means, for it’s certainly not new to me or you, I suspect, that snow is white.

William Croft tried to enlighten me: mud, he said, is an entity. If that’s so, what isn’t an entity? Is brown an entity? Is running an entity? Are we to countenance future dogs as entities in order to find a predicate in “There will be dogs two hundred years from now”? What about possible dogs? These are serious questions that philosophers and logicians have been discussing for more than 2,000 years. Van Eijk and Hess’ definition of “predication” is either not clear or too restrictive even for English, and with it go their definition of “predicate” and “complement”. Yet it is clear enough how to use the terms “subject” and “predicate” in English according to the explanations I gave: we have the standards in talking about individual things, and we extend that pattern to other sentences with similar syntactic structure, even when there is a serious question whether we are talking about individual things.

Van Eijk and Hess’ criteria for nouns also suffer from ignoring that there is much even in English that cannot be assimilated to thing-talk.

We all believe and have been taught that “mud”, “snow”, “running”, and “sleeping” are nouns, but they are not classified as nouns by the morphological criterion. The syntactic criterion fails because it depends on the definition of “predicate” and “complement”, which has limited application to sentences in English and would not classify “mud” and “running” as nouns, unless van Eijk and Hess or other linguists can clear up what they mean by “entity”. And the semantic criterion again shows not only the focus on things but a clear lack of understanding of reference and naming. How is “dog” a name of anything? Even if we could understand what is meant, the definition excludes “mud” and “snow” as names, unless mud and snow are things. Some modify the criterion to allow for those words to be classified as nouns by saying that a noun can be a word for a substance. But that is still inadequate because it won’t classify “flame”, “midnight”, or “justice” as nouns.

Their criteria for verbs fare somewhat better in English. What we typically call “a verb” is what we can conjugate for tense or with which we can use a mood word, such as “could”. Here is how Robert I. Binnick puts it in *Time and the Verb*:

As with so many other things, our most basic ideas about the verb go back to the ancient Greeks. Plato defines the verb as that word which denotes action, and it is still often called the “action word.” But for Aristotle, “a verb is a composite sound with a meaning, indicative of time”; it is tense which is its essential feature. To this day the verb is thought of as a “time-word”—as in German in which the usual term, alongside the learned *Verb*, is *Zeitwort*. It is that part of speech which is concerned with distinctions of time, that is, with tense. p. 3

But this criterion doesn’t apply to Chinese which does not have tenses that modify words; rather, words or phrases indicating a time preface a whole sentence or even a paragraph. William Croft points out in *Radical Construction Grammar*:

One might propose that inflection for agreement and tense-mood-aspect will be the criterion for the category Verb across all languages. But why? No reason has been given to do so. And if one does, then one will have to conclude that all words are Verbs in Makah and no words are Verbs in Vietnamese, which is hardly a savory conclusion for a theory that posits Verbs as part of a Universal Grammar. p. 31

These observations about Vietnamese and Makah are what we would

expect of mass-process languages, where each mass-process word (phrase) is marked for time in an affirmation, or where no mass-process word is marked for time, as in Chinese. And there is a reason to classify as verb what can be inflected for tense: the verb is what places the description of a supratemporal thing in time.

The syntactic criterion for verbs depends on the thing-based notion of “predicate”, and hence is not always applicable even in English—except that van Eijk and Hess generalize past that by saying “can”: so if the word can be used in a thing-sentence construction as a predicate, it’s a predicate, even though it can also be used in a mass- or process-sentence construction.

As for the semantic definition, Benjamin Lee Whorf long ago showed in “Science and Linguistics” that it fails for English:

In English we divide most of our words into two classes, which have different grammatical and logical properties. Class 1 we call nouns, e.g., “house, man”; class 2, verbs, e.g., “hit, run.” Many words of one class can act secondarily as of the other class, e.g., “a hit, a run,” or “to man (the boat),” but on the primary level, the division between the classes is absolute. Our language thus gives us a bipolar division of nature. But nature herself is not thus polarized. If it be said that “strike, turn, run,” are verbs because they denote temporary or short-lasting events, i.e., actions, why then is “fist” a noun? It is also a temporary event. Why are “lightning, spark, wave, eddy, pulsation, flame, storm, phase, cycle, spasm, noise, emotion” nouns? They are temporary events. If “man” and “house” are nouns because they are long-lasting and stable events, i.e., things, what then are “keep, adhere, extend, project, continue, persist, grow, dwell,” and so on doing among the verbs? If it be objected that “possess, adhere” are verbs because they are stable relationships rather than stable percepts, why then should “equilibrium, pressure, current, peace, group, nation, society, tribe, sister,” or any kinship term be among the nouns?

pp. 215–216

Not one of van Eijk and Hess’ criteria can be used to investigate whether a language has a noun-verb distinction because not one works even for English.

Perhaps, though, we have been looking at the noun-verb distinction in English wrong. Yes, it is the use of thing-words that leads us to the idea of a noun. We have that “dog”, “chair”, “rock”, “woman”, “Zoe”, “London” are nouns according to the semantic criterion of van Eijk and Hess. These are prototypes: we think of them in classifying and extend

the classification to other words. But how can these be prototypes for “mud” and “snow” or “running” and “sleeping”? And even if we do extend the notion of noun in some way to these, how can those be used as prototypes for “justice” and “beauty”? There is no extension by analogy or prototype. There is extension by the exigencies of grammar. In English, German, and Romance languages our first focus is on things and what is done by or to them or how they are related. That perhaps drove the creation of the grammar, or perhaps the earliest grammar drove that focus. But talk of prototypes does not illuminate that.

Note that except for the definition of “predication”, all the criteria are for words. The noun-verb distinction is meant as a classification of words. But then is “run” a noun or a verb? We can use it as either: “He scored three runs”, “Spot likes to run”, “Spot ran from Zoe”, where in the latter “run” is conjugated. Is “dog” a noun or a verb? We can use it as either: “Spot is a big dog”, “Zoe dogged Zeke’s steps”. Benjamin Lee Whorf long ago said we should focus on the uses of words in our classifications, what he called “verbations” and “stativations”, not on the words.<sup>9</sup>

William Croft, too, says that we should look to speech acts in establishing linguistic categories. In *Radical Construction Grammar*, he says:

The act of REFERENCE identifies a referent and establishes a cognitive file for that referent, thereby allowing for future referring expressions coreferential with the first referring expression. The act of PREDICATION ascribes something to the referent. Predication does not establish a cognitive file for the state of affairs that is predicated, but instead prototypically reports relatively transitory states of affairs, often in a narrative sequence. The act of MODIFICATION (of referents) functions to enrich a referent’s identity by an additional feature of the referent, denoted by the modifier. p. 66

But this is just a variation on the grammatical categories of English, German, and Romance languages. It doesn’t defend a thing-view of the world as a basis for finding these categories in, say, Chinese; it simply assumes that view. We can see that with his definition of “reference”. It is circular unless we already know what is meant by “a referent”, which he does not define, yet that use of “a” shows that Croft is taking referents to be things.

Perhaps, though, a different idea of reference or “denotation” is

<sup>9</sup> “Grammatical Categories”, p. 8 (published posthumously in 1945).

meant along the lines of or what John Lucy in *Linguistic Diversity and Thought* describes :

They [R. W. Brown and E. Lenneberg] represented language by the denotational value of lexical items, that is, the array of objective stimuli that they could refer to. p. 260

But Brown and Lennenberg's idea of denotation assumes that we have some access to objective stimuli that is not coded by our language, which is the issue in trying to understand reference.

Compare how Michael Tomasello extends the notion of reference in "Pragmatic Contexts for Early Verb Learning":

For purposes of simplicity, throughout this chapter I write of actions as the referents of verbs. Verbs can be used to refer to all kinds of processes and states as well. The crucial factor is that they always involve a sequence, even in the case of a state that remains the same over time.<sup>10</sup>

To say that actions, processes, and states can be referents is to make actions, processes, and states into things, ones we can "talk about", things that we can count and supposedly distinguish. But that is exactly what we cannot coherently do, as I show in "Why Event-Talk is a Problem" in this volume.

So how do linguists show that there is a noun-verb distinction in a particular language?

### **Searching for noun-verb distinctions**

Van Eijk and Hess give their criteria for what constitutes a noun and verb as a prelude to showing that despite what Kinkade said (p. 9 above), there is a noun-verb distinction in some Salishan languages.

