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Understanding Human Language: An In-Depth Exploration of the Human Facility for Language

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Abstract:

The human capacity for complex language is an inherent ability with sizeable cultural results. Anthropological and historical evidence of human communication in prehistory will be presented in an effort to better understand the instinct for language. Moreover, the characteristics that separate language from other types of communication will be assessed, and the physical and cognitive capabilities for human language will be examined. These facets within the discussion regarding language will arrive at the conclusion that, in humans, language is a remarkable, innate facility. This innate facility, however, produces derivatives such as the products of writing and reading, as well as dialects, which can be considered cultural archetypes. These are constructs that can be interpreted socially and carry cultural, and sometimes negative, consequences. Writing and reading, together with dialects, will be reviewed to determine how they have been interpreted in the past and today. Finally, this piece will conclude that it is arguably through language and speech that other aspects of culture developed; language made possible the presentation of more abstract ideas, which led to cultural depth and differences.

Language: Indispensable to Humans

What critical evolutionary events does the span of human progression include? Anthropologists agree that decisive transitions such as sedentism, domestication, the use of language, and the arrival of culture and complex societies are associated. Although this is true, and all these issues will be addressed in some capacity, the main objective of this piece will be to examine the marvel of language thoroughly, along with its effects. Why is language so essential to humanity, and how has it affected human history so profoundly? Examining the relationship between language and its derivatives is vital, and it becomes imperative to distinguish which came first in order to better understand the history of man. There are language principles that are “universal by biological necessity and not mere historical accident” (Chomsky, 4). It is this text’s declaration that *language* stands alone as the greatest accomplishment of man and it is language, sequentially, that fostered a myriad of cultural products.

First, the concept of language should be discussed. What is it, exactly? As Joel Davis notes in his work, *Mother Tongue*, “Everybody uses language, but nobody knows quite how to define it” (6). He indicates that renowned linguists, such as Edward Sapir, G. Trager, and Robert Hall have all attempted their own classifications but have not quite succeeded. Some of these proposed definitions seemed accurate at the time, but then excluded individuals who use Sign Language (through a purely *nonverbal* transmission), or animals, some of which are known to employ a kind of communication in their own interaction. Perhaps a meaningful classification with which to proceed can be found in *Webster’s Ninth New Collegiate Dictionary*, wherein the definition of language is: “A systematic means of communicating ideas or feelings by the use of conventionalized signs, sounds, gestures, or marks having understood meanings” (Davis, 8). This acknowledges that language is not necessarily limited to sounds and that, possibly, (some) other animals are capable of something like it.

The Characteristics of Language

Provided with a definition of language, it should be assigned more precise qualities. First, there is the characteristic of displacement. This is the ability to refer to an object, event, person or concept— to effectively discuss abstract ideas. Displacement “allows the users of language to talk about things and events not present in the immediate environment... [it allows] the human, unlike

any other creature, to create fiction and to describe possible future worlds” (Yule, 21). Second, language holds an arbitrary nature in that its linguistic form has no natural relationship to the items to which it makes reference. In other words, linguistic signs have a subjective relationship and they do not match with the objects they specify. Third, there exists a property in language known as productivity, which means that the possible number of expressions in any human language is infinite. Fourth, language is passed from generation to generation through a characteristic process called cultural transmission (Yule, 24). Fifth, a distinction in meaning due to differences in sounds is described as discreteness. Each sound within a given language is treated as distinct, and it is possible “to produce a range of sounds in a continuous stream” (Yule, 24). Finally, language exhibits an attribute known as duality, which is related to discreteness. As individual sounds, none of the discrete forms holds intrinsic meaning, but “when we produce those sounds in a particular combination, as in *bin*, we have another level producing a meaning which is different from the meaning of the combination *nib*” (Yule, 25). These are the aspects that George Yule contends for as the “uniquely human characteristics” in his work, *The Study of Language* (25).

Given some of the qualities of authentic language, how does it differ from animal communication? Many of the answers can be derived from Laura Ann Petitto’s work, deliberated at length in Davis’s *Mother Tongue*. Petitto began studying the acquisition and use of language by humans in the 1970s; she was the primary teacher of ‘Nim Chimsky,’ the famous chimpanzee subject at Columbia University, for over three years. Petitto and Chimsky communicated via sign language. The object of this comprehensive scientific exploration was to determine whether nonhuman primates could, or do, possess language, and the study was dubbed ‘The Nim Chimsky Project’ (Davis, 269). Petitto deduced that “apes are very complex cognitively and communicatively. They can be referential and intentional, and they can demonstrate a variety of cognitive capacities... [But] no ape or primate project... claims that these apes master all the aspects of human language... there were key aspects of human language that they failed to master” (Davis, 282). What were these key aspects? First, based on the hypothesis that language plays an important role in how sophisticated a level of consciousness a being has, and that consciousness is a result of the brain “attending” to output and paying intense attention to it, Petitto observed that Nim Chimsky did not attend to the relevant aspects of the signing he was

seeing (Davis, 283). To the apes that are the subjects of these studies, Petitto submits, the language is “almost superfluous,” and they are not fully aware of some of the information they are relating (Davis, 283). The apes, next, do not have a lexical or vocabulary knowledge, nor do they possess a phonemic inventory (which is, essentially, the collection of basic speech sounds or speech forms from which all human language is shaped). Animals cannot achieve complex syntax. They aren’t capable of referring to abstract things that are not physically present. “The ape doesn’t do that... probably because it doesn’t have the relevant brain tissue,” Petitto surmises, and as complex as the brains of apes may be, they do not have the intricacy in the human brain or the language regions found in the human brain (Davis, 284). Of course, apes are not the only animals to be able to communicate effectively. Dolphins and whales communicate with a varied system of whistles and clicks. “No one is arguing that these animals do not communicate,” Petitto urges, “but... communication and language are not the same thing” (Davis, 283).

