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WOMEN'S ROLE AND POSITION
IN THE EMERGENCE OF HOMO SAPIENS

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Abstract

Homo Sapiens (HS) started emerging around 300,000 BP. HS, a long-distance fast bipedal runner had a 29-year life expectancy. The ensuing physiological mutations caused the birth of long-dependent children. Their side-effect was enhanced vocal articulation. Linguistic phylogeny produced language with three time-ordered articulations: 1- rotation vowels-consonants into roots; 2- space- and time-categorization of roots into stems; 3- functional and temporal specifications of stems into fronds. Women henceforth developed as spiritual members in their communities, hereinafter their place in the production of symbolic cave and mobiliary art. The spiritual dimension of such symbolism must heavily be centered on women. Around 45,000 BCE all over the world, HS communities who had migrated out of Black Africa between 250,000 and 70,000 BP developed women-centered symbolism for the first time on durable media, though male-centered hunting weapons and tools had been produced even by previous Hominins.

Keywords: Linguistic Phylogeny; Homo Sapiens Emergence; Women's Position; Durable Media; Symbolism;

1. INTRODUCTION

The position of women in the emergence of Homo Sapiens starting at something like 300,000 years ago has always been made marginal at best. The more recent revaluation after a precise study of the handprints in various prehistoric sites with cave paintings in the world (Europe and Indonesia) proving



that most handprints were women's handprints has not radically changed the approach that still considers that the shamans who used to be considered only as men going through some initiation by solitary descent and confinement in some deep caves and recesses in these deep caves, were at best open to the possibility of the inclusion of some women among them and yet without any specification of what it could be for them and how their experience could be different from the experience of men in this initiation. In fact, apart from the hands, these women were no women at all.

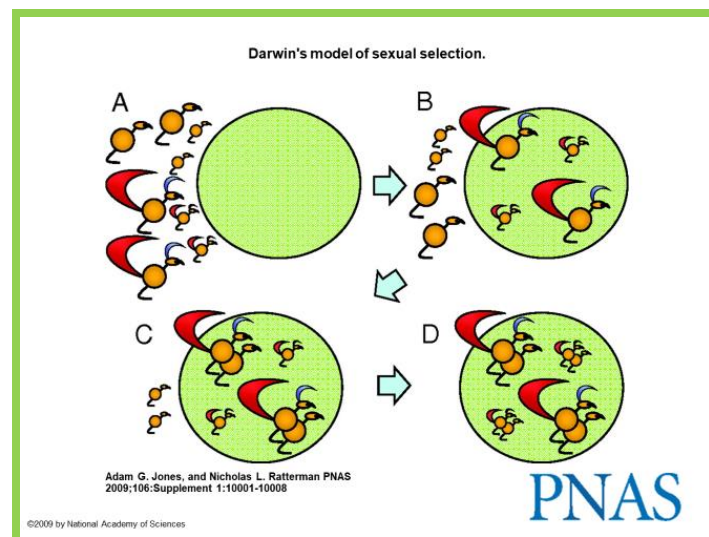
I consider we have to start from a completely different point of view and with a completely different method that will have to be open to other scientific and theoretical approaches. I always kept in mind Darwin's model of sexual selection for reproduction stating that the females were the selectors of the best males. Following Adam G. Jones and Nicholas L. Ratterman in "Mate Choice and sexual selection: What have we learned since Darwin?" Darwin's definition of this sexual selection is in *The Descent of Man, Part I*, pp 254–255:

"We are, however, here concerned only with that kind of selection, which I have called sexual selection. This depends on the advantage which certain individuals have over other individuals of the same sex and species, in exclusive relation to reproduction."

But Darwin is centered on animal species, and a lot of insects and fish, not human species or higher mammal species, though he seems to approach the Homo Genus with the following quotation when envisaging this sexualized mate choice within the concept of pairs of partners (same reference, *Part I*, p. 263):

"Such pairs would have an advantage in rearing offspring, more especially if the male had the power to defend the female during the pairing-season, as occurs with some of the higher animals, or aided in providing for the young."

This can be represented as follows:



If this idea is correct that gives to women an essential role to play in reproduction and thus in the selection of various mutations. The selected males are those who possess the best qualities from the women's point of view beyond the selection process itself both to defend the impregnated female if necessary and to provide her and the progeny with the necessary goods. Note the model given here assumes there are the same numbers of males and females, which is in no way guaranteed, just as much as the fact that mating is only one male and one female without considering that one male can mate with more than one female because the male does not get pregnant. The exclusive sexual relationship between one male and one female, even if it is for one mating season, has nothing natural in itself, including

among apes, even those closest to us. We cannot know the heritage as for the one coming from *Homo Erectus* or *Homo Ergaster*, but there is no reason to believe sexual reproduction was based on an exclusive relationship between one male and one female. What was important in a community that expanded and then migrated was the possibility to produce as many adult individuals as possible that could enjoy a full reproductive life with a life expectancy of 29 years, hence to produce as many individuals as possible to guarantee the possibility for at least three individuals to have a full reproductive adult life. The objective then is not so much exclusive sexual relationships as effective sexual relationships. Darwin never considered this point and globally, archaeology does not consider it either. And that was the starting point of my reflection, the perspective that was mine all along.

One other thing is missing in Darwin, and *The Descent of Man* is unluckily the fact it is very little advanced on human articulated language (which is normal in his time) and even on the man-made culture of Hominins, and particularly *Homo Sapiens*' utilitarian or non-utilitarian artifacts and practices such as clothing, body decoration (painting, scarification, and beads), tools of all sorts, "artistic" objects or production in caves or on rocks, portable or not, and before these durable media on non-durable fast-biodegradable media, not to mention the language and the use of language (what language, what level of language?) to produce a meaningful discourse that can also be seen as "artistic" (elaborate discourse that will become poetry) or "spiritual" (elaborate discourse that will become ritual, liturgical or religious). Adam G. Jones and Nicholas L. Ratterman do not seem to notice this shortcoming with Darwin and they do not suggest that there is a lot to do along that line. And this is my second attack on the problem of women in the emergence of *Homo Sapiens*.

2. WHO WAS HOMO SAPIENS?

That question sounds naïve, and yet it is crucial to know what was the main genetic characteristic – and we assume we can look at the problem in a unified way – of *Homo Sapiens* as a species, and how *Sapiens* was different from all other Hominins, how this difference made them so unique that their sole existence will wipe out all anterior Hominin species. In fact, the basic mutation was a lot older: the bipedal standing position as the basic corporeal stance for walking. The main ancestor of *Homo Sapiens*, also the ancestor of *Homo Neanderthalensis* and *Homo Denisova*, and directly or indirectly of some other Hominin species has this characteristic in his/her name *Homo Erectus*, and yet the change is even older. Note *Homo* is not neutral semantically and it is connected to males in all Romance languages that evolved from Latin and even wider with derived adjectives or nouns like "humanism" and "humanities." We have to consider that the species is composed of two equal sexes, males and females and we should have a female expression for females like "Femina Sapiens," or a neutral term for both males and females. That's why we may drop the term *Homo* and only keep the second element of the name. Otherwise, we should always refer to the species as a plural hence as "they," "them" or "their," which is not always feasible or elegant.

This bipedal upright position is thus typical of the *Homo* species (plural) and that's the difference with apes, including the top ones who are still able to use their grasping feet to climb in trees and who are able to run with the help of their arms and hands, which Hominins normally do not do, certainly from *Homo Erectus* onward.

But *Homo Sapiens* goes one stage further than all other Hominins: they became long-distance bipedal fast runners when they got out of the forest and the protection of trees to develop in the savanna, and their whole bodily structure was transformed by this fundamental evolution, first of all, brought to the species by the mutation of the foot, seen as follows.