In summation, we can say that there are two basic word-classes in Salish and these classes are similar enough to the 'noun' and 'verb' in Indo-European to apply profitably in descriptions of Salish. The traditional criterion by which nouns are distinguished from verbs (viz., the idea that nouns are typically complements in a predication while verbs are typically predicates) fails for Salish, since in Salish both nouns and verbs freely serve in both predicates and complements. Thus the main criterion by which nouns are distinguished from verbs in Salish and Indo-European (and many other languages) is a morpho-syntactic one based on the fact that nouns can combine with possessive markers while verbs cannot. The fact that only nouns can take

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<sup>10</sup> Footnote, p. 118. Tomasello nowhere defines "verb" in his paper.

possessive markers is compatible with the fact that nouns typically refer to things, persons, or places, i.e., to those entities with which one can enter into a relationship of possession. Verbs typically refer to actions, i.e., to entities that are too fleeting to be involved in possession relationships. pp. 329–330

From the mass-process view we can describe with “mother-ing” not to pick out a thing, nor a process (though perhaps that might help you see the issue), but as a description of the flow of all. And we can combine that with “my” as a classifier to specify some part of mother-ing. Van Eijk and Hess cannot see this because they are tied to a thing-view of the world. They say that verbs “refer to actions, i.e., to entities that are too fleeting to be involved in possession relationships”, as if in “Spot ran to Dick” there were a thing (Spot’s running?) that the “ran” refers to. Worse, the criterion they use is not one of those that they begin their paper with.<sup>11</sup>

Van Eijk and Hess are engaging in what William Croft in *Radical Construction Grammar* dismisses as “methodological opportunism”:

Language-internal methodological opportunism simply selects a subset of language-specific criteria to define a category when the criteria do not all match. The subset of criteria, or possible just one criterion, defines the category in question. Mismatching distributions are ignored, or are used to define subclasses or multiple class membership.  
p. 41

Michael Tomasello comments similarly in “Universal Grammar Is Dead”:

Just as we may force English grammar into the Procrustean bed of Latin grammar—that is how I was taught the structure of English in grade school—the grammars of the world’s so-called exotic languages

<sup>11</sup> The problem with using distributional grounds for a classification of nouns and verbs can be seen in the work of William Jacobsen in “Noun and Verb in Nootkan”:

Let us return to . . . the marking of apparent nouns for tense, aspect, and mode. This criterion is not necessarily decisive for the determination of parts of speech, as there is no reason from *a priori* assumptions why words that are, say, nouns on distributional grounds should not, in fact, indicate tense.

But there is a reason: we can’t think of the words as nouns because nouns are meant to pick out stability, and if they are tensed then there is no stability but only process.

may be forced into an abstract scheme based mainly on European languages. For example, one can say that all the world's languages have "subject." But actually there are about 30 different grammatical features that have been used with this concept, and any one language has only a subset—often with almost non-overlapping subsets between languages. pp. 470–471

What is worse than unclear or shifting definitions and explanations, which clearly have limited scope, is that so many linguists use the terms "noun" and "verb" with no indication of what those mean, as if there were no controversy. For example, Bruce Biggs in "The Languages of Polynesia" says:

Syntactically the languages [of Polynesia] are characterised by a well-marked division between verbal and non-verbal utterances, and in general, the capacity to frame any utterance in either a verbal or non-verbal way. p. 470

This would seem to refute Jürgen Broschart's claims about Tongan in "Why Tongan Does It Differently: Categorical Distinctions in a Language without Nouns and Verbs". But look at how Biggs applies this to Maori:

A base is the *sine qua non* of every phrase. Bases fall into five classes according to their compatibility with various particles when filling the head position in the nucleus of the phrase, as follows:

Nouns occur with articles (and other nominal particles), but not with verbal particles, nor with the passive suffix or the noun derivative suffix. Nouns usually denote entities, concrete or abstract, e.g. *ika* 'fish', *whenua* 'land', *moana* 'sea', *takiwaa* 'space', *raakau* 'tree, wood'. p. 476

Biggs does not define "noun". He says that nouns usually denote entities, yet the translations of the examples he gives are "land", "sea", "space", and "wood", which do not denote entities in English: they are mass-terms. And that *raakau* can mean variously "tree" or "wood" is exactly what we would expect of a base word in a mass-process language.

Why do linguists strive so hard to show that a language has a noun-verb distinction?

### **The search for universals**

Many linguists who are concerned with finding a noun-verb distinction in a language are trying to confirm that the distinction is a language universal. What does that mean?

It's not just that a linguistic feature can be found in every language that has been studied. If all languages other than English were to go extinct, along with all records of them, then the word "dog" would be found in every human language. All the linguistic features and categories of English would be universal. No, finding the feature in every human language that has been studied is supposed to be evidence that it will be found in every human language.

We get this stronger claim, William Croft says in *Radical Construction Grammar*, by induction from the languages we have studied.

A typologist uses an INDUCTIVE method of analysis, by constructing a sample of the world's languages and seeking language universals via cross-linguistic generalizations. Since diversity is basic, the only safe way that one can discover the range of linguistic diversity is by cross-linguistic research. And it is only through exploring linguistic diversity that one is able to discover the limits to variation, that is, the universals of human language. p. 7

But as Nicholas Evans and Stephen C. Levinson point out in "The Myth of Language Universals":

Somewhere between 5,000 and 8,000 distinct languages are spoken today. How come we cannot be more precise? In part because there are definitional problems: When does a dialect difference become a language difference (the "languages" Czech and Slovak are far closer in structure and mutual intelligibility than so-called dialects of Chinese like Mandarin and Cantonese)? . . . If we project back through time, there have probably been at least a half million human languages [reference], so what we have now is a non-random sample of less than 2% of the full range of human linguistic diversity. It would be nice to at least be in the position to exploit that sample, but in fact, as mentioned, we have good information for only 10% of that. The fact is that at this stage of linguistic inquiry, almost every new language that comes under the microscope reveals unanticipated new features. p. 432

In any case, as in any science we want more than an induction from a sample; we want a reason for why the generalization should be true. Bernard Comrie in "Explaining Language Universals" says:

The study of language universals is the study of those properties that are necessarily common to all human languages. It is important to understand that by claiming that a particular property is a language

universal, we are not merely claiming that it is true of all human languages that happen to be available to us—all the languages that are spoken today and all those for which we have historical records. Rather, we are making a claim about the human language potential: This is the way human languages have to be. p. 195

Comrie says that there are two ways we can show why a linguistic feature must show up in every language or be in no language. We can look for a *biological* basis. His example is that no language has or could have a sound as the part of its basis that is produced by touching the tip of one's tongue to one's nose. Too few people can do that. If human biology were to evolve so that almost all people could touch their nose with their tongue, that sound might be included in many languages. But on the basis of our current biology we can justify that no language can have that sound.

The other motive/reason/cause for a language universal comes from the purposes for which we use language.<sup>12</sup> As Comrie points out, all languages have greetings that are nearly meaningless in terms of the parts of which they are composed. That's because language is meant for communication between people, and people first have to acknowledge each other. These are *functional* constraints and motives for universals.

Some believe that there is a biological basis for a thing-view of the world. We must see the world as made up of things, and so every language must have a noun-verb distinction. My claim that there are mass-process languages is just impossible. In the only paper I have seen that attempts to show this, "Objects Limit Human Comprehension", Philip Richard Sullivan says:

A type of nerve cell in this area responds to a reporting cluster of retinal ganglion cells that forms a line of stimulation along a given slant. And since a line of such activated ganglion cells will chart the direction of relatively abrupt light-intensity change formed by a particular "edge" (as we perceive it) within the visual field, brain cells that respond to this sort of stimulation are referred to as "edge cells"—edge cells because they chart the edges of objects that exist in our surroundings. That, at any rate, is the commonsense conclusion: the computational process just described will assure that we detect the edges of the discrete objects that actually exist in our surroundings.

But what if there were no actual "discrete objects?" What if there

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<sup>12</sup> Comrie never talks about cause and effect.

were only “regions in space where the field is extremely strong?” Our visual system would, under those conditions, structure the strong fields so as to form “edges”, thus representing those regions as the perceptual objects that we ineluctably experience. p. 74

The argument then is: the human visual system responds most strongly to differences of intensity of light, therefore we cannot help but experience the world as made up of objects. What Sullivan calls the “commonsense” conclusion is just reading the predominant aspect of English grammar into the world. If Sullivan were right, we could equally conclude that dogs and even cats must see the world as made up of things.

Here is how a philosopher, P. F. Strawson, justifies in *The Bounds of Sense* that we must perceive in terms of things:

. . . concepts of *objects* are always and necessarily compendia of causal law or law-likeness, carry implications of causal power or dependence. Powers, as Locke remarked . . . make up a great part of our idea of substances. More generally, they make up a great part of our concepts of any persisting and re-identifiable objective items. And without some such concepts as these, no experience of an objective world is possible. pp. 145–146

Strawson thought he could establish an empirical claim on the basis of “obvious” metaphysical assumptions. But it is those assumptions that are at issue. In “Reasoning about Cause and Effect” I show that talk of individual objects is not needed for causal analyses.