The Development of Language in Humans

Next, how did this noted difference between animal communication and human language transpire? Most essentially, early hominids noticed a need for more involved, intellectually fulfilling expression.

In response to this need, humans biologically adapted for the capability. Davis notes, “we are *Homo sapiens*, ‘the thinking human.’ Our brains are uniquely endowed with an innate ability to detect the basic rhythms and structures in sound or movement that can become the building blocks of symbolic communication” (285). As Charles Yang, professor of linguistics and psychology at Yale University explains, “this means that the neural hardware for language must be plastic; it must leave space and possibilities to respond to... the environment” (Yang, 4). But, Yang acknowledges, this “great leap forward,” the development of language as the latest step that led to the rise of *Homo sapiens*, must have been preceded by other developments in history (7). The gift for language must have built upon and interacted “with other cognitive and perceptual systems that existed before language” (Yang, 7). What were these developments, and how do they prevail as proof?

It is accurate to maintain that the capacity for complex language in humans has become more accommodating in the course of evolution. This can be seen in the progressive selection for

both corporal faculties more amenable for complex language and for bigger brains. Frank Wilson, author of *The Hand*, explains that “the brain and the musculoskeletal systems, as organs, evolve[d] just as organisms themselves do, by modification of structure and function over time” (16).

Anthropologists argue that the acquisition of upright posture, the change in dentition, and the alteration of the hand were the triggers that made the advancements in language possible. William H. Calvin, neurobiologist and author, confirms that early hominids became bipedal in adapting for scavenging, to be able to run more quickly (17). Bipedalism also seems to have developed in order to free the hands for using tools and for other various activities. Further, Calvin maintains that, unlike other primates who have large canine teeth for fighting, “smaller [teeth] in the hominid line suggest that something was going on that made aggression less important” (19). The changes from the ape-like hand to that of *A. afarensis* moved the radial (thumb) side of the hand dramatically, providing the “capacity to conform the thumb and first two fingers to a very wide range of object sizes and shapes, allowing them to be held and manipulated easily” (Wilson, 26).

Other changes in the pattern of evolution were beneficial. By the time of *Homo erectus*, the pelvis had become more bowl-shaped. The hominid knees were indented, while chimps’ legs still articulate straight down from the hip joint. The hole in the bottom of the skull, where the spinal cord is located, had moved forward, better balancing the head. The spinal column was now vertically-aligned. Body size was growing, and that encouraged the increase in brain size and enlarged cranial capacity. This all paved the way for the *new complexities* in the brain at the time of *Homo erectus*. Speaking in terms of cranial capacity, *A. afarensis* was 400 cc; *H. erectus*, emerging roughly 1.5 million years ago, had an average brain volume of 850 cc (Elgin, 39). Indeed, “the thought processes of *Homo erectus* were surely different from what is seen in great apes” (Calvin, 43).

Around 750,000 years ago is the time when, Calvin claims, there were profound enlargements in the hominid brain. Why then, and what caused it to happen? This is unclear, but conjecture suggests improved hunting techniques as well as the development of a proto-language. In this case, proto-language can be defined as “just a growing vocabulary and then two words paired for a third meaning” (Calvin, 49). The motivation for the early form of communication probably had much to do with socialization and sexual selection, where “verbal grooming” and

even gossip grew to be important. At the same time that Neanderthals were dominant in Europe (around 100,000 to 35,000 BC), a more lightly built *Homo sapiens* was evolving in Africa and the Middle East.

It is suggested that, where other animals and even other species of Homo “knew,” *Homo sapiens* “knew that they knew.” This reflective consciousness became essential to “social as well as to personal evolution... [providing] an increased capacity for self-determination, reconciliation, cooperation, and creativity” (Elgin, 18). *Homo sapiens*, around 100,000 years ago, possessed a cranial capacity average of about 1,400 cc (Elgin, 39). This branch of hominids was the one that eventually developed modern language and gained all the advantages involved with rapid speech, and even though that development may have taken some thirty thousand years, by about forty thousand years ago, the fossil record demarcates that modern man had arrived (McCrone, 171). The use of symbols appeared approximately 50,000 years ago among *Homo sapiens* and, in the words of Richard Leakey, speak ““of a mental world we readily recognize as our own”” (Calvin, 83). With the influx of modern humans, the blade forms of stone tools proliferated—scrapers, chisels, spear blades, knives, and the like—demonstrating notable creativity, as well as practical ingenuity, in tool-making. This was, most likely, in response to more changes in hunting—a task should not be underestimated in terms of mental and social development (Osborne, 20). It is clear that “man must have been self-conscious and articulate by this time... [man] had made the break with the present tense and lived in a mental world of his own creation” (McCrone, 172). So, in their long history, physically and mentally, humans have essentially “adapted” for conditions that make complex language more feasible.

USING THE ADVANTAGES OF EVOLUTIONARY ADAPTATIONS

But still, the question remains: how and when did humans begin using fully evolved language?

Greenspan and Shanker contest that individuals must be able to connect and engage with one another and have the ability to form relationships (Greenspan and Shanker, 322, 360). In order to assemble supportive groups with shared goals, these early peoples had to be able to converse more productively. They experienced the desire to express themselves and to talk. They were equipped with adaptations which selected for language, and they built upon it. Then, a sound was paired with a meaning. This involves what is called the “arbitrariness of the sign”— the

word *cat* does not look like a *cat*, walk like a *cat*, or meow like a *cat*, but it carries the meaning of 'cat' nevertheless. This is because every speaker has undergone a like act of learning in childhood that associates the sound with the meaning. Due to this uniform memorization, "the members of a language community receive an enormous benefit: the ability to convey a concept from mind to mind virtually instantaneously" (Pinker, 75).