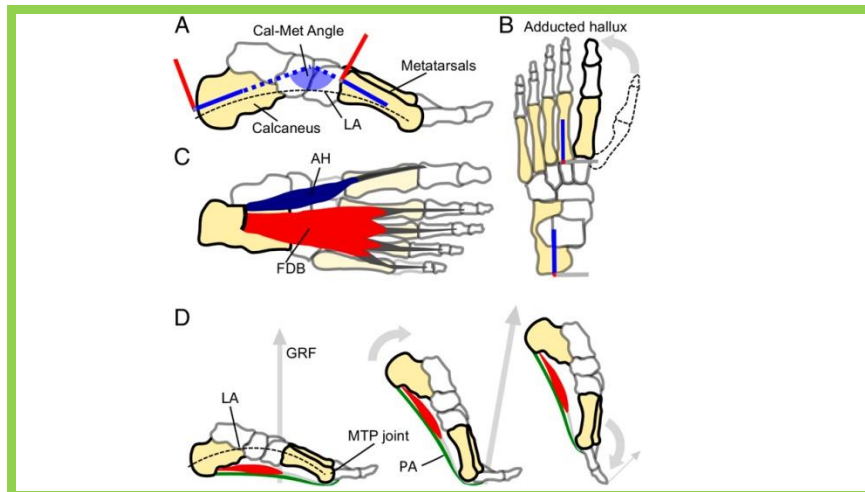


Fig. 1. Salient features of the human foot, and the windlass mechanism in action. (A) A medial view of the human foot bones highlighting the pronounced longitudinal arch (LA, dashed line) and a schematic illustration of the Cal-Met angle that we used as a measure of dynamic arch compression (the angle formed between the calcaneus and metatarsal segments of the foot model, as defined in ref. 43). (B) Superior view of the human foot bones with a depiction of how the human hallux (bold outline) is greatly adducted from the opposable hallux found in fossil remains of our hominin ancestors (e.g., dashed outline). (C) A plantar view of the human foot showing the largest superficial PIMs that span the LA and MTP joints: Abductor hallucis (AH) and FDB. The PIMs also include abductor digiti minimi, quadratus plantae, flexor hallucis brevis, the lumbricals, and adductor hallucis (17), which have not been included here for clarity. (D) Depicts the windlass mechanism in action from mid to late stance in human walking. From left to right, the foot rotates about the MTP joints, tensioning the plantar aponeurosis (PA) and raising the LA (decreasing the Cal-Met angle) before the toes are plantar-flexed as the PA recoils just before toe-off.

Sapiens became agile, slender, and the difference between males and females got reduced, though females still had a wider pelvis to enable easy delivery of children. Yet evolution is important here. Women were obliged to run as much as men in their migrations and the female pelvis got and is still getting, narrower meaning that the children were born a lot more premature or less mature than with other Hominin species so that children were dependent for a long time, something like three to five years, and they could not walk at all for at least one year. The young were dependent for at least one-sixth and maybe one-fifth of their whole life. That would mean two years for cats and dogs, which is just unimaginable.

With a death rate before 12 that could be 50% due to miscarriages, stillborn babies, death of child and/or mother during delivery, infantile deaths, childhood deaths, including in both cases some predators like eagles and felines, and all sorts of diseases (measles and smallpox are not a modern invention). Then after puberty (twelve), pregnancy and delivery were dangers for women (and their babies), and women could meet with some accident or some predator, could be sterile, and for such reasons not able to be regularly pregnant. In the same way, males could be the victims of accidents, particularly hunting accidents and their fertile life might be reduced. Missing adults had to be replaced in a way or another for the communities to be able to provide for themselves. That's probably why we are finally understanding that interbreeding with Neanderthals, Denisovans and other Hominin species was more important than we thought – and we neglected this point – and that meant integrating the mothers of the hybrid kids to take part in their raising, and eventually some males too, be it only to avoid inbreeding in smaller communities. But that general situation had a hefty consequence on women and their fertility.

Between 13 and 29, most women had to be pregnant every 18 months to produce about ten children of which five will die before puberty and one or two will die before their normal life expectancy, hence to have three or four children who will be able to have a full procreative life from 13 to 29. No one

has so far – to my knowledge – wondered what it meant for women. From 13 onward up to 29, a woman will be carrying a child in her womb, or/and breastfeeding a child and taking care of one or two non-autonomous children. And it is clearly not an “or” for the first two situations, except for the first pregnancy. There is going to be a choice for the third situation and maybe a partial choice for the second situation. But to reach that understanding we have to state such communities where procreating children and raising them was so crucial for their survival and expansion, women who were crucial in such a social perspective had to find a position in the community that was altogether protected, privileged, and uniquely original. Ten women over 13, let’s say aged 15 to 20, will have three or four pregnancies at different levels of advancement, plus three or four newborns to breastfeed for at least one year, plus three or four if not slightly more infants and young children under five to be taken care of. Ten women mean nine to twelve/fourteen children to take care of in their wombs, at their breasts, and around their legs. Plus, the children over three up to the age of eight or nine when they probably became autonomous enough to take care of themselves and take part in socially productive activities. There were thus a lot more children than women and it is quite obvious this cannot be abandoned to spontaneity. This situation requires a special division of labor to cope with these children, to-be-born, newborns, infants and young toddlers, plus children in transition (from six to twelve) to puberty.

I insist on the fact that this is the direct result of the genetic evolution of the species brought about by the change in the lifestyle, which is more than a style and is a new way of being Hominins: hunting by running after the prey and running to go from one place to another.

That new division of labor enabled women to collectively raise the children and thus a certain number of women could be delegated to some other tasks while one third to one-half of the women would take care of all the children, breastfeeding the newborns, taking care of the toddlers and infants, looking after older children, and of course, nursing their in-womb to-be-born children. This hypothesis is the only one that can provide women with the possibility and ability to give birth and raise the children needed by the community to survive in the middle- or long-run, and to expand in order to migrate farther away. I am suggesting this migrating perspective is not a hypothesis. It is exactly what happened, and as we are going to see, very early.

But another transformation of the species was brought about by this long-distance fast bipedal running status.

3. THE LONG-DISTANCE FAST BIPEDAL RUNNING MUTATIONS

That’s the crucial element that has never been taken into account properly. We cannot know what language or level of language Homo Erectus, Homo Neanderthalensis, Homo Denisova and some other Hominins controlled. We can follow Steven Mithen along this line. They probably had the control of some limited rotation of vowels and consonants, but their communication was rich enough for planning, communicating, educating and migrating because of the use of other elements than purely linguistic elements, and that’s probably the result of the fact that they were not long-distance fast bipedal runners.

What did this physical specialty bring to Homo Sapiens? It brought many mutations that were selected because they enabled this transformation. Let’s list these mutations apart from the feet and the legs without which there cannot be any running of that sort.

This running is based on the possibility to breathe in such a way that the running individual is able to run for a long time, at a good speed and over a long distance. To be able to do this, the individual has to have a very important breathing capacity, and I insist on the concept of capacity. This implies a deep larynx that will be, along with the diaphragm, the pump necessary for deep breathing. It will also require a very fine innervation of the subglottal zone, the glottis itself, the mouth as the breathing-in and breathing-out “culvert” (if we can use such a metaphor), plus the sinuses also used as the entrance and exit orifice for breathing-in and breathing-out. But to be able to be such a runner the whole body has to be entirely connected and coordinated for the lungs, heart, diaphragm and larynx, legs and arms, plus the whole body (orientation of the pelvis and torso, hence the backbone, and what’s more, all that bodily

coordination has to be coordinated with the breathing itself. This can only be performed by the Broca area in the brain that has to be developed by some mutations selected within this development.

No one has ever wondered what it is and what it means to be such a runner. Every part of the body and every sensor in the body are totally mobilized to guarantee the perfect breathing, heart beating, orientation of every part of the body, running rhythm, etc., without which there cannot be any running of the sort.