Almost all linguists and philosophers and many cognitive scientists just assume that the world is made up of things and that we have to see the world that way. You can see a particularly egregious example by Jean Piaget in my essay “On the Genesis of the Concept of Object in Children” in this volume. Andrew Lock in “The Emergence of Language” provides another example:

I would suggest that at this stage in his development the child has *mastered* the fundamentals of language: but I would not wish to go as far as saying he now *possesses* language. While he can communicate his intentions in an unambiguous and structured manner, the messages he conveys are not objective in nature, nor are they propositional, and neither are they capable of being judged true or false. Language is still implicit in his activities, and will remain so until he becomes able to name objects. p. 8

But water is not an object, yet “water” is one of the earliest words children learn in English.<sup>13</sup> Seymour Papert rejects this “common-sense” view of how objects are in the world waiting for us to discover them:

For the infant, objects do not even exist; an initial structuration is needed to organize experience into *things*. Let us stress that the baby does not *discover* the existence of objects like an explorer discovers a mountain, but rather like someone discovers music: he has heard it for years, but before then it was only noise to his ears.<sup>14</sup>

Evans and Levinson invoke evolution for a noun-verb and subject-predicate division in (almost) all languages:

In short, there are evolutionary stable strategies, local minima as it were, that are recurrent solutions across time and space, such as the tendency to distinguish noun and verb roots, to have a subject role, or . . .  
p. 444

Radu J. Bogdan in *Predicative Minds* also looks to evolution to explain why there has to be a subject-predicate division in every language. He starts with:

When conscious and explicit, human thoughts have a number of singular properties. One of them is being predicative. p.xv

<sup>13</sup> In “Names, Relational Words, and Cognitive Development in English and Korean Speakers: Nouns Are Not Always Learned before Verbs” Alison Gopnik and Soonja Choi seem to give good evidence that picking out objects with language is not fundamental. But they do not define what they mean by “noun” and “verb” so we can’t evaluate what they are doing. Worse, there is good reason to think that Korean is a mass-process language, so that the noun-verb distinction would not even apply.

The entire volume in which their paper appears is marred by the editors and authors of the papers never defining what they mean by “noun” and “verb”. At best, they talk of “object names”, which is what Gopnik and Choi do, though only in passing:

The idea that object names are acquired well before words encoding actions and relations, first proposed by Gentner (1982), is still widely accepted. p. 63

<sup>14</sup> “Problèmes épistémologiques et génétiques de la récurrence” in *Études de Épistémologie Génétique, Vol. II. Problèmes de la construction du nombre*, eds. P. Gréco, J.-B. Greize, S. Paper and J. Piaget, Presses Universitaires de France, 1960, pp. 117–148, translated by Stanislaus Dehaene in *The Number Sense*, Oxford University Press, 1997, revised 2011, p. 31.

Yet even as thing-language speakers we have lots of thoughts that have no linguistic structure, such as when I sniff and identify the smell as that of sheep, without any language or reasoning, just knowing.<sup>15</sup>

Bogdan continues:

The contribution of these roots to predication takes the form of an *ontogenetic staircase* leading successively to the child's sense of communicative meaning, prelinguistic coreference, and finally word coreference introduced by the adult's explicit acts of naming in contexts of shared attention. The child's mental scheme of explicit and shared word coreference becomes the source and template for the child's earliest predicative judgments. p. xviii

Predications are the bread and butter of human propositional thinking and language use. When I think or judge, and say, that this pig is fat, I predicate—mentally and linguistically—a property (fatness) of an individual (this pig). p. 3

There are several reasons why human ontogeny appears to be an evolutionarily unique incubator of predicative thinking. p. 46

If there were an evolutionary basis for predication, it would seem that people who speak languages without a subject-predicate distinction must have evolved differently from speakers of English. Yet we can interbreed!

Already in 1941 in “Languages and Logic” Whorf made clear the thing-basis of English and showed that it does not apply to American Indian languages:

English terms, like “sky,” “hill,” “swamp,” persuade us to regard some elusive aspects of nature's endless variety as a distinct *thing*, almost like a table or chair. Thus English and similar tongues lead us to think of the universe as a collection of rather distinct objects and events corresponding to words. Indeed this is the implicit picture of classical physics and astronomy—that the universe is essentially a collection of detached objects of different sizes. p. 266

Our Indian languages show that with a suitable grammar we may have intelligent sentences that cannot be broken into subjects and predicates. Any attempted breakup is a breakup of some English translation or paraphrase of the sentence, not of the Indian sentence itself. p. 268

### **How to show there isn't a noun-verb distinction**

How then can a linguist show that there is no noun-verb distinction in a

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<sup>15</sup> See “Language-Thought-Meaning” in this volume.

language? Kinkade in “Salish Evidence Against the Universality of ‘Noun’ and ‘Verb’ ” shoots the moving target of what is meant by “noun” and “verb” by showing that none of the characterizations apply in Salish.

It is usually claimed that languages contain at least two major word-classes, nouns and verbs. However, Salishan languages of North-western North America cannot be described in these terms. Instead, only predicates and particles can be distinguished. Nouns and verbs are variously defined for other languages. But whether looked at morphologically, syntactically, semantically, or logically, and whether at a surface or deep level, the notions of ‘noun’ and ‘verb’ (as well as other traditional parts of speech) are not relevant in Salish. A Salishan sentence contains at least a predicate, which may be inflected for pronominal subject and/or object (as well as aspect, control, transitivity, etc.). p. 25

But that left open the field to van Eijk and Hess to come up with a new criterion.

Whorf in “Languages and Logic” gives examples from Shawnee and Nootka for which it is clear that there is no way to parse them as subject-object or noun-verb. No talk of distributional classes or odd definitions of “noun” and “verb” can overcome that. Whorf fixes on polysynthetic languages as lacking a thing-basis. But our earlier discussion of the division of languages into those that are thing languages and those that are mass-process languages gives a more general analysis and applies to Chinese, which is not polysynthetic. As discussed before, in a mass-process language there is no distinction in the role of “dog-ing” and the role of “brown-ing” in “dog-ing + brown-ing”. Neither identifies a referent in any sense I can see. Yes, we can import into the mass-process language some notion of reference to say that this brown-ing is the same we saw yesterday. But that is a derived, secondary notion and need not “pick out” a single individual thing.<sup>16</sup> The basic affirmations involve no act of reference. “There: brown-ing and dog-ing mixed together.” Once you see this, and then find it in many ordinary languages, the idea of predication and modification are clearly not applicable.<sup>17</sup>

<sup>16</sup> See *Reasoning about the World as Process*.

<sup>17</sup> Jan Rijkhoff surveys many languages in “When Can a Language Have Nouns and Verbs?” to come up with this criterion for when a language can have verbs. He says:

Attempts to find a noun-verb distinction in Salishan languages, Chinese, Nootkan, and other mass-process languages are how linguists try to make those languages less strange, to make it seem plausible that we can effect translations from those languages to English that show we all see the world the same.

### Translations

Melissa Axelrod, who studied the mass-process language Koyukon<sup>18</sup>, concurred with my assessment that linguists who study languages very different from Indo-European languages are really only showing how to translate from such a language into our language, how best to describe the grammar of such languages using the grammatical categories of Indo-European languages. Jürgen Broschart in “Why Tongan Does It Differently: Categorical Distinctions in a Language without Nouns and Verbs” concurs:

I strongly object to Dixon’s confident statement that “it is an empirical fact that there is *always* a major class that is aptly termed Noun: there is *never* any doubt as to the applicability of this traditional label, and *never* any question as to which class should be called Noun.” Most linguists simply take a practical position implying that whatever translates as a noun in Indo-European will be called a noun.<sup>19</sup>

So suppose we have a grammatical distinction in English and we want to find whether it is “present” in another language. Put that way,

In other words, according to Table 1, to have transitivity coded in a group of lexemes is a necessary and sufficient condition for a language to have a distinct class of verbs (i.e. lexemes that can only serve as the head of the clause; see Hengeveld’s definition above). p. 16

. . . lexemes are regarded as being transitive when they designate a dynamic relationship between two obligatory participants as agent/subject and a patient/object. p. 17

For all practical purposes I will assume that dynamic verbs typically involve some kind of change. p. 29

Transitive lexemes depend on the language allowing talk of subject and object, which is characteristic of thing-languages. Talk of change is talk of change of a thing, for in mass-process talk there are only varying descriptions. So Rijkhoff’s criterion picks out (a subclass of?) thing-languages.

<sup>18</sup> *The Semantics of Time: Aspectual Categorization in Koyukon Athabascan.*

<sup>19</sup> Note 2, p. 160. The quote is by R. M. W. Dixon in *Where Have All the Adjectives Gone? and Other Essays in Semantics and Syntax*, p. 1.

it's clear we are trying to find out how the other language relates to English; we are not trying to find what are the natural, inherent grammatical categories of the other language. So we should be explicit about this as a basis for finding linguistic features in other languages. For example, we would establish:

There is a passive construction in the language.

by showing:

Particular occurrences of certain elements in sentences in the language are best translated into English with a passive construction.

We could establish:

There is no verb "to be" either in the sense of existence or as a copula in the language.

by showing:

There is no word or phrase in the language that appears in constructions that we would naturally translate into English as a form of the verb "to be".

Now consider:

There is a noun-verb distinction in this language.

In this pattern of viewing grammatical studies as manuals for translation, we could establish this claim with:

Certain words are used regularly in such a way that the most natural translations into English of those words in those contexts is as a verb, and similarly for other words as nouns.

Then it is the aptness of the translations that are at issue.