When examining human history, the language community is a natural sort of unit. "Languages, by their nature as means of communication, divide humanity into groups: only through a common language can a group of people act in concert, and therefore have a common history" (Ostler, 7). The most basic way in which a language can come to thrive is called the Farmer's Approach (Ostler, 19). All the community needs to do is stay united, understand and communicate in the same designated language, and grow in population. This language becomes natural to the defined group. It is then enculturated, learned by the young from transmission of the old, steeped in habit. Steven Pinker claims, "once invented, language would entrench itself... as parents taught their children and children imitated their parents" (19). Use of language, in practice, is persistent over generations.

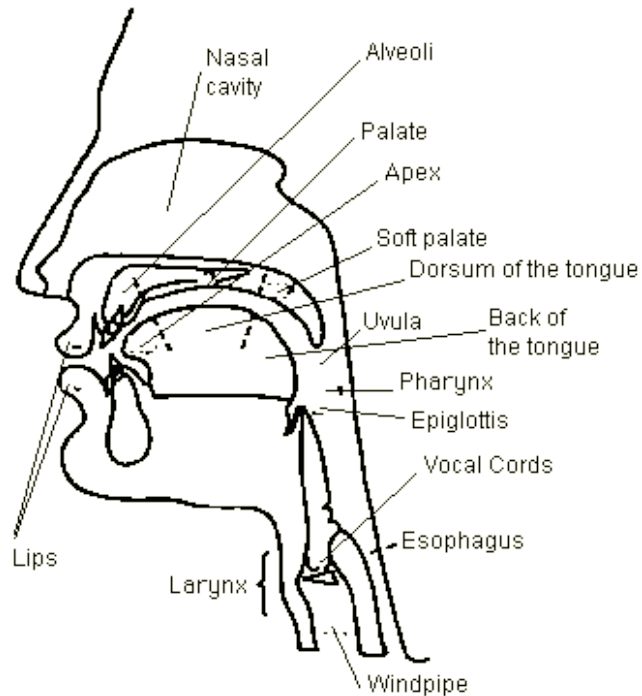
Trying to determine exactly when humans began using language is extremely difficult, but one method is to date the emergence of certain languages or language families. Proto-Indo-European, the ancestral language of Indo-European (of which English is a part), is thought to have emerged six to eight thousand years ago in the general area of Turkey (Davis, 25). However, some paleolinguists propose that Proto-Indo-European, in its earlier phase, belonged to a more ancient and larger "superfamily" of languages known as Nostratic, believed to be spoken 15,000 years ago by the peoples living between the areas of the Caspian and Black seas. (It should be noted that this puts the emergence of language before the invention of agriculture, before sedentism and the appearance of the complex society). Even more, Davis indicates, the real date is "likely more than twice as long ago as that... [and] some scientists... think they can push the date for the origin of human language back even further" (Davis, 26). Stanford University geneticist Luigi Cavalli-Sforza, for example, believes that tracing the earliest migrations of humans around the world coincides closely with previous work by historical linguists. Provided with recent discoveries of archaic *Homo sapiens* in the Middle east around 90,000 B.C., Cavalli-Sforza supports the notion that modern humans were speaking some form of real language nearly 100,000 years ago.

Given anthropological and paleolinguistic evidence, it becomes clear that humans have biologically and mentally provided themselves with a way to take communication to a higher, more complicated level.

How Language Works: Functions in The Body and Mind

So then, how do these conditions—the physical changes in body and brain, and the history of use of language, manifest themselves now? Physically, what are the faculties that humans possess so that they are capable of forming various and wide-ranging sounds? There are many more than one might think. In regards to the body, all of what are known as the vocal organs aid in the production of

Illustration from www.unil.ch/webdav/site/ling/shared/IntroPhonEnglish/organes.



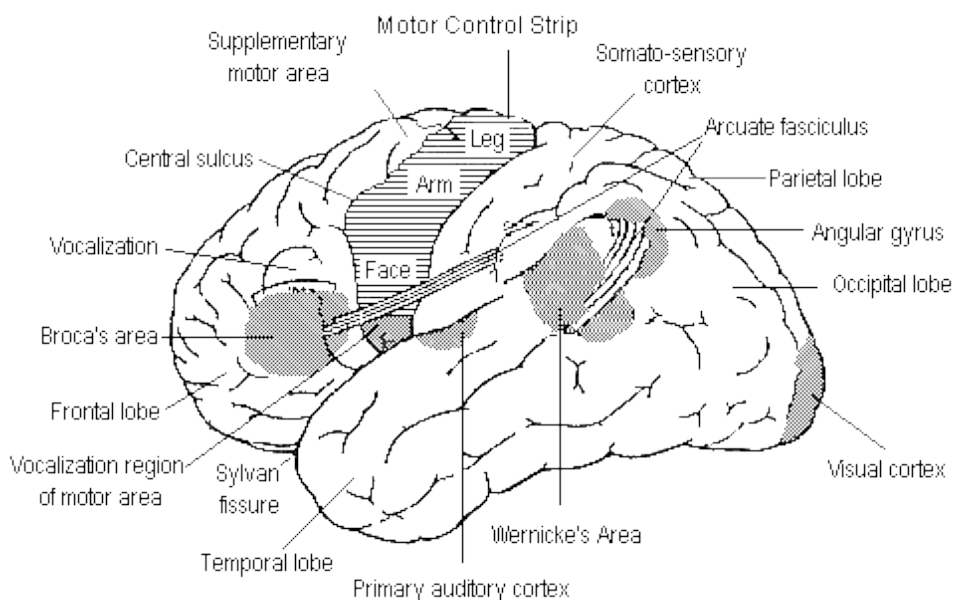
speech. These include, generally, the lungs, mouth, throat, and nose. Inside the mouth, the lips, tongue, teeth, palate, and uvula are all involved. *How Language Works*, by linguist David Crystal, states that inside the throat, the pharynx (upper part), larynx (lower part), vocal folds, and glottis are engaged in the speech process. The vocal tract, which consists of the pharynx, mouth, and nose, form a system of cavities that can alter their shape, and this is what allows the many different sounds of spoken language to be created. Crystal explains that the lungs produce a stream of air (called pulmonic air), which helps the chest to contract and expand and the ribs to move, causing the diaphragm to move downwards; all of this reduces the air pressure in the lungs (Crystal, 20). But pulmonic air has to be converted into audible vibrations, in the lower region of the vocal tract, the larynx.