And it is quite obvious that, apart from the most physical elements of the body like the legs and the arms, or the torso and the backbone, all other elements, particularly the deep larynx, the fine innervation of the articulatory and respiratory apparatus of the body are fundamental for uttering a great number of vowels and a great number of consonants without which there cannot be any human language. But the main characteristic of human language is that it is articulated and the very first articulation is this rotation of vowels and consonants.

Some studies of vocal communication among monkeys and apes show that with three vowels and four or five consonants, these monkeys or apes produce half a dozen or a dozen calls, whereas the rotation of these vowels and consonants would produce in human language at least 125 three-sound calls. Were Hominins before Homo Sapiens able to do that up to a certain point? Probably. It is the first articulation of the three articulations of human language. Articulated language is not what determined the selections of the various mutations concerned here, so that language is a collateral side-effect of the running status of Homo Sapiens, and Homo Sapiens used the possibility as soon as they realized what they could do, just like a child uses this first articulation as soon as he/she realizes he/she can rotate one or two consonants with one or two vowels: as soon as he/she can articulate various consonants, his first production like “papa” or “mama” will bring the second (“mama” or “papa”), and then extensions to “dada” or “caca” or “baba” or “nana” and many others. Imagine what he/she starts doing when he/she can articulate a second vowel: he/she rotates it into the words he already has, and he attaches all these “phonetic items” to objects around him/her. The vowel /i/ will produce “pipi” or “mimi” or “didi” or “kiki” or “bibi” or “nini” and every single of these “calls” becomes a word by being attached to a reference outside the child. We all know the pleasure of the child when he/she reaches that moment in his/her development. Imagine the pleasure of Homo Sapiens when they reached that moment when the rotation of vowels and consonants gave them the possibility to produce hundreds, and soon thousands of words.

It is necessary to insist here on the fact that this is the resultative collateral side-effect of long-distance fast bipedal running, and nothing else. Thus, articulated language cannot be stated as appearing only after all migrations out of Black Africa are done around 50,000 BCE. The possibility to migrate fast and faraway came with the running status of Homo Sapiens, and at the same time, the possibility to develop an articulated language was potentially contained in that running status. Language first was inherited in its communicational dimension from previous Hominin species (and even apes and monkeys), but it was developed as an articulated communicational tool essentially by Homo Sapiens. And do not tell me the hyoid bone is essential, because then horses should speak. The hyoid bone is not typically human or even hominin since horses have it and it is for them essential for breathing when running, so essential that the Benedictine invention of the collar in the 11th century finally liberated horses from the choking reining methods used before. The hyoid bone is essential for breathing and since breathing is essential for speaking, the hyoid bone has become essential for speaking but that was not its initial function. Now we have stated the phylogenic dimension of language as the result of the phylogenic development of the runner in Homo Sapiens, we can go back to women before speaking of the three linguistic articulations and the migrations out of Black Africa that are attached to them.

4. HUMAN ARTICULATED LANGUAGE

This is the trickiest subject about the history of human language that I call the phylogeny of articulated language.

The starting point is vastly inherited from their ancestors. Hominins, at least the Homo Genus, could communicate and used vocal calls to do this along with many other means. Monkeys and apes use

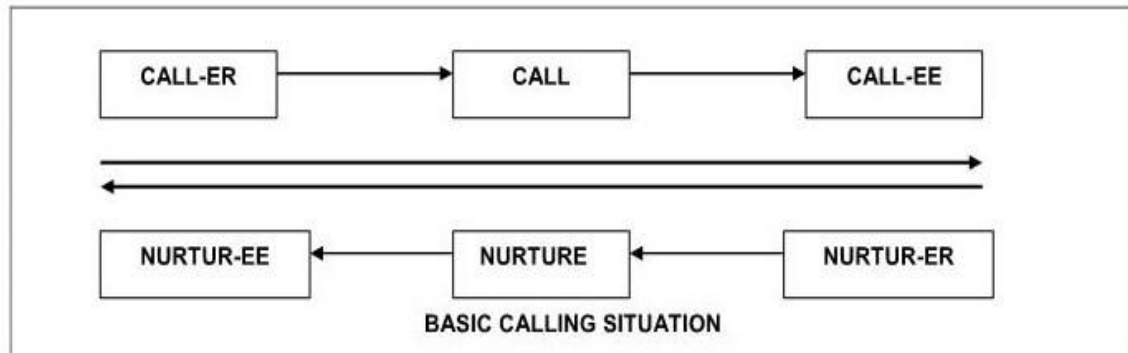
calls for that sort of communication plus all the resources of their body language and vocal elements that are not per se lexical or linguistic, such as intonation, chanting, and repetition. But these communicational means of monkeys and apes do not seem to have any hierarchical syntax. Their only syntax is concatenation and two concatenated signs do not create a new semantic unit. The concatenated signs just mean what each one means by itself. If there is danger nearby, the monkey who will use calls to let his pals know about it will use a first call to attract their attention and then a second call to tell about the danger. Intonation, speed, repetition of each call just give more value, more emergency force to the calls but each one keeps its value and no combined meaning nor lexical compound or in any way syntactic composition is reached.

The bipedal position changed a few things in the species and it probably progressively evolved towards what Homo Sapiens was to become, a long-distance fast bipedal runner. A lot of research is still needed in the biology of this evolution as well as in the consequences of this evolution, stage by stage, trying to reconstruct the biological and genetic phylogeny of this change and at the same time to extend this biological genetic approach with the phylogeny of the social life and institutions of these Hominins. I extend the term phylogeny to phenomena that are not basically genetic but are the consequences, at times purely collateral and secondary, of the genetic changes selected naturally for quite different reasons.

This being said, the bipedal stance must have incited these hominins to walk and run on their two feet. That stance and those activities caused other changes like the deepening of the larynx and the necessary mutations for long-distance fast running. This evolution, probably started before Homo Sapiens and some ancestors like Homo Erectus and Homo Ergaster, without forgetting the more or less distant cousins, Neanderthals, and Denisovans, and probably some other “archaic” humans who disappeared long ago, contains in its very dynamic architecture the forces and ferment of its own evolution. Note such vocal, lexical, morphological, syntactic, and discursive elements that build language, any language, have nothing genetic: they are not linked to this or that gene, except accidentally, even opportunistically, since to rotate vowels and consonants you need to have some physiological characteristics even if they have been chosen genetically for other reasons, but they have to be present for the linguistic characteristic to develop in the mind of the Hominins concerned. I say in the mind and it is not the brain. The brain is the tool or machine used by the mind, but the mind is a construct from and “in” the brain that enables Hominins to develop any form of abstract vision representing and trying to explain the natural phenomena they are confronted to. Homo Sapiens reaches with their articulated language the real level of conceptualization without which science, poetry, literature, technology, religion, philosophy and many other things of the sort would not be possible, and this abstraction is only possible thanks to language. I am going to give a general picture of this phylogeny.

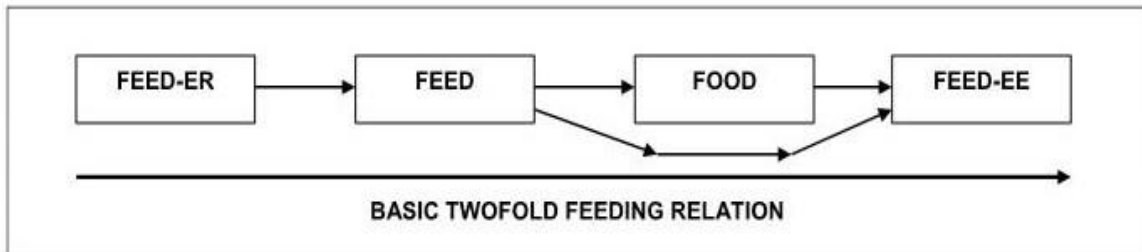
The children of Homo Sapiens are highly underdeveloped physically when they are born, and they are going to remain dependent on their mothers for one year after birth because of their necessary breast-feeding, and then at least one or two more years to be able to walk and to become autonomous as for moving and walking around. And yet they will have to go through some rather long apprenticeship to learn a tremendous number of things, starting with language that they will possess enough around three to be able to communicate with other people, adults included, of course.