A. C. Graham gives a word-for-character literal translation from Chinese to English in the Introduction to *Poems of the Late T'ang*:

Dog bark water sound middle  
A dog barks amid the sound of water. p. 18

We can see how Chinese works without tenses and pronouns. The effect, as Graham says (p. 23), is a "forever", "universal" feel to what is said, somewhat comparable to using the simple present tense in English.<sup>20</sup> On p. 25 he gives another word-for-character translation:

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<sup>20</sup> Compare the comments by Perry Link on p. 11 above.

33 *Nouns and Verbs*

WOOD	DARK	GRASS	STARTLE	WIND
GENERAL		NIGHT	DRAW	BOW
DAWN		SEEK	WHITE	FEATHER
LOST	IN	STONE	CORNER	MIDDLE

Here is how he turns this into an English poem:

Woods dim, grass startled by the wind;  
 In the night the general draws his bow.  
 At dawn they seek the white feather  
 Lost among the corners of the stone.

Graham's goal in translating is to give some idea of late T'ang poetry in what we as English speakers would recognize as poems. But it is the word-for-character translations that allow us to enter into the Chinese world. The universality, the tenselessness, the lack of nouns and verbs are all lost when a poem is rendered into "good English". Consider two poems I wrote in the style of the Chinese:

DOG BARK	YOUNG BEAUTIFUL
CAT RUN	OLD UGLY
LIFE GOOD	NO FIT

I challenge you to translate these into "good English" without traducing the objectlessness, tenselessness, subject-predicate-lessness of the original.

Linguists have no literary motive for translating. They mean to show us the nature of the other language. Translating into "good English" impedes that, for the strangeness, the difference is lost. Consider again the translations from Tzeltal by Levinson:

- a. *jipil ta laso lo'bal*  
 hanging AT rope banana  
 'the banana(-fruits) are hanging from the rope'
- b. *k'atal ta s-ba s-k'iyobil kaipej te lo'bale*  
 lying-across AT its-top its-drying coffee the banana  
 'the banana(-trunks) are situated across the top of the  
 coffee-drying patio'
- c. *palal lo'bal ta xujk na*  
 attached-in-bunches banana AT its-side house  
 'the banana(-bunches) are against the inside side-wall  
 of the house'

As a guide to the nature of Tzeltal, the renditions into "good English"

mislead. To put “the” and “are” in the translation of (a) is to deny the mass-nature of the original expression, reading instead nouns and verbs; to put “are situated” in (b) is to impose a subject-predicate view; to put “the” in the translation of (c) is to impose a thing-view.

Aert H. Kuipers in “The Categories Verb-Noun and Transitive-Intransitive” faces this problem:

The Squamish language lacks a morphological distinction between two word-classes which would parallel that between verbs and nouns in English. p. 612

The translations ‘who/which *arrives*’ and ‘which is *water*’ suggest the distinction of noun and verb which is absent in Squamish; translations which would be more neutral in this respect would be ‘*arrival-manifestation*’ and ‘*water-manifestation*’. p. 623

W. V. O. Quine in *Word and Object* disagrees:

Wanton translation can make natives sound as queer as one pleases. Better translation imposes our logic upon them, and would beg the question of prelogicality if there were a question to beg. p. 58.

Quine’s commitment to first-order classical predicate logic as the basis on which to judge translations is another example of reading the thing view of English, German, and Romance languages into other languages. Quine is taking logic to be descriptive rather than prescriptive, for which there is no justification.

Only linguists who are fluent in languages such as Navajo or Squamish can try to convey to us a fully different parsing of the world. And then it is their obligation to make as clear as they can the differences, the oddity of the other language by not making translations into good English. That’s essential, because as I show in *Reasoning about the World as Process*, there are reasons arising from the incompatibility of the views of the world as made up of things with the view of the world as flow that prevent good translations.

But people do translate all the time between Chinese and English, between Navajo and English, between Maori and English. Surely that shows I’m wrong. It does so only if the standard for a good translation is that the translation is “what I would say if I were in that situation” or “it gets the other to respond in a way that would be expected if he or she spoke that language”. Those are behavioral standards. As Joseph H. Greenberg says in “Concerning Inferences from Linguistic to Nonlinguistic Data”:

It would now be generally agreed that meaning is to be understood functionally, i.e., that meaning is to be described in terms of a rule of use stated in terms of the environment. p. 14

But this is quite wrong. My friend does not like dogs, he has had very bad experiences with them. When we encounter a dog, he walks away, he is clearly frightened, while I approach the dog with coaxing noises. So what does “dog” mean functionally? Does “dog” mean the same to both of us? I think not, unless you have a very impoverished idea of meaning, as I discuss in “Language-Thought-Meaning” in this volume.

What counts as a good translation is not well established outside the bounds of formal languages and logics, which can be some but only a partial guide for evaluating translations between ordinary languages, as I discuss in “Translating, Formalizing, Critical Thinking, and Hermeneutics” in this volume.

**What is common to thing-languages and mass-process languages?**

No language, I suspect, focuses through its grammar solely on the world as made up of things. No language, I suspect, focuses through its grammar solely on the world as the flow of all. How, then, can we discern whether a language is a thing language or a mass-process language?

In trying to orient ourselves we can look for certain features of the language. For a thing language, I look for whether there is a clear noun-verb distinction: words that pick out and words that describe in time. Singular and plural marking on (most of) the nouns is a sign that the grammar is directing to see individuals. Numerals can be added to (many) nouns. And I look for whether there is a verb corresponding to our “to be” that is used to connect nouns and descriptions.<sup>21</sup>

As signs of a mass-process language, I look to see if there are single word sentences, whether there is no clear noun-verb distinction,

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<sup>21</sup> It is common to distinguish the role of “to be” as copula from its role in asserting existence. But compare these sentences about my dog Birta:

Birta is a dog.  
Birta is brown.  
Birta is.

Each places Birta in time: the present. The first two add a description. The last adds nothing, treating Birta as a thing that can be talked about absent any of its “properties” as we are led to conceive of her in a thing-language. The role of “to be” is univocal: placing an object, with or without description, in time.

or at least none that seems fundamental. That numerals cannot be added to a base word except with a classifier suggests a mass-process view. And there is likely no verb corresponding to our “to be”.

Yes, many languages have just some of these characteristics. In the history of Chinese, it has varied whether numerals could be added to a base word. English has many words which cannot be preceded by numerals: we call them “mass nouns”. It is not the presence of all of these features, or none, or a majority of them that tell us whether a language is a thing language or a mass-process language. No, it is the main focus of the grammar, toward individuals or towards mass-process, that we must discern.

The problem that linguists encounter is that they look at too much “data”—they try to take account of everything. It is clear, once we reflect, that English is primarily a thing-language. Yet if we try to look at all kinds of sentences and take account of all our “informants”, we’ll never get to that. We’ll have to take account of process words, like “running”, and mass words, like “mud”. So the linguist would say that English isn’t a thing-language, or perhaps not recognize it. Only by ignoring a great deal can we see the thing-basis of English, how we try to force concepts into a thing-mould, using nouns for what cannot be construed as a thing yet are needed for the grammar which is thing-based. If we try to look at all we can find in a language, we see only trees, no forest, blindly stumbling along using a map made for another forest: the grammar of English, German, and Romance languages.

What, though, is common to thing languages and mass-process languages?

Recall William Croft’s suggestion that the act of reference is universal. He says the act identifies a referent. A referent is (normally) outside language, some of the world that the act is meant to get us to pay attention to. And that, it seems to me, is key to language: getting others to pay attention to what we want them to. We do that with describing.

We should not confuse describing with referring. Referring has been studied for more than 2,500 years and has a clear meaning: drawing someone’s attention to a particular individual thing. There is debate about what one means by “particular individual thing”. Thing-language philosophers debate whether justice is a thing, though it is certainly a noun. But though referring through language does involve describing—by saying what kind of thing (dog, chair)—not all

describing involves referring. To talk of a beautiful sunset, speaking of the colors and the clouds, does not involve referring, unless you think that because “sunset” is a noun it must be a word for a kind of thing and we’re talking about this particular one. From the mass-process view, there is no distinction between concrete and abstract, for those apply to things. The words “dog”, “run”, “mud”, “justice”, and “white” are used for describing in the flow of all. There is nothing abstract in our conception of justice. We are all born with a sense of fair play, a sense that cognitive scientists have shown we share with dogs and monkeys. We do not abstract from experience to use the word “justice” any more—or any less—than we abstract from experience to use “dog”. We describe using that word.

The spoken “dog” evokes all of that concept ready to be used in many ways within the grammar of English. For example, we have:

- dog      a singular noun, though it needs an article or quantifier to show that, as in “A dog is barking.”
- dogs     a plural noun, as in “The dogs are barking.”
- dog      a mass noun, as when a person in a country where dogs are eaten might say, “Let’s have dog for dinner tonight”(and be damned to eternity for that).
- to dog   an infinitive, as in “He set out to dog her steps.”
- dogs     the present tense of a verb, as in “He dogs her steps.”
- dogging the progressive of the verb, as in “He was dogging her.”
- dogged   the past tense of “to dog”, as in “He dogged her steps.”
- dogged   an adjective, as in “She had dogged determination.”
- doggy    an adjective, as in “Birta coming out of the river has a wet doggy smell.”
- doggedly an adverb, as in “She doggedly pursued the subject.”
- doggieness a noun, a mass word.