Thus, one of the main functions of the larynx is to create a kind of buzzing sound, known as phonation, which is used for most of the consonants and all of the vowels. The larynx is also

capable of pitch movements (when the vocal-fold vibration is altered at will), glottal stops (when the vocal folds are held tightly closed), and glottal friction (when the vocal folds are held wide apart). Once the given air stream passes through the larynx, it enters the vocal tract and is manipulated by several mobile vocal organs—the tongue, soft palate, and lips, mostly. This is the point at which articulation is achieved (Crystal, 27). The tongue is able to conform to more shapes and positions than any other vocal organ; it therefore assists in the making of a high number of speech sounds (Crystal, 29). It is the soft palate that, during normal breathing, is lowered to allow air to pass through the nose, and it affects the quality of sounds. The lips are employed for sounds such as “p” and “m” and create the various spreading used with vowels. Resonance is produced through the cavities in the throat, mouth, and nose. When the body exhales, the chest and lungs are then contracted, the ribs lowered, and the diaphragm raised, forcing air out. When one speaks, “the pattern [of the respiratory cycle] changes to one of very rapid inhalation and very slow exhalation... [carrying] much larger amounts of speech than would otherwise be the case” (Crystal, 21). As Crystal clarifies, of course, humans are capable of many other “sound effects,” possibly considered more emotional noises than speech sounds—but these communicate something nonetheless (23).

The physical means for language within the body have been discussed. Now, what of the brain’s role as it relates to the human capability for language? Neurolinguists contend that, in fact, extremely detailed processes trigger speech; although as of now there is no set, detailed model of neurolinguistic operation, it is still possible to speak generally of neurolinguistic processing. It

Brain illustration from www.bucknell.edu/Linguistics/lectures/brain.gif



seems that the theory of cerebral localization (the idea that a single area of the brain is related directly to a single behavioral ability), proposed by neurolinguists such as Broca and Wernicke, has some validity. For

example, the area in front of the fissure of Rolando is mostly involved in motor functioning, thus significant in speaking and writing. Part of the upper temporal lobe (known as Wernicke's area) plays a major role in the comprehension and production of speech, and the lower back part of the frontal lobe (Broca's area) is primarily concerned with the encoding of speech. Part of the left parietal region performs tasks related to manual signing. And the area at the back of the occipital lobe is mainly used for the processing of visual input. But David Crystal stresses that a multifunctional view is held today. He offers, "while recognizing that some areas are more important than others, neurolinguists postulate several kinds of subcortical connection, as well as connections between the hemispheres [of the brain]" (Crystal, 176). There is a general understanding of the model of the production and comprehension of language, containing several steps, each of which has some kind of neural representation. In speech production, an initiative to communicate is followed by a conceptualization of the message. The conceptualization is encoded into the semantic and syntactic structure of the language the speaker utilizes. For the structure to be verbalized, it first has to be assigned a sort of phonological representation, such as syllables. A motor-control program (functioning within the cerebellum, thalamus, and cortex) is then used in order to coordinate the multiplicity of signals which have to be sent to the appropriate muscles managing the different parts of the vocal tract. While these actions transpire, feedback is being received back from the ear through sense of touch. The brain demonstrates an inclination for "scanning ahead" while issuing commands for particular segments of previous thoughts, known as coarticulation (Crystal, 177).

More Proof for Innateness

There are other factors to consider when reflecting on the natural quality of language. "Language," Steven Pinker contends in his book *The Language Instinct*, "is no more a cultural invention than is upright posture" (5). For example, there is to consider the universality of complex language, a strong reason to infer that language is the product of a special human instinct. Pinker points out that "there are Stone Age societies, but there is no such thing as a Stone Age language. Earlier in this century the anthropological linguist Edward Sapir wrote, 'When it comes to linguistic form, Plato walks with the Macedonian swineherd, Confucius with the head-hunting savage of Assam'" (Pinker, 14). And there is still a uniquely human quality to this form of

contact: notwithstanding decades of effort, no artificially engineered language system comes close to accomplishing that which comes naturally to the average human in terms of understanding and utilizing speech. This even includes such complicated programs such as HAL and C3PO (Pinker, 15).

The instinctive language facility can further be observed in children. There are children who are exposed to a pidgin language, and also deaf children, whose parents' flawed signing is the only example of how to communicate, at the age when subjects acquire their mother tongue. Instead of settling for a fragmentary language as their parents did, children actually "fill in the gaps" or "inject" grammatical complexity where none existed previously, thereby transforming an enriched language into what is known as a creole (Pinker, 21). Noam Chomsky's experiments support this idea; he derived the notion from his studies that, "the only way for children to learn something as complex as language... is to have known a lot about how language works beforehand, so that a child knows what to expect when immersed in the sea of speech... the ability to learn a language is innate, hidden in our genes" (Yang, 8).