Left to their own means, these young Homo Sapiens would find it very difficult to survive beyond a few days at the most. They need to be taken care of from the very start and they have a simple way to request the care they need: they can cry, hence call for help. And that has not changed since then. The first cry of the newborn is the proof he has started breathing. The second cry will be that he feels awkward and in some discomfort that requires some help. This pure survival communication is the matrix of all communication later on. When babies have understood their calls or their crying is addressed to the outside world, to some of these moving things they see for the first time around them, and one of them will respond to their call or crying and satisfy their needs, they have understood the basic communicational situation.



The newborn understands this situation very fast, that he/she is the one who is calling for help, that his/her crying is his/her call, and that he/she is calling for someone out there to come and help him/her. And it works all the time or most of the time making then the initial understanding into a stronger understanding. Feeling is experiencing, and experiencing is living, and living is thinking, even if this thinking is still very primeval, certainly not primitive because it contains the whole shebang of human mental conceptualization.

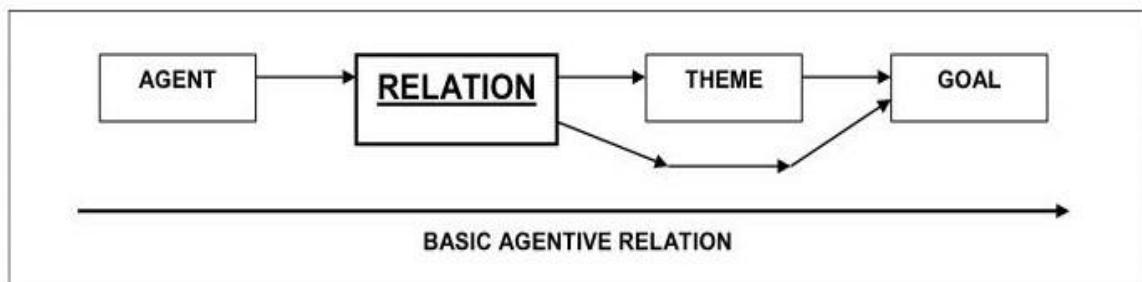
If you implement this basic situation to “feeding” you get the two intransitive and transitive constructions. First the relation of the feeder to the feedee.



And second, this basic feeding situation is the basic syntactic relation of a transitive or intransitive verb.

- (1) The baby is breast-feeding. [simple intransitive relation.]
- (2) The mother is breastfeeding the baby. [Simple transitive relation.]
- (3) The mother feeds milk to the baby. [Direct and indirect transitive relation.]
- (4) The mother feeds the baby with milk. [Direct transitive relation with “instrument.”]

At a more functional level, the indirect object is the goal of the action, the beneficiary of it, and the only direct object possible is not the baby but what is transferred between, the mother and the baby. The milk is thus the Theme and the baby is the Goal of the action, which makes the mother the source of the action and of the theme.



This abstract functional structure is the linguistic approach to the situation. The newborn only has experiential knowledge of it and it is his interest to have this experiential knowledge that may remain an

experience a long time, but as soon as newborns start using words to express wants, needs, and desires, they begin to integrate into their minds the abstract structure I have just stated. It is quite clear that at this point we are dealing with the biological growth of a baby, with the psychology of this baby in its making and evolving, the linguistic capacity to speak and to communicate, the level of abstraction this language implies for it to be meaningful.

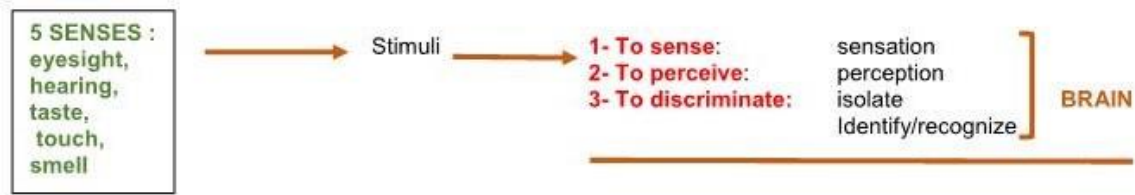
The situation I have stated here is the very matrix of a tremendous number of elements that will grow and develop in the child, both physically, physiologically, biologically, but also mentally, intellectually, linguistically. The relation I have stated just before implies a relation between two people and that relation can be of different types, which leads to social and even political notions. A relation of dependence that insists on making the child wait for satisfaction, and thus cry some more. A relation of love that will satisfy the slightest want, need or desire as soon as the first expression of the request appears. Some will say that the “truth” is to balancer these two elements. But this is neglecting language in both cases. The nurturer has to speak to the baby all the time. The nurturer can speak with love or with little care, or even speak to someone else and not the baby. The nurturer can take care of the baby with loving hands and a lot of good attention, and yet let the child cry some more before receiving what it is expecting, teasing the baby even with the satisfaction of its want, need or desire. It might be a game. But it might be perceived as negative duress imposed on the child, and I am speaking of the baby’s reaction. What may be a game can become a cruel frustration. The very tone of what the nurturer may say is essential and has to be somewhere between all extremes, full of love, attention, and at the same time full of adulthood, and this concept is not very easy to define. Adulthood is what in the nurturer represents the future of the baby. The contact between the baby and the nurturer is the contact of the baby with the future adult world. Only words and tones can express such elements.

Now think of Homo Sapiens some 300,000 years ago. The whole species is emerging and as such is born to a new life they are inventing as well as experiencing. The newborn that long ago was in the same situation as a newborn today as soon as he/she was born because he/she could not be born otherwise than dependent. He/she could express his/her needs or discomfort by crying, grunting or whatever other signals he/she could emit naturally. The great difference with an animal is that soon enough the newborn Homo Sapiens will be able to use words and no longer simple calls. Since he/she was born with the physiology that makes speaking possible, he/she will imitate the adults who are speaking to him/her or around him/her. That learning will take some time because the newborn Homo Sapiens will have to wait for his/her larynx to go down, get deeper and his/her articulatory system to develop, but we have to keep in mind this articulatory system develops genetically to satisfy the essence of Homo Sapiens that natural evolution has produced, that of a long-distance fast bipedal runner, and collaterally a speaker. Homo Sapiens seem to be sharing in their daily thinking what Fernando Pessoa calls “his romanticism.” He defines it in many ways in *The Book of Disquiet*. We must not be tricked by the official heteronym author Fernando Pessoa attributes it to, Bernardo Soares. What is important is what his character who Pessoa declares to be the author says. And the myth is contained in numerous passages like this one:

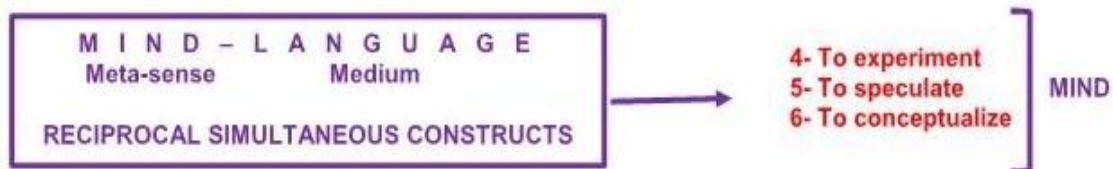
“Life is whatever we conceived it to be. For the farmer who considers his field, the field is an empire. For a Caesar whose empire is still not enough, the empire is a field. The poor man possesses an empire, the great man a field. All that we truly possess are our own sensations; it is in them, rather than in what they sense, that we must base our life’s reality.”¹