Though the last seems like a mass-process word, it is a genus or universal word, an essence word. You could say that my dog Birta is an example of doggieness, but you couldn’t say that Birta is a part of doggieness nor that a couple dogs roaming down the street are a part of doggieness. A part of doggieness is not a dog or dogs or dogging.

Rather, “dog” by itself is like a mass-process word. Alone, without modification, without use in a sentence, it conjures up all of the notion of dog: one animal; many animals; dogging; the nature of dogginess; the way dogs act; the way other concepts are likened to dogs; . . . .

Similarly, only by modifying or using “run” do we have a word that fits into a grammatical category:

- to run    an infinitive, as in “He likes to run.”
- runs     the present tense of the verb, as in “She runs well.”
- running the progressive of the verb, as in “She is running.”
- run      a singular noun, as in “He had a good run around the block.”
- runs     a plural noun, as in “They won by five runs.”
- runner   a noun, as in “There was only one runner on the street.”
- run      an adjective, as in “He was run over.”
- runny    an adjective, as in “She likes her eggs runny.”
- running a mass noun, as in “Running is good for your health.”

And we have:

- white    an adjective, as in “This is a white piece of paper.”
- white    a noun, as in “This restaurant serves only whites.”
- whiten   a verb, as in “Whiten his face for the show.”
- whiter   a comparative, as in “This dress is whiter than that one.”
- whiteness a noun

This is how I explain meaning in “Language-Thought-Meaning” in this volume. There you’ll see that “concept” and “category,” even “idea”, are too rigid for describing how we mean. Such base words, such roots, are what all languages must have. How those words or roots are used, how they are placed into a grammatical system varies from language to language. But in each language we can find such words, such basic symbols that evoke a concept or category. We start with those words when we translate. Learning Arabic, if someone points to a dog and says “kalb”, I have a way to begin to understand the word, though not whether what is meant is one dog, a dog as part of the mass of dogginess, the essence of dogginess, or some other, for I do not know how it is used in the grammar. Only by application, by

learning to speak and use the grammar, do I begin to see with the language as a thing language or as a mass-process language, though with “kalb” the doggy smell, the pleasure of petting a dog, the barking, the howling, the whimpering, the running and chasing are all there ready to be fit into the grammar or adjusted to include, perhaps, uncleanness, once I have seen the person point to a dog.

Words we use to describe are part of both thing languages and mass-process languages. Except that “word” is a bad term. Is “run” a word in English? As we saw above, it is a stem, a base, that we modify and whose role we understand in the context of an utterance. To talk of a word in Makah where it can be modified by a prefix, suffix, and/or an infix to be a complete utterance, makes the idea of word even more suspect. We should talk of *stems*, of basis parts of a language. But bowing to convention and ease of discussion, I’ll talk of “base words”, or better, “concept words”. We use concept words to describe; they are the bases for our descriptions in both mass-process languages and thing-languages. They are the *catagorematic* parts of speech.<sup>22</sup>

I am not suggesting that there are any particular concept words that are shared by all languages, only that each language has some.<sup>23</sup> Nor am I suggesting that any concept word has a (possibly complex) correlate in the other language. It may be that the smallest unit of a language that can be translated into English is a sentence.<sup>24</sup>

The only idea of “predicate” I can find that makes sense in the writings of the linguists above on mass-process languages is that of “description”, the use of a base concept word modified to work in a grammar. But that doesn’t mean that a concept word in another language that is best translated into English as “red” could not be used in that other language in differing grammatical ways: we’ve already seen that with Wintu (pp. 8 above). When Kinkade talks of predicates in Salishan languages (p. 9 above), we can understand that as uses of

<sup>22</sup> Borrowing the term from the medieval logicians in Europe.

<sup>23</sup> Compare how Cliff Goddard describes work of Anna Wierzbicka in “Whorf Meets Wierzbicka” (p. 420):

Wierzbicka claims that notwithstanding language-specific polysemies and metaphorical overlaps, there are universal temporal concepts shared by languages as diverse as English and Hopi (WHEN/TIME, NOW, BEFORE, AFTER, A LONG TIME, A SHORT TIME, FOR SOME TIME).

<sup>24</sup> See the examples from Shawnee and Nootka that Whorf gives in “Languages and Logic”.

parts of speech for describing. Whorf in “Languages and Logic” seems to agree:

When we come to Nootka, the sentence without subject or predicate is the only type. The term “predication” is used, but it means “sentence.” Nootka has no parts of speech; the simplest utterance is a sentence.

In English and other thing languages we divide the uses of categorematic words—not the words themselves—into various classes: noun, verb, adjective, and more. Mass-process languages do not so clearly divide uses of the concept words into classes, though they may. But the classes into which a language divides uses of categorematic parts of speech need not apply to any other language, though there may be similarities that will help us find our way in understanding a particular language. Yes, we might say, that is a kind of verbal use of a stem since it is marked for time in Makah. But those “correlations” are as likely to mislead.

Both kinds of languages also have parts of speech that are meant to help us understand the way in which a concept word is being used to get us to pay attention. There are prefixes, suffixes, and infixes, as in English “manly” and “irreverent”. There are connectives, as in English “not” and “if . . . then . . .”. These have significance only when used with one or a combination of categorematic parts of speech. So we call them *syncategorematic*.<sup>25</sup> This division of parts of speech into categorematic and syncategorematic seems to be what Marcel Granet and Th Ribot say that Chinese speakers make between whole words and empty words (p. 13 above).

Both kinds of languages also have parts of speech for *punctuation*. It might seem that these appear only in written language: commas, periods, question marks. But they are an integral part of our speech, indicated by pauses or tone.<sup>26</sup>

Descriptions can be good or bad, right or wrong, true or false. Affirmations, in the widest sense described in my paper “Truth in Reasoning”, seem to be an essential part of communicating, too.<sup>27</sup>

<sup>25</sup> Again borrowing from the logicians; “syn” = “with”.

<sup>26</sup> I do not know how punctuation is present in sign languages.

<sup>27</sup> It might seem that there are always ways to combine affirmations using words like “and”, “or”, “not”, and “if . . . then . . .”, leading to a kind of propositional logic implicitly used by speakers of a language. But there is evidence that some languages lack one or more of these. See my comments in the aside at the end of Chapter ?? in *Reasoning about the World as Process*.

So in both thing-languages and mass-process languages we have the following ways to divide speech:

<i>categorematic</i>	<i>punctuation</i>
<i>syncategorematic</i>	<i>affirmation</i>

Now we can ask whether these are universals of language. As a prelude to that we should look for whether there are other kinds of languages besides thing languages and mass-process languages.

### **Metaphysics and language relativity**

It's often said that metaphysics consists of claims that are in some sense fundamental. So consider:

The world is made up, at least in part, of things.

Is this a claim? There is no way we can show that it is true or show that it is false. It summarizes how we encounter and understand the world of our experience, and as such is fundamental to our way of life. But rather than "summarizes" perhaps we should say it serves as a guide, directions in our lives. It is relative to this sentence that a very large part of what we believe that we can put in propositional form is evaluated. It is assumed, not shown, for it cannot be shown.<sup>28</sup>

We assume that the world is made up of things, but when we try to be clear about this we must work very hard, writing books, debating, looking for form in both language and reasoning. We do not show how it is true, but how it underlies our beliefs.<sup>29</sup>

Some say that language shapes how we see the world.<sup>30</sup> Surely it does: it is hard for us to distinguish different kinds of snow for which there are distinct words in Eskimo languages. That kind of shaping, due to vocabulary, is not very significant, for we can, with little effort, learn the other vocabulary and begin to use it.

No, the claim of linguistic relativity is a claim about differing metaphysics, about how different languages shape how we see, live in,

<sup>28</sup> But surely it can be shown, my friend says, here's a thing (picking up an apple). That has as much force as Samuel Johnson refuting Berkeley's subjective idealism by kicking a stone.

<sup>29</sup> As I have tried to do in *Predicate Logic, The Internal Structure of Predicates and Names*, and *Time and Space in Formal Logic*.

<sup>30</sup> I will not review that debate and the history of this idea, for that is done well by John Leavitt in *Linguistic Relativities: Language Diversity and Thought*.

encounter the world. Grammar—what must be said and what cannot be said—is what shapes a speaker’s view of the world. For thing language speakers, our grammar directs us to see stability—things continuing in time despite their changes—that shapes how we live. For mass-process language speakers, their grammar directs them to see the flux—the flow of all described but not partitioned with mass-process words—that shapes how they live. Note well that I say that the language shapes, not determines. If English determined how we can see the world, I could never have led you to understand the mass-process view. If a language determined how we understand the world, we could never have new insights that initially seem like mysticism but with time lead us to modify our language.