Another example of the inherent language capability can be demonstrated in the following set of sentences:

- A. Sarah appeared to Angela to like herself.
- B. Sarah appeared to Angela to like her.
- C. Sarah appealed to Angela to like herself.
- D. Sarah appealed to Angela to like her.

How does one know how to distinguish between ordinary pronouns like "her" and reflexive pronouns such as "herself," while also being able to tell the difference between verbs like "appear" and "appeal?" Ray Jackendoff, author of *Patterns in the Mind*, concludes that "grammatical patterns [are] deeply ingrained... much that we know about [language] has not been taught" (23). Jackendoff concludes his argument for innateness in recalling Chomsky's argument: humans do not learn to have arms rather than wings. Why, then, is it surmised that the human brain acquires fundamental structure through learning rather than genetic inheritance? "The ability to learn language is rooted in our biology," he states, "a genetic characteristic of the human species, just like an opposable thumb and a pelvis adapted for upright stance... the supporting brain structures are present" (30). Provided with these hereditary precedents, it hardly seems

surprising that there could be a structural specialization in the brain for language and language acquisition.

HELP!!

Languages all over the world have been thoroughly studied for similarities. “Literally hundreds of universal patterns have been documented,” Pinker asserts, and “linguists have long known that the basic design features of language are found everywhere” (Pinker, 234, 238). For example, no language forms questions by reversing the order of word sequence, like *Built Jack that house the this is?* (Pinker, 234). All languages have vocabularies with words in the thousands or tens of thousands, organized into part-of-speech categories. Also, it has been noted that subjects go before objects in almost all languages, and verbs tend to be adjacent to their objects (Pinker, 234).

Everything that Followed: Ideas brought to Fruition

But what did this innate ability to possess language do? Were there social consequences to such a mental, seemingly single ability? Yes, in fact—many. After language came the actualization of culture, the description of which will be presented briefly. All of the functions of culture necessitate communication, but more specifically, complex language; they also require an evolved intellect.

Among the brilliant distinctions exclusive to *Homo sapiens*, as opposed to other animals, the character and impact of culture is indeed prominent. But what is culture, and of what is it comprised? Culture can be seen as a collective source of knowledge, experience, outlook, values, and meaning shared by a group of people. Culture is learned, shared, symbolic, comprehensive, adaptive. Culture affects every aspect of society. It is instrumental in shaping the beliefs and behavior of the individuals accountable to them, and has physical and psychological manifestations. To be sure, it is chiefly because of language that other human endeavors within the context of culture were put into motion—among these, hunting, sedentism, agriculture, the development of more complex societies, social stratification and specialization, formalized religious beliefs. There are other concepts that found themselves voiced in language as well: concepts such as ethnocentrism and discrimination. Conrad Kottak, author and anthropology professor at the University of Michigan, asserts that “for hundreds of thousands of years, humans

have had some of the biological capacities on which culture depends; among them are the ability to learn, to think symbolically, [and] to use language” (Kottak and Kozaitis, 11).

The natural ability for language brings with it many cultural consequences. Language clearly “bridged the gap” and made many other concepts concrete to *Homo sapiens*; these perceptions were physically possible because members of *Homo sapiens* were able to articulate ideas to each other. In fact, it is the advancements in the application of language and cognizance that brought about the conception of culture and its derivatives. The culmination of culture, then, is what brought about *social interpretations of the use of language*—a few of these being writing and reading, access to literacy, and dialects.

The History of Writing

Writing is easily one of the most considerable of the cultural branches of language; its formation signifies a revolution in human progress. In fact, with the appearance of writing within a society, it must be stressed that other progressive patterns are also assuredly in place— patterns such as sedentism, agriculture and organized gathering, more formalized and shared religious beliefs, etc. So the discussion of writing and “advanced” societies should go hand-in-hand in regards to their manifestations after language. The development of a standardized writing system is a cultural off-shoot of a standardized language, observed in the evolution of many given “advanced societies.” As a culture or a people grow and expand in other areas, an apparent need for written communication arises. There is a transition from a simply widely-spoken and understood *language* to a designation of a palpable *system of letters and symbols* which correspond to that language. Therefore, writing is one of a number of indications of a truly emergent society. Richard Rudgley, author of *Lost Civilizations of the Stone Age*, validates this: “writing is, of course, one of the main features of those societies considered to be civilized” (Rudgley, 15). (It is precisely because of writing and the written record that actual cases of writing in the world can be examined within this text.) This contention, regarding the necessity and the resolution of writing, can be seen repeatedly through some very particular examples in prehistory, which will be discussed.

First, for the purpose of argument within the context of this piece, it is appropriate to identify the qualities of an “advanced society.” Basically, the people in a progressing society find

something of a common identity. An advanced society is one which possesses intricate functions, one which has made significant contributions in areas such as architecture and agriculture. An advanced society has some designated and somewhat stable ruling power for the benefit of its occupants. It is one that has developed the need for interdependent economies and craft specialists. It is relatively urbanized, or at least those in smaller centers ascribe to the central culture. These are societies in which “not only did abstract thinking in technology and science flourish but so did much more complex social organizations, and there were striking developments in... art, writing, literature... and so on” (Greenspan and Shanker, 380). It is these demands of more “advanced societies” that necessitated the transition from merely speaking a language to writing it down.