Caesar’s field sounds more like a battlefield than anything else, but apart from this remark, if we follow this romanticism the character “speaking” here should be mute, I mean unable to speak, utter sentences, use words because words can only come after the sensations. Our body works like that, and Pessoa wants to lock us in the first stage of our human body’s mechanical work, hence in our brain machine-code and not language:

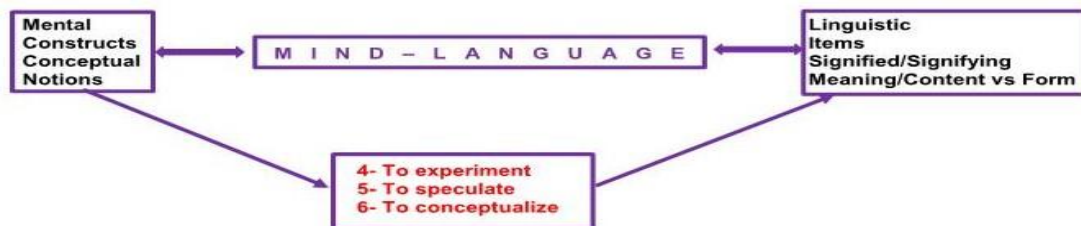
¹ Fernando Pessoa, *Bernardo Soares’ The Book of Disquiet*, Penguin Random House, UK, 1998, page 98.



If we lock ourselves in our brain and our sensations, we are not better than any animal that is able to discriminate between what is good or bad for them. The human-animal has a second level that Pessoa seems to neglect:



To shift from what we could call brain-machine-code that enables a dog to recognize us or a lion to recognize its prey, due to the capability to produce so many oral items that we, human animals, can attach to each item in brain-machine-code, “oral-vocal-items” that become their names, and we start experimenting not only with the material items captured by our senses and sensations, but with the “words” themselves, and this is the door to speculation and conceptualization. That’s exactly what Pessoa does, and his character pretends he does not do though he writes hundreds of pages playing on these words.



If this Bernardo Soares were able to only reside in his sensations he would have to lose his language, if not his mind because he would only live in brain-machine-code, a code that is never expressed orally in any way, since it is only based on sensations. At best Bernardo Soares would groan, grunt, and grumble, or maybe even grouse, but without the use of any vocal item that would be more than an animal call, certainly not in any way a word. When Bernardo Soares writes what he writes, he is fooling himself and fooling us. Uttering, what’s more, in writing, the slightest linguistic discourse unit is necessarily beyond pure sensations. The author is de-minding and de-linguaging himself, and that’s true for Bernardo Soares and, since he is only a character of Fernando Pessoa, it is also true of Bernardo Pessoa who has the excuse he is not saying this himself but having a character of his say it.

From the very start, even before birth, a newborn Homo Sapiens is being built by the communicational situation he is soaking in as follows.

COMMUNIC ATION MATRIX	AGENT or AGENT/SOURCE	ACTION IN TIME (Verbal)	ACTION SPACE (Nominal)	GOAL	THEME
INDIVIDUAL IN NEED NEED → DISCOMFORT → CALL	Agent/Sourc e Call-ER	Action Verb CRI-es	Action Noun CALL	TO Goal Call-EE	FOR Theme Care

NEWBORN'S MATRIX	Agent/ Source	Action Verb	Action Noun	Goal	THEME
FIRST CRY OR CRIES	Baby	CRY(ies)	CALL	CAR-ER	CARE, FOOD ...
NEWBORN'S NEED(s)	Baby's Need	CRY(ies)	CALL	Goal CAR-ER FEED-ER ADULT	Theme CARE FOOD LOVE
SYNTACTIC STRUCTURE EAT	Agent John or Mary EAT-ER	Action Verb EAT-s	Action Noun EAT-ING	Goal Beneficiary John or Mary	Theme EAT-EN Food/Fodder
FEED	Agent/Sourc e Paul or Jane FEED-ER	Action Verb FEED-s	Action Noun FEED-ING	Goal John or Mary FEED-EE F-ED	Theme FOOD FODDER

What is essential in this table is the fact that the matrix of the syntax of the language, in most abstract terms to be detached from and positioned over any particular specific language, is directly generated by the survival communicational situation in which the newborn Homo Sapiens finds him/herself at birth. I have used English terms and that could be discussed but that would lead us very far in the direction of an abstract non-language-specific functional syntax. We could think of Saumjan² and his non-specific terms, all of them being relators that from roots produce discursive entities defined the way they have been for some centuries indeed in western grammar starting more or less with Port Royal Grammar³:

- R1 (verb affix, finite form)
- R2 (noun affix)
- R3 (adjective affix)
- R4 ('adverb modifying verb' affix)
- R5 ('adverb modifying adjective' affix)

Western linguistics would be inspired if they went beyond the 17th century and out of Western European Indo-European languages (including Slavic languages). At least one other grammarian should be taken into account, Panini as a grammarian of Sanskrit, our Indo-Aryan cousin ancient language. Pāṇini (~6th–4th century BCE), or Panini, is the name of an ancient Sanskrit linguist, grammarian, and a revered scholar in Hinduism. Considered the father of Indian linguistics, Panini likely lived in northwest Indian subcontinent during the early Mahajanapada era.

Pāṇini is known for his text *Ashtadhyayi*, a sutra-style treatise on Sanskrit grammar, estimated to have been completed between 6th and 4th century BCE. His 3,959 verses on linguistics, syntax, and semantics in "eight chapters" is the foundational text of the Vyākaraṇa branch of the Vedāṅga, the auxiliary scholarly disciplines of the Vedic period. His aphoristic text attracted numerous *bhasya* (commentaries), of which Patanjali's *Mahābhāṣya* is the most famous in Hindu traditions. His ideas influenced and attracted commentaries from scholars of other Indian religions such as

² S.K. Saumjan, *Principles of Structural Linguistics*, Mouton, The Hague, 1971. It is advised to consider the mathematics that are behind this "applicational model" and particularly H.B. Curry, *Foundations of Mathematical Logic*, New York, 1963.

³ *Port-Royal Grammar* (originally *Grammaire générale et raisonnée contenant les fondemens de l'art de parler, expliqués d'une manière claire et naturelle*, "General and Rational Grammar, containing the fundamentals of the art of speaking, explained in a clear and natural manner") was a pioneering work in the philosophy of language. Published in 1660 by Antoine Arnauld and Claude Lancelot, it was the linguistic counterpart to the *Port-Royal Logic* (1662), both named after the Jansenist monastery of Port-Royal-des-Champs where their authors worked. The *Grammar* was heavily influenced by the *Regulae* of René Descartes and it has been held up as an example *par excellence* of Cartesian linguistics by Noam Chomsky. The central argument of the *Grammar* is that grammar is simply mental processes, which are universal. Therefore, grammar is universal.