Max Black in “Linguistic Relativity: The Views of Benjamin Lee Whorf” dismisses the idea of linguistic relativity:

Were we able, as we are not, to infer from a given vocabulary to corresponding cognitive capacities, a further inferential leap would be needed to show that different languages incorporate different conceptual systems. The admitted possibility of translation from any language into any other renders the supposed relativity of such systems highly dubious. p. 232

What makes Black think that the translations are good, that they preserve meaning? I can get you to look at a dog by saying “Look, there’s a dog”, or by saying “dog-ing, there, now”, or by grabbing your hand and taking you over to the dog and pointing, or taking your hand and going over to the dog and putting your hand on it. Does that mean we have the same conception of dog? That the first sentence was translated by each of the other ways show that we have the same meaning in each case? And Black misses Benjamin Lee Whorf’s most important point that it is not the vocabulary, or at least not the vocabulary alone, that shapes thought so much as the grammar. As Whorf says in “Science and Linguistics”:

We cut nature up, organize it into concepts, and ascribe significances as we do, largely because we are parties to an agreement to organize it this way—an agreement that holds throughout the speech community and is codified in the patterns of our language. The agreement is, of course, an implicit and unstated one, *but its terms are absolutely obligatory*; we cannot talk at all except by subscribing to the organization and classification of data which the agreement decrees.

pp. 213–214

And as Dorothy Lee says in “Conceptual Implications of an Indian Language”:

It has been said that a language will delineate and limit the logical concepts of the individual who speaks it. Conversely, a language is an organ for expression of thought, of concepts and principles of classification. True enough, the thought of the individual must run along its grooves; but these grooves, themselves, are a heritage from individuals who laid them down in an unconscious effort to express their attitude toward the world. Grammar contains in crystallized form the accumulated and accumulating experience, the *Weltanschauung* of a people.  
p. 89

John Leavitt in *Linguistic Relativities* speaks of Franz Boas’s views similarly:

Boas’s point here, probably his major single contribution to linguistic theory [reference], is that the key difference between languages lies less in what they allow you to say—as Boas kept insisting, any language will allow you to say anything you want—but what domains a given language *obliges* you to refer to. Different languages have different obligatory grammatical categories requiring attention to different aspects of experience. p. 127

Yet Boas denies linguistic relativity when he says “any language will allow you to say anything you want”. Any of us who speak two languages well know that this is false; we approximate, we negotiate meaning, but we do not say what the other said.

In “The Scope of Linguistic Relativity: An Analysis and Review of Empirical Research” and in *Linguistic Diversity and Thought*, John A. Lucy describes how linguists look to other languages, see how those differ, infer metaphysics from that, and then look for first linguistic consequences and then cultural and behavioral consequences. Perhaps that can be done, but looking at number or gender or tense, though interesting, is not likely to lead to the thesis that language shapes how we see the world. If a Portuguese speaker has six aunts and one uncle, then he or she will say “meus tios”, the masculine form, not “minhas tias”, the feminine form, and all the adjectives must agree and be masculine. No doubt this encodes a view that men are more important than women. But this can be pointed out easily to a Portuguese speaker. Though habit is strong, at least the speaker can be aware of this emphasis and, perhaps, try to correct it in his or her own thinking. Learning English, that person will have to say, “My aunts and uncles”

which is not a hard stretch to make. In contrast, some speakers of English and Portuguese, in my experience at least, cannot imagine seeing the world as not made up of things. It is not a habit. It is not an emphasis. They cannot adjust to conceive of the world as mass-process, the flow of all, not even as a mystical vision. This is the deep way that language shapes our thought.

Lucy and others look to those parts of the language that are hardest for speakers to recognize as significant as the key to the most fundamental metaphysics that shape their conception of the world. But every speaker of English is aware, or can be easily shown, that the language has words for things. The notion of thing is not hidden or covert, yet we can see that it is a fundamental part of our language experience because it is so extraordinarily hard for us to conceive of an alternative.

Moreover, that language shapes how we see the world is not an issue of relativity, for it could be true and demonstrated even if no other language embedded a different way to see the world, for example, if there were no mass-process language other than the artificial one I devised.

Many look for behavioral differences to justify a linguistic relativity. But small behavioral differences, such as how you or I respond to dogs—unless generalized to a whole population from a careful study—can be idiosyncratic, simply a difference arising from our personal experiences. If there are behavioral differences, then they must be culture-wide, seen in the large. This is the virtue of Benjamin Lee Whorf’s investigation of how Hopi speakers understand time.<sup>31</sup> He shows that they do not have a conception of “Time as Such” as Sinha et al. dub it, no idea of time separate from experience, what I call *Zeit an Sich*.<sup>32</sup> They do not divide up Time as Such into parts, as we do in English, viewing those parts as things (days, hours, minutes, seconds, years, epochs). But they do take account of time, as we do also in English, by comparing with before and after.<sup>33</sup>

<sup>31</sup> “The Relation of Habitual Thought and Behavior to Language”.

<sup>32</sup> See [Sinha and . . . reference](#) for “Time as Such” and [XXXXXXXXXXXX](#) for her development of that. I dub it *Zeit an Sich* in analogy to the idea of a thing that is distinct from all its “manifestations” that is dubbed *Ding an Sich*.

<sup>33</sup> Vera da Silva Sinha has given a similar analysis in *Linguistic and Cultural Conceptualisations of Time in Huni Kui, Awety’, and Kamaiura Communities in Brazil* for some language cultures in and near the Amazon region of Brazil.

Large cultural differences do follow from whether we speak a thing-language or a mass-process language. I am not speaking of how houses are built, or whether a people observe a matrilineal or patrilineal descent, or whether a people practice agriculture or hunting-gathering. The differences are broader.

For example, consider the idea of owning. Birta is my dog, I own her. Hence I can do what I like with her, constrained only by laws that require humane treatment. I can sell her, I can kill her, or I can give her a doggy treat every morning. To think of owning Birta, though, is to view her as a thing, and me as a thing, for owning is a relation between things. I own my ranch Dogshine. Hence I can do with it what I like, subject only to laws that constrain the impact of what I do on others. I can sell it, I can divide it into parts, I can plant trees, or I can graze sheep until there is not a single bit of green on the land. It is mine. I own it, which is to say that this piece of land is a thing, and I am a thing, and I have a special relation to it. But as process I can only interact, intermingle, flow with the process of the land, perhaps controlling its flow but as much controlled by its flow. In process-mass grammar we think principally of the impermanence, we think of interacting. Conservation is not a foreign idea to be reconciled with ownership but is natural, for the relation is not owning but at most modifying the flow.

Can we even talk about owning in our process-mass language? To do so we would need some way to import thing-talk. The idea of a thing needed for the concept of owning is alien to the world as portrayed in the grammar of mass-process. Nor can we introduce an individuating operator and write, say, “*i* (Dog)” to mean a single, individual dog, for what are the individuals for “*i* (Mud)”? What is natural for us as we speak this language is to see my flow intermingling with the flow of dog-ing and land-ing here and now and through time past into the future. Perhaps this is why natives of North America who spoke a mass-process language could not understand the idea of selling land to American settlers, or why Maoris in New Zealand did not think of the exchange of money for land in the way the English settlers did.<sup>34</sup>

Or consider also crime and punishment. Higaberto is an evil person, a murderer. We put him in prison for his crime. He is a thing with a label: “evil”. So we isolate him from our society. We are punishing, isolating a thing. But seeing the world as process,

<sup>34</sup> See also the quote by Dorothy Lee on p. 51 below.

putting Higaberto in prison, we are mixing the flow we describe with “Higaberto-ing” with the process of prison-ing, and we think of how those intertwine, how they may affect one another and all the flow they encounter. The possibility of change in the process of Higaberto comes to the fore, rather than as an afterthought with a notion like “reform” or “degrading”.<sup>35</sup>

Linguistic relativity is now well-established—at least if you can understand how differently speakers of thing-languages and speakers of mass-process languages see and live in the world. Language shapes thought, no doubt. But outside the large cultural differences that come from speaking very different languages, it is hard to know to what degree. When I am sitting outside my home with my dogs, content, stroking one, looking at the sunset, seeing the tree large and full with green leaves, with no sentence, no words in mind, is that perception or experience shaped by my language? I do not know, and I do not know how I could ever know.

### **Western philosophy is so parochial**

#### *Common sense*

Milton D. Hunnex describes G. E. Moore’s “epistemological realism” in *Philosophies and Philosophers*:

The sensation of something, i.e., “knowing” something, is unique and irreducible. Also there are truths of common sense whose certainty is such that to doubt them would be to raise questions about our understanding of what it *means* to know anything at all, since knowing these common-sense truths is *paradigm*, i.e., the clear-cut example of *what it means to know anything*. Examples of “clear-cut” common-sense truths are:

- (a) Things exist in space and time.
- (b) We can only think and see and feel *where* our bodies are.
- (c) Things exist when we are not conscious of them.