Next, it is important to define “writing” and determine how it differs from earlier proto-writing. Writing can be described as “a system of graphic symbols that can be used to convey any and all thought” (Robinson, 14). It is a widely-established and complex system that all speakers of that particular language can read (or at least recognize as their written language). According to *The History of Writing: Script Invention as History and Process*, “writing includes both the holistic characteristics of visual perception, and at the same time, without contradiction, the sequential character of auditory perception. It is at once atemporal and temporal, iconic and symbolic” (Robertson, 19). Writing is clearly more advanced than proto-writing, pictograms, and symbolic communication, which should also be briefly classified. Ice Age signs and other types of limited writing could be designated as “proto-writing.” This type of communication was long before any systems of full writing were developed. In short, proto-writing can involve the use of pictures or symbols to convey meaning. This form of early writing could relate an idea, but the system was not elaborate, complete, or fully evolved. A group of clay tablets from the Uruk period, probably dating to 3300 BC, model these properties of proto-writing (Robinson, 62). The tablets mostly deal with numbers and numerical amounts; most of the symbols are pictographic in nature. Nothing that could be identified as true writing is evident. So, this form of communication can convey certain concepts well enough, but it isn’t capable of expressing more abstract ideas, nor is it necessarily standardized.

How did proto-writing evolve into writing? On the whole, how did writing develop around the world, and what were the similarities shared by each occasion? Generally, many of the early

societies that exhibit the application of a true writing system indicate that writing was first employed for accounting and economic purposes, to record rituals, to relay messages, and to commemorate the actions of various rulers. These documents note transactions, trade, the names of powerful rulers or officials, etc. In complex society, there are many factors in consideration: population growth, interdependent economies, craft specialization, possibly warfare, the acquisition of new or important knowledge, accomplishments of significant individuals, important exchange and business. These are all reasons that writing was essential—to have a concrete record of things that happened and to provide a bridge between the present and the past. “The advantage of endowing spoken language with permanence through writing allows for the preservation of feelings, facts, and ideas through time and space. This power to conserve... has changed the face of the world. It is a small wonder that such an advantage would prompt the potential of writing to instantiate itself as an omnipresent reality” (Robertson, 20). In other words, people in these cultures and at different points in history, recognized many long-reaching matters that demonstrated a need for the written word.

What were some of these advanced societies, and what do we know about their writing systems? Mesopotamia could be considered a candidate in this realm. The later portion of the fourth millennium BC was a time of substantial population increase in Babylonia. During this time, Uruk emerged as the first “true city,” and exhibited an “increasingly hierarchical sociopolitical structure” (Cooper, 72). The manifestation of artifacts and architecture usually attributed to Uruk at other sites ranging from southwestern Iran across upper Mesopotamia to northern Syria is interpreted as evidence for a strong southern Mesopotamian presence, perhaps even control over these areas. Cooper explains that the level of complexity seen in the social and political aspects of this region led to the use of various means for the improvement of accounting and liability, such as cylinder seals and clay tokens used as counters. In the Uruk IV and III phases, a highly complex accounting system is seen, as well as what is labeled “proto-cuneiform,” which includes an extensive system of logographic and numerical-metrological signs, these phases marking the difference from the earlier tokens, bullae, and simpler seals that were used (Cooper, 75-6). Cooper states that “for a system of writing with around 900 signs, complex numerical-metrical conventions and intricate bookkeeping formats to be useful, its utilization had to be uniform, necessitating years of more or less formalized instruction” (Cooper, 76). As time passes and the

needs of the society change, it appears that Sumerian writings evolve and become more complex. The writings are an indication of the culture's progress and level of advancement.

This same pattern can be detected in Egypt. John Baines, in his discussion of Egyptian writing, supposes that Egypt developed its own initial writing systems independent of Mesopotamian suggestion or influence. This idea is based on radiocarbon dating of findings in tomb U-j in the royal tomb of Naqada IIIa (Dreyer and Hartung: 1989). Many of the inscriptions found in this tomb are found on small bone and ivory tags which contain hieroglyphs, as well as ceramic jars which display similar markings. The numerals on these tags include single digits in groups of twelve or less, and the hieroglyphic signs represent human figures, various animals, geographical features, and other objects. Scientists have placed dates on the material as possibly concurrent with the Uruk IV tablets, around 3200 BC (Baines, 153-4). Although the data is difficult to interpret, the system looks as though it is well-formed and diverse. Moreover, these signs point to the utilization of visual culture that had much in common with the progression of writing of later times in Egypt. Günter Dreyer, one of the excavators of tomb U-j in 1989, argues that motivation for the formulation of writing in Egypt was clerical and economic, and that it occurred within a quickly-developing administration (Baines,163). More specifically, Dreyer contends for a politically-unified Egypt at about Naqada II or c. 3500 BC, with the invention of writing shortly after this (around Naqada IIc). Regarding the findings at U-j, Baines states that "this is the largest and oldest early group of inscribed artifacts so far found in Egypt... [it] is unlikely to have been the first material ever written, and it has prompted excavators to search for earlier antecedents to writing," reinforcing Dreyer's conjectures (Baines, 154). Whether earlier examples are found or not, however, it is observed through this example that Egypt's culture and its system of writing were closely interrelated.