Buddhism.⁴ To go back to Saumjan, note he chose to use terms like verb, noun, adjective, and adverb that are far from universal in all languages. Chomsky⁵ did the same mistake not understanding that such terms are derived from Latin, meaning from the Latin taught and used in universities in the Middle Ages, and that was not questioned during the Renaissance. Yet the main objection to Saumjan, or Port Royal Grammar, or Chomsky's Cartesian Linguistics, is precisely that restrictive approach of linguistic entities. You can build a cathedral with bricks, stones, metal, wood, or any other materials, but that does not explain the architecture of a Romanesque vault that can only be built with stones, and these stones have to be cut in a very specific way, or with wood, like Saint Pierre's in Montluçon, France. The architecture of it is the shape, what supports it, the beaming over it to support the roof, etc. A Romanesque church is defined by its architecture, not by its materials. Unluckily the discursive parts of mostly Indo-European languages, too often analyzed with the medieval scholastic grammatical analysis of Latin and at times Greek, is just what it is: Indo-European concepts that are characteristics of the surface of the language, not its deeper architecture, and a Noun Phrase or a Verb Phrase are named and defined based on the opposition between noun and verb without understanding that what we call "verb" in western linguistics is the entity/ies that carries/y the temporal element of the utterances, and what we call "noun" in western linguistics is the entity/ies that carries/y the spatial dimension of the utterance. An utterance is the joining of spatial and temporal elements and the third dimension is the set of functional roles the spatial elements can carry to express the semantic-syntactic connections between the spatial and the verbal elements of the utterance. Actually, on this point, Port Royal is swifter than Chomsky in their imitation of Latin since for them nouns have to be defined in their case functions, even though most romance languages have lost a lot of declensions, but Germanic and Slav languages have kept a lot. Chomsky has rejected these elements out of his Universal Grammar and that's precisely what is essential in what I am explaining. And Chomsky has made the same mistake with the tense-aspect-mood categories carried mostly by the temporal elements.

From my point of view, Saumjan does not give the functional architecture of the sentence but only a morphological architecture, and yet not universal. In fact, he uses the "parties du discours" (discursive parts) of André Martinet who actually betrayed his master Antoine Meillet who was entirely dedicated to Indo-European languages with a high level and diversity of declensions in the spatial field of the language and highly sophisticated conjugations in the temporal field. What's interesting in a functional matrix is that the same functions can be used both for the communicational situation that is the melting pot of language both for Homo Sapiens as a species and for a newborn Homo Sapiens at any moment in their long history and not starting arbitrarily around 45,000 BCE, or a little bit earlier (70,000 BCE for Harari⁶). If this functional architecture is universal though with local modifications it is because the communicational situation in which every single newborn is born is the same or so similar that the basic concepts of this communicational architecture are universal, making the syntactic functional architecture also universal, and I insist on this particular fact that it may go through adaptive elements in local situations.

I extend the applicational model of H.B. Curry and S.K. Saumjan and work on the following concepts for the spatial side of language (and time is always treated the same way as space when such time elements are not attached to the element carrying the relation, as we are going to see. Think of "I

⁴ "Born: about 520 BC in Shalatlula (near Attock), now Pakistan. Died: about 460 BC in India. Let us end with an evaluation of Panini's contribution by Cardona in: « Panini's grammar has been evaluated from various points of view. After all these different evaluations, I think that the grammar merits asserting ... that it is one of the greatest monuments of human intelligence. » Article by: J J O'Connor and E F Robertson." <http://mathshistory.st-andrews.ac.uk/Biographies/Panini.html>

⁵ Chomsky, Noam, *Cartesian Linguistics: A Chapter in the History of Rationalist Thought* Harper and Row, New York, 1966.

⁶ Yuval Noah Harari, *Sapiens, A Brief History of Humankind*, Harper, New York, 2011, and *Homo Deus, A Brief History of the Future*, Harvill Secker, New York, 2015.

worked from morning to evening” where “from morning” is a temporal source and “to evening” is a temporal goal in the very same way as in “I worked from Bordeaux to Poitiers, but then I slept.”):

- 1- AGENT (the entity that performs the action)
- 2- THEME (the entity that is moved or transformed or produced or destroyed by the action)
- 3- SOURCE (the point in time or space, or the state or person from which-whom-where-when the movement or the transformation is performed)
- 4- GOAL (the point in time or space, or the state or person to which-whom-where-when the movement or the transformation is performed)
- 5- LOCATION (the place in time or space where the action is performed)

All other functions are particular cases, or double functions, or modulations in discursive value due to the semantic content of the entities carrying the function. It is well known that the three following sentences have the same functional structure:

- 1- The window was broken by Paul.
- 2- The window was broken by the wind.
- 3- The window was broken by the hammer.

The last one needs a situation that makes it clear like “...by the hammer that Paul dropped accidentally,” or “... by the hammer that Paul dropped on purpose.” The hammer does not contain in its definition the force necessary to break a window on its own like Paul or the wind. In the first sentence “Paul” is an [Agent + Control]. In the second sentence “the wind” is an [Agent – Control]. In the third sentence “the hammer” is an [Agent – Control that implies and/or requires a real Agent + Control]. Imagine the power of such concepts when implemented in a complex situation like:

“Paul bought the car for Peter for 2,000€ for Mary, Peter’s wife.”

Who is the real agent? Paul? Of course, not since he did it for Peter. Peter’s wife? Of course, not since she is going to be the goal of the action, the beneficiary. Then Peter? Yes, provided he be the source of the 2,000€ if we understand that the real agent is the one who provides the money necessary for the buying. Then Peter = Agent + Control & Source (of the money); Paul = Agent – Control; Mary = Goal (of the car). The same utterance can be expanded with other elements like the source of the car itself who is going to be the goal of the money. We are coming to the idea that the architecture of a sentence is hierarchically stratified, and each level is determined by the theme or themes of the exchange: the money in exchange for the car and the car as a present for someone else.

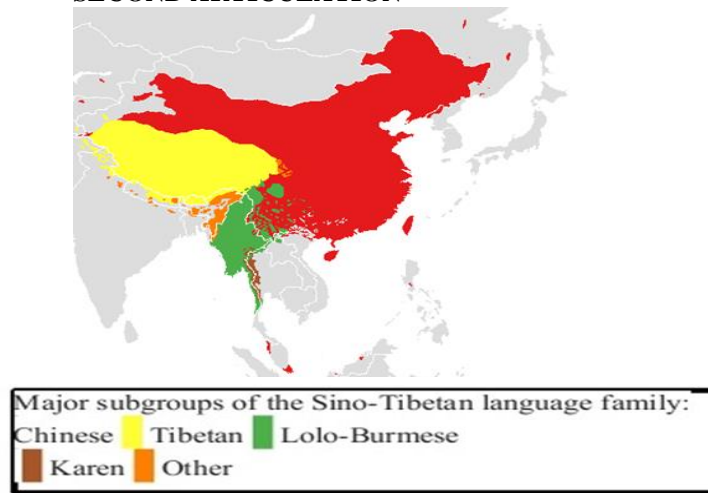
We just need then to consider the RELATION that brings together these various individual elements to have the keystone of this architecture. From these, you can produce all sorts of complex situations and meanings, one item in the utterance being able to carry more than just one function at only one level of the architecture of the utterance. It is based on this phylogenic communicational situation that we can easily determine that there are three articulations in human language, and that these three articulations are ordered from the first to the third and that each advanced articulation cannot take place if the one just under it has not been performed. It is a hierarchical phylogeny. Yet outside the utterance itself, the communicational situation can keep a lot of elements that are not contained in the utterance but are contextually essential, and if we speak of written communication, cotextually, for the understanding of the utterance.

FIRST ARTICULATION



Distribution of Afro-Asiatic languages in blue, and Semitic languages in hatched blue (Beware: expansion from northern Africa, particularly with the Egyptians, the Phoenicians, the Roman Empire, and Islam may have pushed some languages south). The migration must have started somewhere around 200,000 BP. The first articulation is based on the rotation of vowels and consonants and this single operation produces what are **roots**. This must have happened a long time ago since root languages are all in northern and Saharan Africa with a recent extension to the Arabian Peninsula and the Middle East. They are known as Afro-Asiatic languages, the most famous of which are Semitic languages. They left Black Africa when language had reached that first articulation and they went on developing based on this sole first articulation, hence being root-languages. All the rest is discursive, i.e. it only exists in discourse and is carried into the linguistic production by the communicational situation. Note these languages often have a consonantal writing system because the roots are consonantal, vowels being only discursive.