For Moore, if some philosopher denies the reality of time, as, e.g., *idealists* like Bradley and McTaggart did, one need only remind him that he no less than anyone is obliged to acknowledge that he ate his breakfast before his lunch and that he cannot possibly argue that there is anything mistaken about his speaking *this* way or believing

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<sup>35</sup> See “Life Comes from It: Navajo Justice Concepts” by Robert Yazzie, Chief Justice of the Navajo Nation.

consequently that time is *real*. We learn to use terms like “real” by referring to simple clear-cut cases just as these. p. 12

Here “doubt” is the wrong word. Yes, if one does not accept (a) and (c), then one would raise questions about what it means to know anything at all *in our language community*. But (a) and (c) are clearly not basic, not even intelligible in a mass-process language. Assumption (b) is also odd for a mass-process language whose speakers do not distinguish minds and bodies as things. Common-sense epistemology for speakers of such a language must be quite different. The comments about time are equally narrow. I can accept that I ate breakfast before I ate lunch, but that does not signify anything about time being real, *Zeit an Sich*. All that is assumed in the example is before and after, nothing more.

*The flow of all and the many-one problem*

“Dog” as a base mass-process word describes not one dog, not many dogs, not the class of dogs, not the process of being a dog, not the essence of being a dog, but all of those and somehow none of those. It is not dog as mass, not dog as process. Yet comparing “dog” in our new sense to how we use mass-words, such as “mud”, and process words, such as “raining”, is the only way I have to lead you to this conception. Others, as we saw above, say that the base words are verbs, as in “to dog”, “to bark”, “to whiten”. Others have suggested the terms “essence”, or “universal”, “kind”, or “genus” for what the base mass-process words “express” in some languages. But those terms are tied to resolutions of an old and continuing issue in Western philosophy: What is it that is common or unifies many individuals as being of the same kind? What is common to all dogs that they are dogs, not coyotes or tables? Is it some essence: doggieness? Is it a universal of some sort that is more real than any individual dog? Or is it just how we use our language?

In a mass-process language, the “universal”, the “essence” comes first; individuals are somehow picked out, if they are picked out at all, from that. There is no need nor impetus to worry about how different individuals share some common essence, any more than when I submerge a glass into a tub of water and lift it out do we worry how the water in the glass shares a common nature with the rest of the water in the tub. Chad Hansen contrasts how the idea of universals is meant to stand behind our learning languages with a mass-process view in Chinese:

Baby Susie learns to utter “doggie” in the presence of Fido (the family dog—a collie) and the neighbor’s German shepherd and a few other occasional mongrels as examples. However, the first time she sees Uncle Harry’s Afghan hound, she promptly chirps, “Doggie!” How did she know? We tend to say she has learned to abstract from particular examples—learned abstract thinking. She has abstracted from all the particular dogs she had encountered the features common to all dogs. Seeing that the Afghan hound had these features, even though quite different in other respects, she correctly classifies it as a dog. This classification depends on her having learned an abstract idea.

Baby Mei-Ling, on the other hand, has learned to use the word *kou* ‘dog’ for that stuff which she encounters at Uncle Jang’s. But the story told does not involve any abstracting. Rather one says that she has acquired the ability to distinguish dog-stuff from non-dog-stuff.\*\* The problem of learning for Mei-Ling is how she is able to reidentify the same stuff. But expressing the problem in that way makes us less likely to talk of abstracting properties from different objects. As we shall see [reference forward], the philosophical problem corresponding to the possibility of abstract knowledge generated by the Chinese picture is rather how we can possibly know or love some mereological whole rather than just knowing or loving those parts we encounter.

\*\* In fact, the puzzle about learning is identical in both stories. Our ability to acquire discriminatory skills adequate to learn a language is what needs to be explained. What is hard for us to acknowledge, given our commonsense commitment to mental abstract ideas, is that the detour through ideas doesn’t explain that ability at all. pp. 51–52

### *Existence*

For those of us who speak thing languages, questions of existence are central not only to philosophy but to our daily lives. What exists? Is there such a thing as a good cat? Does the apple exist after I’ve taken a bite out of it? Existence and identity are intertwined in a great puzzle.

But in a process-mass language such as the one I devised we have simply:

Dog-ing (4:43 p.m. April 10, 2010; Dogshine)

To say that this is true is to say that dog-ing is going on at that time and place. There is nothing more to say about existing. Similarly for mud-ing and running. There are no assertions of existence but only assertions of mass-process words for times and places.

“What exists?” isn’t even an intelligible question when we see the

world as process. We can't even say that "the world"—the flux of all — exists, for there is no contrast of what doesn't exist. There are no parts of the flow of all, only parts as arise by our paying attention in certain ways. "Why is there something rather than nothing?" is not a deep question leading us to a conception of God but only ungrammatical nonsense in our process-mass language.

### *Identity*

When did the apple I was eating begin to exist? When did it end? To ask that is to view the apple as a thing in the world, real and distinct with distinguishable properties independent of us. Our work is to see it correctly. In the process-mass language we ask instead when it is correct to use the word "Apple". We replace worries about the reality of what is "out there" with worries about how best to describe the world of our experience. The question of what is the thing in itself, pure of the properties we attribute to it, evaporates.

At a talk I was asked whether I have criteria for identity for process talk. What counts as "the same" when we say that the dog-ing here now is the same as the dog-ing then there? I have none. But the status of what counts as the same for things is still unsettled after 2,500 years of worry, though I hope to have clarified it some in *Predicate Logic*.

H. H. Price in his book *Thinking and Experience* casts the issue of what is the same in a way that might seem to be appropriate for both thing-language speakers and mass-process-language speakers:

When we consider the world around us, we cannot help noticing that there is a great deal of recurrence or repetition in it. The same colour recurs over and over again in ever so many ways. Shapes repeat themselves likewise. Over and over again we notice oblong-shaped things, hollow things, bulgy things. Hoots, thuds, bangs, rustlings occur again and again. p. 7

But nothing is ever repeated except as we draw equivalences to say that there is repetition. The red in this rose is not repeated an instant later, for the sun shines a bit differently, the intensity and saturation, all change. The red in this rose most definitely is not repeated in another rose, nor in the color of a car that is driving by. Other cultures and languages classify colors differently than we do. They classify as the same, and hence a repetition, what we classify as different. We classify as the same, and hence a repetition, what they classify as different. Most certainly the same shape never recurs again: each potato is

different, each tomato is different. And the shape of each cell phone is different, too; though millions are meant to be made identical, they are not exactly the same shape—unless we are willing to ignore the differences. Even the idea of shape is an imposition we make on our experience, surely different from the impositions that a frog makes.

What counts as “the same” is never identical, never the same, except as we choose to call it, to think of it as the same. And that depends on our biology, our experience, our culture, and our language. Until we learn this lesson—which it seems mass-process-language speakers already know—we will chase after universals and certainty.

*The external world*

Of course there is an external world, separate from my thinking and your thinking. It is real, and is what makes our utterances true or false. But we need not invoke all of the external world to justify that “Juney is a dog” is true. All we need is some part of it, some situation or state. Nor need we invoke all of the external world to justify that “Birta is running” is true; all we need is some part of it, the event.

Yet what is this external world? What is the event that makes “Birta is running” true? All we can say is that it’s the part of the world described by “Birta is running”. Events, states, situations are how we try to conceive of parts of the external world.<sup>36</sup> And in doing so, we are conceiving of the external world as separate, a thing. Yet in a mass-process language there is no such distinction. Dorothy Lee in “The Religious Dimension of Human Experience” describes how such a division of self and world does not arise for speakers of the mass-process language Wintu:

Here we find people [the Wintu] who do not so much seek communion with environing nature as *find themselves* in communion with it. In many of these societies, not even mysticism is to be found, in our sense of the word. For us, mysticism presupposes a prior separation of man from nature; and communion is achieved through loss of self and subsequent merging with that which is beyond; but for many other cultures, there is no distinct separation between self and other, which must be overcome. Here, man is *in* nature already, and we cannot speak of man *and* nature. p. 164

We, standing outside that community, can say that they are describing the “external world” differently. But that is us imposing

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<sup>36</sup> See “Why Event-Talk Is a Problem” in this volume.

our conceptions on them. And what that world is, independent of our descriptions and their very different descriptions we cannot say. It is as bloodless as the thing-in-itself, the *Ding an Sich*, there only for us to have confidence in how we talk, idling except as a psychological prop.

But that psychological prop interferes with how we understand other people and their language and culture. We reason:

My language sees the world right. I know because I speak it.

There is only one world.

So speakers of this other language must “see” that world more or less the same as I do with my language.

So there has to be a good translation of their speaking into mine.

So there has to be a subject-predicate division and a noun-verb division in their language.