China could also be considered with the emergence of writing. The earliest known writing of Chinese origin dates to about 1200 BC, from the Shang dynasty, and was discovered at a site known as Anyang in northern China (Bagley, 190). According to Shi Bo, author of *Between Heaven and Earth: A History of Chinese Writing*, this early writing is called *Jiaguwen*, which simply means "writing inscribed on bones and shells"—namely, turtle plastrons and bovine scapulas (Bo, 13). Divination and answers from oracles were perceived through the cracking of these heated animal bones. The script found on these numerous artifacts demonstrates a very complicated system,

with 4,568 identifiable characters that are well standardized (Bo, 13). Indeed, as Bagley specifies, “a Shang scribe could probably have written pretty much anything he could say” (Bagley, 198). In this case, writing was used to record questions that the king asked spirits, his interpretation of the omen, and then what actually happened. The mechanism of writing, then, might have first incorporated into ancestor worship and religion. Religious beliefs were connected to the government of the region, since the king (the Anyang samples mentioned are from the reign of Wu Ding) was the one who asked the questions and interpreted the responses (Bagley, 197). It had a ritual context. Inscriptions from this period are meticulously recorded, which seems to suggest that at least some of them were intended for display. Robert Bagley proposes that “the audience for [this] display must have been privileged and small. Inscribed objects a foot or so high are not public monuments; the audience they addressed is likely to have been a literate inner circle around the king” (Bagley, 199). On these grounds, it is assumed that literacy was an important requirement for royals and nobles. It is perplexing, however, that earlier examples, which might reveal phases progressing into density of the Anyang text, have not been found. Perhaps we cannot see the visible steps because writing before 1200 in China was done on perishable materials that have disappeared. Or perhaps archaeologists simply have not unearthed sites which contain evidence of earlier steps. It is also possible that Chinese writing was a sudden invention, that a few intelligent court officials discovered the principles of phonetic illustration, saw the possibilities of a sign system that could embody language, and expanded on it immediately. With any of those theories, it is still certainly acceptable to contend that, through social and intellectual progress, China recognized the need for a system of writing.

The Minoan and Mycenaean civilizations, with respect to the progression of writing systems, prove themselves to be advanced. The three early Cretan writing systems are traditionally known as “Cretan Hieroglyphic,” “Linear A” and “Linear B.” At this point, Cretan Hieroglyphic has been found only in Crete; Linear A is confirmed in certain Aegean islands (such as Kea, Kythera, Melos and Thera) and on the Greek mainland; Linear B has been found in the Mycenaean palaces of Knossos on Crete, and Pylos, Thebes and Tiryns (Olivier, 2). Cretan Hieroglyphic appeared for the last time around 1500 BC, Linear A at around 1450 BC, while Linear B continued to be used on the Greek mainland until around 1200 BC. Although Cretan Hieroglyphic is the first perceived form of written communication in the area, it is regarded as a

random arrangement of symbols rather than pure writing. It is an older form of Linear A that seems to demonstrate the characteristics of a true writing system; it was found in the remains of the first palace at Phaistos and is dated to the early eighteenth century (Olivier, 2). The Mycenaeans, probably around 1800 BC, modified a form of Linear A in order to formulate their own language, Greek. J.P. Olivier, in "Cretan writing in the second millennium BC," is quick to stipulate that the Minoans themselves did not "re-invent" writing. Instead, with earlier ideas taken from the surrounding areas, "they created an original and astonishingly uncomplicated system for recording the sounds of their language" (Olivier, 3). With data obtained thus far, it is most likely that the Minoans developed their writing system in response to economic needs, given the simultaneous building of the first Cretan palaces (1900-1625 BC). The script here represented not only the syllables of the language(s); it also comprised a very simple method for the representation of numbers based on a decimal system. In the time of the second millennium, Mycenaean culture expanded into other parts of the Aegean and Greek and Anatolian mainlands. There is evidence for a thriving economy and wealth in this period. Crete's cultures again demonstrates the need for writing as society becomes more multifaceted.

As Jerrold S. Cooper words it, "many scholars would be happy with the proposition that Sumerian, Egyptian, Chinese, and Maya were all created in response to local needs... [it] was a response to increasing social and political complexity" (Cooper, 71). These societies, as well as others discussed, recognized the necessity of the written word as they grew more complex and changed their focus. As the systems of writing became solidified and standardized, they became cultural derivatives of language.

Writing: An Ability of the "Upper Class" Only

But who was using writing in these societies? There is a further way that writing began as a cultural construct, and that is perceived through social stratification. Culture brought about the distinction of upper and lower classes. Wealth came to matter. The 'ruling class' of a given society "relies on language to diversify and stratify the varied segments of the population, thus reinforcing a social order" (Kottak and Kozaitis, 272). The ability to write and read, and the access to education in general, were and are not permitted to everyone. Regrettably, it has been observed repeatedly that a "fund of information... is accessible only to those who can afford it and

to those who can make sense of it... [knowledge] remains chiefly the property of an academic elite" (Kottak and Kozaitis, 303).

"Scholars have often asserted... that ancient cities were full of things to read, and there is some truth in this claim; but it must not lead us to the assumption that the majority of city-dwellers were able to read for themselves, still less to the assumption that they could write," William Harris, author of *Ancient Literacy*, affirms (14). For one thing, most of the populations in earlier societies found writing materials to be superfluous and expensive. The possession of these "prestige items," as they are identified in anthropological terms, would denote societal status—along with being educated. Also, Harris notes that in many advanced societies such as Greece and Rome, a widespread system of educational institutions was not realized. He acknowledges their significance by saying that "in every single early modern or modern country which has achieved majority literacy, an essential instrument has been an extensive network of schools... [with a] large-scale literacy campaign effectively sponsored by the state" (Harris, 15).