SECOND ARTICULATION

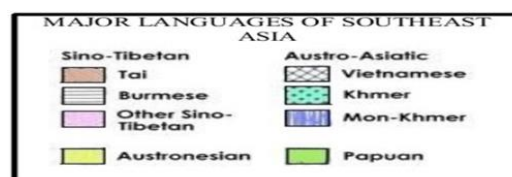
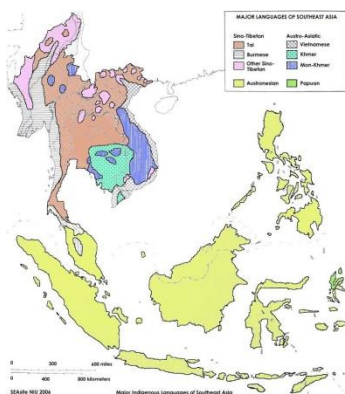


⁷ David Testen, *Semitic languages*, updated: march 16, 2020, <https://www.britannica.com/topic/Semitic-languages>

This migration must have started somewhere around 120,000 BP, used the Arabian Peninsula corridor from Djibouti to Hormuz and then spread out into Asia meeting Denisovans and interbreeding with them in different areas up to after the peak of the Ice Age that occurred at 19,000 BCE. Some speak of up to 12,000 BCE in Austronesia.

We should add Korean, Japanese and some languages in Siberia that are from this migration but went on evolving probably in contact with the other big family that appears later, the agglutinative family.

But we should also add the languages of South East Asia that went on evolving too and recent discoveries seem to prove the Denisovans actually integrated these communities and interbreeding was still active after the peak of the glaciation, hence in the phase of the emergence of agriculture in this area, particularly in Indonesia, though it seems to be more complex.



The language went on evolving in Black Africa and reached the second phase of its phylogeny. The roots that are neither spatial nor temporal, hence neither verbal nor nominal to remain within the western linguistic lexicon, are categorized as for their spatial or temporal morphology. The roots are thus modified into **stems** that are either spatial or temporal, nominal or verbal to use the western linguistic lexicon. These stems are invariable and then can only concatenate, not really compound themselves together. These stems carry with them their spatial or temporal connections but they can also carry elements like gender, number (particularly generic or compact number), but most subcategorizations will be externalized, expressed discursively with outside ancillary elements, and first of all functional elements or time-aspect-mood elements, though the former will be concatenable to spatial stems and the latter to temporal stems. This will become by migration then out of Black Africa the vast conglomerate of Asian languages that are isolating or character languages. These languages often evolved under the influence of later arriving languages and cultures, including recent arrivals like the French colonizers who enabled the Vietnamese to adopt the Latin writing alphabet. Southeast Asian languages adopted other phonetical writing systems though they are from this big family.

The writing systems have no influence on the nature of the languages they are used for. Some writing systems like with Japanese are mixed, using some Chinese characters in the general Japanese writing system. The use of computers has introduced a new consciousness of the vocal nature of language since a keyboard cannot have more than two thousand keys for the Chinese characters. If you are interested you can find a quick presentation of the various methods and keyboards at <https://www.businessinsider.fr/us/chinese-keyboards-2011-9>, Dylan Love 15/09/2011, 20:24 "We Researched How Chinese Keyboards Work, And It's Totally Nuts - Business Insider." Note the "Totally Nuts" that is disparaging and uncomplimentary. I guess that's how some people are different-friendly. But here are three phonetic writing systems of these languages.













Agglutination makes the temporal elements carry functional marks representing the various functional spatial elements attached to a particular temporal element in a particular utterance. These agglutinative languages are often called Turkic, and Turkish is one of the best known and ancient Turkic languages. In fact, the language of the first Homo Sapiens who migrated to Europe something like 55,000 years ago from Anatolia and the Middle East were speaking Turkic languages. Basque is the surviving language from these Old Europeans who regrouped in South-West Europe to survive the peak period of the Ice Age, probably 25,000-16,000 BCE. But these Turkic speaking Homo Sapiens came from Black Africa via the Arabian Peninsula Corridor and they migrated then to the Middle East, to Europe via Anatolia and the Caucasus, to Central Asia and then Siberia, northern Russia, and Finland. Finns and Sami people are from this migration. It is only a long time later that some of the Finns migrated to what is today Hungary that speaks an agglutinative language. The lexical units of these languages are derived from the stems of the second articulation and developed into fronds by the addition of functional and tense-aspect-mood marks on respectively the spatial and temporal stems. The syntax is thus totally, or at least mostly, integrated into the lexical units due to declensions and conjugations with the conjugated temporal element of the “sentence” carrying the summary of all the functional spatial elements it governs. That’s where Universal Grammar has it wrong. When functional marks and tense-aspect-mood marks are integrated into the fronds, in the lexical units, in order to build a “sentence” the temporal element (“verb” in the western linguistic lexicon) is the key of the vault such a complete utterance is.

Within 10-20,000 years a second wave will migrate out of Africa. We are still within the third articulation but this time many of the functional marks or the tense-aspect-mood marks are no longer directly carried by the fronds but are externalized. That gives, for the spatial fronds, articles, demonstratives, and other determiners, plus prepositions for the functions. Only pronouns keep some case markers, but pronouns are conservatives because they are often frozen in form and use. For tenses, aspects, and moods, the externalization is carried out with auxiliary or periphrastic constructions. These third articulation languages cover a vast range of externalization, from what is synthetic (little externalization) to analytical (a lot of externalization) and some modern languages in this group can reach fronds that are invariable and at times can be spatial or temporal indifferently. But all externalized elements are highly variable. These languages are, most of them at least, Indo-European or Indo-Aryan. But some examples of such externalization in the synthetic phase can be found in Maya for one distant example. Though we do not know the history of the people who became the Mayas, where they came from, when and along what route, though we have today various elements showing that cultural elements of their culture developed as far as 12,000 BP in Bolivia or south-west Amazonia (cacao growing for example) which means five or six thousand years before they were asserted among the Mayas, and even among the Olmecs before them. Culture does not move backward in time. The timeline gives you the migrating routes, hence from the south.

Some examples of such externalized syntactic elements are the following.

1- /u/ third-person pronoun agent or subject singular indifferently masculine, feminine, neutral. Many “verbs” do not need that pronoun to work in a sentence. It is typically a re-enforcing synthetic externalization. There are many different autonomous glyphs for this “pronominal” functional element. (See the table further beneath)

2- The counting system is typically a mixture of synthesis and analysis. Without entering the old writing system, the list of the first twenty digits shows a highly complex externalization of number from spatial fronds. No dual, no trial, no quadrial like in some Indo-European languages, and many other languages, though inner plural and compact number in compact fronds are common in the use of the old Maya written language. The standard written forms of numbers are the addition of bars counting for five units and dots counting for one unit each, maximum four dots. All these representations are based on addition, whereas Roman numbers use both addition and subtraction (4, for example, is 5 minus 1 in Roman numeration: the vertical bar for 1 is before the V for five whereas for six it will be after V). Maya counting has two bases. The main one is supposed to be vigesimal (twenty), but there is a base five, the bar that can be one bar for five, two bars for ten, three bars for fifteen, so within the vigesimal basis.