*The parochiality of all philosophies*

Until recently when Western philosophy began to be studied in China, there was no Chinese theory of truth, no discussion of universals, nor an examination of how the mind is related to the body. Those topics were absent because they are tied to the use of thing languages. Universals are meant to explain how many individual things can be understood under a common description; yet if the description is fundamental, a way of describing the flow of all, then an individual, if such can be intended, arises via a classifier, a way to focus more particularly on how a description is applied. Truth is not how language applies to the world, but how descriptions can be used well or badly. And to talk of mind and body is just to note that we can describe Zoe now as mind-ing or as body-ing, different descriptions of the flow of all, as we can describe my dog as dog-ing or eat-ing. The Chinese philosophers, too, have been tied to their language, to a mass-process view.<sup>37</sup>

What is common sense, what is obvious, what is clear, what we can assume in building a philosophy is tied to the (usually) unexpressed metaphysics of our common language. Philosophers risk being parochial by ignoring the work of linguists.<sup>38</sup>

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<sup>37</sup> See *Logic and Language in Ancient China* by Chad Hansen.

<sup>38</sup> I am not the first to recognize how deeply the thing-grammar of English, German, French and other European languages has shaped Western philosophy. I learned from the work of Dorothy Lee and of Chad Hansen cited above. The earliest I have found is by Friedrich Nietzsche in “‘Reason’ in Philosophy” in 1888, reprinted in this volume.

**Languages and logic**

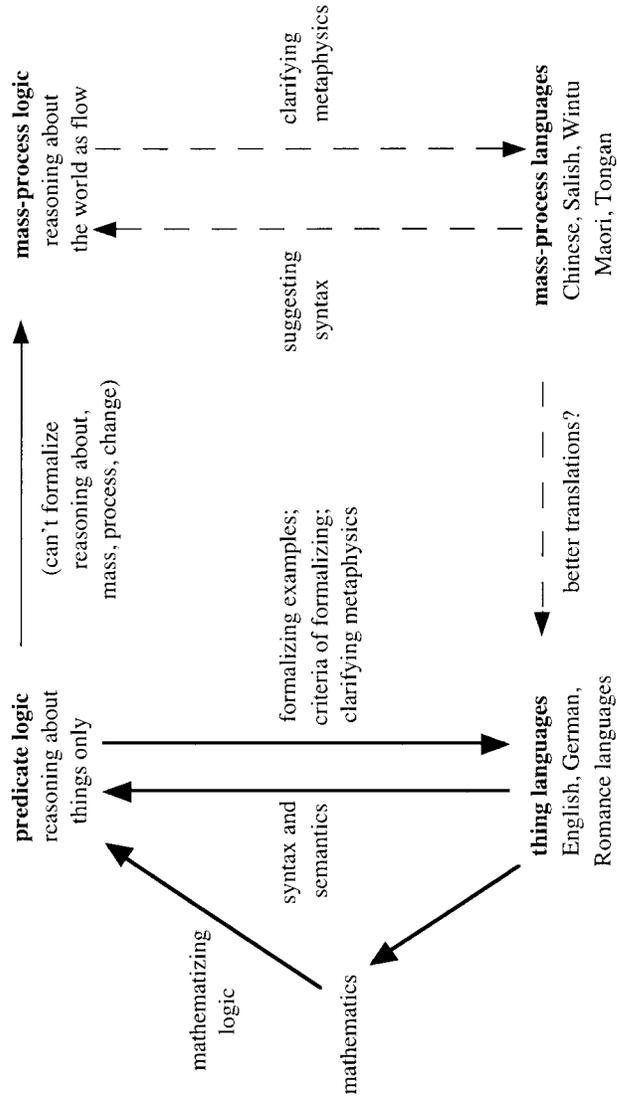
The diagram on the next page sets out how I see the relation of logics and languages.

Starting at the bottom left there are thing-languages, such as English, German, and Romance languages. In the 19th and early 20th centuries, speakers of those created mathematics as we know it now. They replaced all talk of process and transformation with talk of things, usually abstract things. They ignored all talk of masses. Set theory was seen as the ultimate basis of such mathematics, and is the ultimate in a thing-only view of the world. Motivated by examples in those thing languages and examples from mathematics that could not be formalized in the previously dominant Aristotelian logic, speakers of those languages developed predicate logic. They based it on the syntax and semantics of things in those languages, principally the noun-verb, subject-predicate divisions. They ignored, just as in the mathematics they used in devising the logic, all talk of mass, process, and change.

Only much later, beginning with my *Predicate Logic*, was the use of predicate logic to formalize propositions and inferences of ordinary language investigated to devise criteria of formalizing, illuminating the implicit metaphysics of things in English and other ordinary languages. Hundreds more examples of formalizing in the extensions of predicate logic in my works *The Internal Structure of Predicates and Names* and *Time and Space in Formal Logic* made it clear that the thing metaphysics embedded in predicate logic did not allow for formalizing reasoning about mass, process, or change.

I knew that systems for formalizing reasoning about masses had been proposed, beginning with Aristotelian logic and continuing with the work of Harry C. Bunt and others. But none of those seemed suitable for formalizing reasoning about change or process.

So I was led to devise a formal mass-process language and logic. Now we can see that the formal logic reflects much of languages such as Chinese, Salishan, Maori, and Wintu. We can better see how those languages are based on an implicit metaphysics that cannot be reconstructed in English or German but can only be pointed at, as I have tried to do in this essay and as Dorothy Lee and others do in papers in this volume. Now we can draw from the syntax and conceptions of mass-process languages for the development of the formal mass-process logic. In the other direction, as people who speak mass-process languages begin to formalize propositions and inferences from those



languages in the formal mass-process logic, we'll begin to understand better the implicit metaphysics of mass-process in those languages. And, perhaps with time, we can come to better ways of translating between mass-process languages and thing-languages.

I am often asked how to formalize or say some sentence such as "I walked the dog yesterday, you didn't" in the artificial mass-process language I devised. Attempting to do so would be as much a mistake as trying to formalize "Snow is white" or "Running is harder than walking" in predicate logic. There is a metaphysical mismatch, trying to force one conception of the world into a grammar based on a very different one. Just as formalizing "Justice is a virtue" as "All things that are just are virtuous" is wrong, formalizing "My dog is bigger than your dog" in terms of mass-process would be wrong. The only reason to try to formalize English sentences in a mass-process logic or a sentence from a mass-process language in predicate logic would be to uncover how different the implicit metaphysics of English is from the metaphysics on which the formal logic is based.

Still, the issue of whether the logic and language of the world as process-mass reflects or tracks some ordinary language is separate from the issue of whether that language and logic give a way to talk about the world as process-mass. I think the mass-process vs. thing emphasis is a major division in languages, and that the logic and language I've devised helps us see that.<sup>39</sup> I may be wrong. But regardless, the logic and language I have devised stand as a new way to see and reason about the world.

### **And in the end . . .**

Many linguists who study languages of people who live and speak very differently from how we in the West live and speak claim that their data is objective, scientific, there for anyone to see and understand.<sup>40</sup> But data, at least for grammar, is or should be recorded to illustrate, or confirm, or challenge a theory. The idea that the researcher provides "raw data" to be mined by anyone is a bad way to do research, as any scientist will tell you.<sup>41</sup> Often linguists do have a theory of universals

<sup>39</sup> The development of this logic, I later learned, was encouraged but never developed by Benjamin Lee Whorf in "Languages and Logic".

<sup>40</sup> See the criticism of this view in "North-South Relations in Linguistic Science" by Colette Grinevald and Chris Sinha.

<sup>41</sup> See my *How to Reason + Reasoning in the Sciences*.

they are testing. Those theories are tied to a thing-view of the world, invariably derived from the grammar of English, German, and Romance languages. So researchers look for and find nouns, verbs, subjects, and predicates, or at least “referring” in the other language, not even aware that they are imposing the thing-view of their own language on the other language and culture. But some linguists are sensitive to the language and culture of other people; they step outside their own language habits: Dorothy Lee, Benjamin Lee Whorf, M. Dale Kinkade, Jürgen Broschart, Franz Boas, and many others. They find no nouns and verbs, no subject and predicate; they find a different world-view embedded in a different grammar. Linguists who ignore that work are not just wilfully ignorant; they are enforcing a linguistic imperialism of Western languages.

There is a temptation, rarely resisted, for speakers of English, German, and Romance languages, to say that the large cultural differences described above show that thing languages are superior. Look, they say, we have developed mathematics, science, and technology to such levels that our lives are good. We couldn't have done that if hampered by speaking a mass-process language. But who knows what the Aztecs might have accomplished if they had horses, cows, and iron, and not been wiped out by disease more than conquest?<sup>42</sup> And the Chinese developed, before the Greeks, an “advanced” civilization, and did so with a mass process language and a script that has long been considered inferior to our alphabetic ones.<sup>43</sup> Let us resist this temptation to view our life, our culture now, as the result of a long evolution of progress—to drug-resistant bacteria, to genetically modified corn we cannot control, to atomic weapons and mass murder, to suicide, to mental illness, to global warming and mass extinctions. To feel superior hampers us from understanding others and appreciating their cultures, and perhaps from living a good life.

So much here is unfinished, suggested, or suggestive. There is no end but only a continual beginning.

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<sup>42</sup> See Jared Diamond, *Guns, Germs, and Steel*.

<sup>43</sup> See *The Chinese Typewriter* by Thomas S. Mullaney.

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