But perhaps more importantly, literacy itself was a way to separate rulers and nobility from the craftsmen and farmers. Certain jobs or roles within these populations required literacy; many more (mostly those among the poor) simply did not. This characteristic became more or less perpetuated within various early cultures—it was just that way. As mentioned previously in many of the examples, literacy and the ability to write was an important requirement for *royals and nobles* in various societies. Scribes were usually elites, and learning to read and write was a privilege within a culture. There was a "general pattern of restricted literacy applicable to many cultures: shortly after the introduction of writing a 'craft literacy' [developed]," (Ong, 94). At this craft literacy stage, there is no need for the individual to know reading and writing; he or she could have gotten by without attaining these skills. These are common conditions concerning literacy, noted in countless civilizations across time and distance. In this way, the distinction between the ability to speak a language and the ability to *document* something in that prescribed language indicates a *partition* between groups in the given society. Writing was used as an instrument of discrimination; elites and scribes maintained this as a way to keep "commoners" common.

Germany, for example, in 1517, at the time of the Luther-fueled Reformation, can illustrate this point. Everyone in the clergy of the Roman Catholic Church spoke and read and wrote Latin, so that the common people were unable to read the Bible for themselves. In this way, the Church

was able to keep the masses who prescribed to Christianity in their control— the Church had to be sought for spiritual help and guidance, and it could demand money for indulgences. Part of the reason that Protestantism rose so quickly in Europe was because when Luther nailed his 95 Theses to the door of Wittenburg Castle, they were written in the vernacular, something that everyone could read (or listen to as it was read). Copies were written and translated and spread rapidly (Stephanek, 59).

What about a more recent example of this discrimination in action? A fitting case would be the legal discrimination of African Americans in the United States in the first half of the twentieth century. State and local codes were set against blacks in many central areas of life, such as housing, jobs, and politics— but what is critical to note here is that education and literacy were a key mechanism of oppression. “In education, African Americans in the South attended segregated and inferior schools, a circumstance... enforced with threats of actual violence from the white community” (Aguirre and Turner, 106). There were also forced literacy tests for blacks in states like Virginia, another tool of humiliation. It was finally with the *Brown v. Board of Education* ruling that declared segregated schooling inferior and therefore discriminatory.

It is clear that access to become literate was and is not granted to everyone. It has been used, time and time again, as an implement of subjugation: to keep the poor poor, to keep the lower-class in the lower-class.

Dialects: Speaking the Same Language?

Dialects are also one of language’s cultural archetypes. Dialect, in definition, is variation in pronunciation, along with specific features of grammar and vocabulary, which may suggest where the speaker is from, regionally and/or socially (Yule, 227). Differences in language lead to differences in ethnic identification with far-reaching effects (Pinker, 242). Trey Wilson, narrator of *American Tongues* says of dialects: “It’s how we size each other up” (*American Tongues*, 1988). Accents and speech are very essential to identity. The dialect that a certain group applies holds real meaning for that group.

And, it holds meaning for other speakers of the same language who note the dialect but do not sound the same way— speech creates multifarious assumptions for listeners. These assumptions can have tangible repercussions. For example, when a woman from the southern

United States was asked what she thought of New Yorkers, she responded, “I don’t think they have the same values [we do]. I associate all of that with the sound of their voice... it’s very grating” (American Tongues, 1988). Another illustration of the effects of numerous dialects can be seen in the following anecdote:

Man (on his accent): They laugh at me. I took an ahs chest out at a wedding. And I say, ‘I got the ahs.’ And these three guys say, ‘You brought the what?’ And I say, ‘I got the ahs.’ And they say, ‘Well, we’re not quite sure what you’re saying.’ And I open up the chest and say, ‘See? Ahs, asshole’ (American Tongues, 1988).

The way that humans talk is stigmatized. Some dialects are more “preferred” than others and sound “more educated” than others, revealing discrimination and negative feelings related with the less-favored dialects. “The social classes sound different” George Yule claims (Yule, 240). He borrows support from the Labov study conducted in 1972, who researched place of occupation and socioeconomic status together, scrutinizing pronunciation differences among salespeople in three New York City department stores: Saks (high status), Macy’s (middle status), and Klein’s (low status). Labov asked these salespeople questions that would elicit expressions with the [r] sound, and a pattern emerged: the higher the socioeconomic status, the more [r] sounds that were produced. “So,” Yule concludes, “the difference in a single consonant could mark higher versus lowah social class” (Yule, 241).

Many dialects involuntarily divulge to listeners where the speaker is from, allowing for further assumptions to be made. This is because, according to folklorist Cratis Williams, “cultural overtone of [dialects] remain... it’s culture expressing itself in sound” (American Tongues, 1988). It is the differences in various cultures are obvious in the different dialects of a language that are spoken.

Man #2 (on the effects of different dialects): It’s like a vibration thing, you know? It’s not too much what they say out of their mouth; it’s how they say it, you know? Because you can meet a person for the first time, and automatically draw an opinion: ‘I’m not going to like him; we’re not going to get along together.’ And you don’t know him from Adam or Eve—just from what he’s said and how he said it (American Tongues, 1988).

In effect, though the users of English (or any language) may be able to understand each other and are using the same language on the surface, it is clear that, in interaction, the subconscious makes judgments about the way people speak. This can lead to misunderstandings about the users of a dialect on the whole.

Language: What Started it All

Even though human culture incorporates language, language is what started it all. As Kottak and Kozaitis conclude, “the use of language creates social institutions, practices, and the ideology that supports them” (Kottak and Kozaitis, 272). Through language and speech, other aspects of culture developed; language made possible the presentation of more abstract ideas, which led to cultural depth and differences. The innate language facility, therefore, produced derivatives such as writing and reading, incongruities in access to literacy, and accents and dialects, which are cultural archetypes. These constructs have been interpreted culturally and have had extensive consequences.

The mind is a treacherous thing. It is where language is processed, understood, and stored, which is in itself an astonishing capability. But it is also where the products of language are created in order to form opinions— where the decision to discriminate is made. Cultural factors are molded by mankind’s simple desire to express oneself, to be heard, to communicate.

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