 <u>w/U (w)</u> (T13)	 <u>w/U (w)</u> (T191)	 <u>w/U (w)</u> (T1)
 <u>w/U (w)</u> (T1)	 <u>w/U (w)</u> (T204)	 <u>w/U (w)</u> (T231)
 <u>w/U (w)</u> (T232)	 <u>w/U (w)</u> (T3)	 <u>w/U (w)</u> (T513)
 <u>w/U (w)</u> (T738v)	 <u>w/U (w)</u> (T1008v)	

Pronominal functional element, /w/, 3rd person singular, masculine-feminine-neutral-indifferent.
 The head glyphs are considered as older in the writing system. (John Montgomery, Dictionary of
 Maya Hieroglyphs, free open access at
http://research.famsi.org/montgomery_dictionary/mt_entry_list.php?lsearch=U)

 <u>mi/MI (mi)</u> (T173)	 <u>mi/MI (mi)</u> (T217v)	 <u>mi/MI (mi)</u> (T217v)
 <u>mi/MI (mi)</u> (Tnn)	 <u>K'AL (k'al)</u> (T683a)	 <u>K'AL (k'al)</u> (T713a)

Zero = MI; Twenty = K'AL (John Montgomery, Dictionary of Maya Hieroglyphs, free open access
 at http://research.famsi.org/montgomery_dictionary/mt_entry_list.php?lsearch=U)

Maya has supposedly two signs for the last digit, twenty. Either one meaning twenty and triggering the passage to the next level, this group of twenty jumping up into the higher level as one of this second higher level. It is /k'al/. But then the lower level is empty and there they use another sign /mi/ meaning zero or rather /empty/ to push aside the western reference. But the sequence of numbers, this time in their names, shows the analysis at play at this level. Instead of having twenty different names for the twenty digits, which would be logical for a vigesimal system, the first eleven are all different and the next nine are compositions with a twist for twelve. From thirteen top nineteen, they use the name of the number of units over ten and then the word for ten. But for twelve (at least in the Chilam Balam), they use a shortened form often and the number for two.

- 1-/jun/
- 2-/cha/
- 3-/ox/

- 4-/chan/
- 5-/jo/
- 6-/wak/
- 7-/wuk/
- 8-/waxak/
- 9-/b'olon/
- 10-/lajun/
- 11-/b'uluk/
- 12-/chalajun/ or /lahca/ standardized to /lajcha/
- 13-/oxlajun/
- 14-/chanlajun/
- 15-/jolajun/
- 16-/waklajun/
- 17-/wuklajun/
- 18-/waxaklajun/
- 19-/b'olonlajun/
- 20-/k'al

And this last one brings the first level of counting, the first layer of twenty to empty, hence to zero, hence to /mi/. It is a mistake to count twenty digits from /mi/ to /b'olonlajun/. /mi/ is not a digit per se, just the expression of an empty space. The twentieth digit is /k'al/ for twenty and sure enough, it is going to be used in the name of the third layer of counting for dates, /k'atun/ meaning group of twenty of the previous groups, /tun/ or year of 360 days (for dates the second level of counting is in fact an exception since it is only composed of 18 groups of 20 days. I have so far not found the system for counting cacao beads for example that were used as currency).

Most of the counting I have encountered are dates which make things difficult because then the second hierarchical level is not twenty times twenty but only eighteen times twenty in order to work with a 360-day year. Twenty days make a month /winal/; eighteen months make a year /tun/; twenty years make a /k'atun/ (what Tedlock calls a score of tuns); twenty /k'atun/ make a /bak'tun/ or /pih/ (what Tedlock calls a bundle of tuns). There are three more vigesimal levels, /piktun/, /Kalabtun/, and /kinchiltun/. This counting system is used for dates, counting days, and it is in use at the same time as the Roman numerical system was being devised. There is no element going against number being counted from the unit up by a precisely analytical system that remains synthetic in its architecture. So, where do the Mayas come from?

This second wave of the third-articulation migration stayed on the Irani plateau up to something like 12,000 BCE at the earliest and then moved West to Europe (Indo-European languages), and East to the Indian subcontinent (Indo-Aryan languages). If we keep in mind the educational role of women in older prehistoric times (and I mean back to the emergence of Homo Sapiens), that numeration was probably devised collectively but then it was one part of the education women transmitted to the young within their first six years. The fact that it is based on addition at the lower level and only multiplication (which is a complex addition) at higher levels shows this counting system is very old.

The Roman system used subtraction as I have said, though division was only used in geometry and music by The Greeks (in one standard approach of western civilization: we should check in Asia how it was devised and developed). We should here consider the action of sharing the resources available to the community, particularly food, to approach division, and sharing was a basic social procedure before agriculture, and it goes back to the emergence of Homo Sapiens again and here we should try to study mammals communities to check if there is systematic sharing. Sharing is in no way a modern concept despite what some would like us to believe.

5. CONCLUSION

The first conclusion is that such research cannot be the work of one scientific approach, and the results of archaeology, anthropology, biology, genetics and many other hard sciences like those have to accept to confront their results and data with other scientific research, particularly linguistics in all its

various trends and theoretical approaches but all dynamized by what I called the phylogeny of language. The term comes from genetics, but it has been borrowed by various social sciences and humanities to express this simple idea that in these fields evolution is the result of some inner dynamics that have nothing to do with the free will – if any – of human beings. All articulated languages have been produced by *Homo Sapiens*, and language in general and each language, in particular, are governed in their evolution by this (their) phylogeny, the forces that work inside these languages and some are generic enough to be universal.

If we want to understand the position of women in such a long process of emergence of the human species, here *Homo Sapiens*, we have to be concrete on what the requirements are for the species to survive hostile conditions and a serious state of immaturity at birth, let alone expand and migrate. There is no miracle. We have to consider the very bases of animal life among these mammals we call *Homo Sapiens*. That brings two lines of approach: the status of the species physically, even physiologically, as a long-distance fast bipedal runner and all the mutations that were naturally selected for this mammal to become that, and he could not be fully human as long as he was not that because all the rest is the collateral consequences of this first emergence. Some wonder if the proteins or genetic elements that are useful for language had been selected just for that purpose, and some answer that the said proteins and genetic elements are to be found in organs necessary for *Homo Sapiens* to be the runner he is. The history of these genetic elements has to be scrutinized and the transformation might have been longer than we could imagine but the runner is there at least 250,000 years ago and so the potential for language development is there too.

This very potential determines a qualitative change from plain brain machine-code to linguistic items, to a vocal production with a signifying outside form and a signified meaning by attachment to a referent. This change opens up the door to the development of the mind in total connection and simultaneity with language, the two transforming the brain capability to discriminate patterns into conceptualization (experimentation-speculation-conceptualization). And this is the gate to all abstract or artistic productions by humans. Understanding this dual development of the mind and language within the brain, itself within the central nervous system and the body, an extremely productive hierarchical organism, is what life and science are putting on our workbench, and we have to do a little bit more than plain edit the data. We are speaking here of human intelligence.

It is in constant development and restructuration and we cannot even say what the next phase will be. Artificial Intelligence so far is nothing but a tool that tries to imitate the products of human intelligence, but so far its phylogeny has little to do with that of human intelligence, and it seems to be fairer game to say human intelligence is going to use that artificial intelligence to go beyond all the limits it has encountered in something like 300,000 years. If the machine could replace man then humanity would die just extinguished, exsanguinated by the mechanical parasites who would have absolutely no perspective, objective, free or not free-market economy to circulate its production to other machines who anyway have no needs, no wants, no desires apart from what they do to serve the human species that would have disappeared, exsanguinated as I said before. End game, end of it all.

This will lead to a complete revaluation of the place and role of women in the phylogeny of the human species, of human society, of human history and in this present century things are maybe ripe for this revaluation, if the folly of entrepreneurs do not consider their immediate profits are more important than the survival of the human species attacked by one pandemic that is slowly creeping to other pandemics like AIDS, Ebola, Polio, TB that are considered under control, more or less, and may become a simple apocalypse, sorry for the old semi-religious and definitely superstitious term.

Our humanity has reached a turning point and the foolishness of those who consider their free will, their freedom of expression, their freedom of individual action more important than the survival of humanity, even of our civilization, is reaching a point of no return, the necessity to institutionalize them, or at least their leaders, and this civilization should be in the plural because that's the other madness of humanity, to believe that there is only one ultimate civilization and not many different civilizations that have to live together.

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