The Art of Language

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Abstract

The paper proposes to view languages as a form of primordial human art with each member language both present and past representing a variation on an art movement with changes thought time. It is further proposed that languages with two forms are conveniently subdivided into *oral* and *graphical representation forms*. Both forms are the product of the human mind and appear to use different mental abilities with the oral component dominate provided during the language acquisition stage of human development and the graphical representation dominate long after the humans language acquisition stage ability is reduced. Graphical representation forms are used by scholars and others to control the both aspects of language Additionally, it is proposed that most aspects of the oral component (phones, lexicon and syntax) are arbitrary but controlled by coherence which functions unthinkingly in the wider aspects into syntax (including inflections and grammatical gender). Coherence breaks down when human awareness or thought process is evoked and an increasing awareness, known as ambiguity, in some aspects of syntax such as misplaced modifiers and phrases but can be useful in some forms of drama.

Wars have been ended, careers have been ruined and hearts have been broken because of what was said or written. Some people are granted particular, specific power by their society to do things with words. The formal cultural acts of marrying, naming, inaugurating and condemning to death are achieved through the use of language (Mercer 2000:11).

Onset

Language can be a fascinating study. It is difficult to picture a human society or culture without human language ability. Obviously there would be no set of codified laws that tend to most imperfectly regulate human behavior. Even with legal constraints; various social elements are convinced, encoded and practiced as a set of values are the ones all humans within the cultural community must subscribe to. But without the ability to communicate, the consequences would conceivably be much more dire. On one hand there is the pecking order noticed about farm and pack animals. On the other hand one could conceive of roaming packs like some of the African wild life, turning from one foraging area to another with great effort as seen on a PBS wildlife series. Even a means of communication such as some animals display with long training and prompts from their

trainers do not demonstrate the loss of natural instincts. The normal human is born with, a torso, two arms and legs but not all humans are superb athletes, but most acquire normal functions such as walking, running and one or more forms of manual dexterity. Additionally, the normal human acquires one or more languages at a young age, but few are aware of their built in language ability as far as "how it works" but each can make effective use of the communication system praxis in the human's environments. Some take upon themselves the task to setup procedures to teach others what most humans do automatically; they analyze and define the built in systems system used by the human and teach their analyzed paradigms as grammar.

Most High School and lower division college students who are required to pursue further courses of study, are required to discover the proper writing of sentences, paragraphs and term papers. The use of description, narration, exposition and argumentation are combined with a smattering of grammatical instruction. Required texts for English Composition courses focus on the writing process with a few salient points of grammar; other texts invest a larger focus in the grammatical aspects of composition derived from Latin and Greek models. Text selection is usually left to the discretion of the teacher who must work with a wide range of abilities and interests including his own. Some students find the grammatical aspect a pain in the neck. Texts that focus more directly on grammar like that of one text book (Klammer 1992:207) which uses a wide study of grammar and also combines the classical sentence diagraming of Reed-Kellogg with Tree diagrams. The under graduate level of instruction in English Composition is biased toward the prescriptive grammar with the objective of giving the student a proficiency in English that the well educated graduate would be expected to attain.

The number and variety of lower division texts available is wide and an expanding market. Teachers are offered free examination copies so they can select the mix of grammatical focuses that fit the teachers leanings and the expected biases of the current student population. When the in-depth study of Linguistic systems is not the main issue, there is little danger of a student encountering many difficulties with ill formed or fuzzy grammatical categories and classifications used in the English and other languages. For the average student any number of gross generalizations are used for the sake of simplicity. For example English verbs are usually defined as strong and week. The strong verb is defined as one that "changes its root vowel when changing its tense" (Crystal 1997b:459). Strong verbs were in the minority in English and the total number has decreased further over the centuries. One author list seven classes of "irregular" verbs, i.e. strong verbs (Crystal 1997b :204), yet when one attempts to list them one may find some overlaps in Crystal's definition. Another finds six classes but that

> "naturally, thematic criteria must be subordinated to the
> inflectional, which means that members of the Regular and Mixed
> types and their inflectional classes shall be further subdivided
> unto subclasses with reference to their thematic properties"
> (Juilland 1973: 70)

When semantics or meaning are included into the verb paradigm, one can find forty eight divisions with many subclasses.

> "the examples described...are representative of a wide range
> of phenomena that suggest that a speaker's knowledge of the
> properties of a verb goes well beyond the awareness of the
> simple expression of its arguments...."
> (Levine 1993:4)

The student is usually spared the details of weak verbs especially when one finds the weak webs are defined by their spelling and not their phonics. For example *cooked* is pronounced as if it contained a /t/ as its final consonant speech sound; *loved* spelled with the obligatory *-ed* is pronounced in many dialects as /d/. When one finds a verb such as *founded* does the /cd/ stand on its own. Even more subtle descriptions are used to the relations between phones used that defy the spelling. It's no wonder the amount of grammar is limited to simplified descriptions

Outline

It the intent of this essay is to briefly address some closely held belief systems about language that are not usually debated. It starts with a brief discussion from the teaching prospective. Next one will find a discussion of the problems posed by fuzzy edges found in most language classifications. Then follows a brief outline of some of the current theories that were inspired by an analyses based on theories of inherent language accusation starting with Chomsky. That is followed by an equally brief description of expanded Chomskian and other theories. The difficulty of making precise measurements is likened to a bowel of jell-o. The first of the main postulates is next defined stating that human language is the primordial human art form with a focus on coherence and with illustrations of the likeness plastic and more impressive parallel of ephemeral arts. For this purpose, art is defined as abstract, subjective and coherent. The second postulate, is defined as a language dualism that describes first the oral aspect of language involving the human mind/brain interface. Next, the graphical representation of language that covers thousands of years, with various systems of graphemes man has used to reflect to the spoken language. Graphical systems are then used as tools to control and describe how languages must be used providing a war of words for all aspects of language through education. Starting with what may be a paradigm parallel to cytology: each language contains an "arbitrary subsets of phonemes and syntax" (Claborn 1983:9). And finally distinctiveness form the phone to literature through coherence and ambiguity. Finally the thread of discernment is traced to literature with a few selected examples.

Fuzzy Edges

Where does the fuzz come from? Pinker thinks its from areas of human knowledge that change over time,

> "mathematics, physics, and chemistry trade in crisp
> categories that obey theorems and laws, such as
> triangles and electrons. But in any realm in which
> history plays a role, such as biology, members drift in
> and out of lawful categories over time, leaving their
> boundaries ragged. Some of the categories are
> definable, but others are really fuzzy."
>
> (Pinker 1997:310)

Huddelston provides two examples of grammar forms and categories that have fuzzy edges.

> There...are some verbs which lack certain forms...the
> lack of non-tensed forms is a matter of defectiveness:
> the forms are simply missing from the paradigms. The
> deeper one goes in one's study of language the more one
> finds parameters with fuzzy limits for language classes
> and categories that were originally devised by scholars
> to improve language understanding of Latin and Greek
> but tend to do just the opposite when applied to
> English. Many definitions derived from Latin are still
> taught in schools including a sometimes ridged form
> word classes. Rock is defined both as a noun and verb
> in the dictionary.
>
> (Huddleston 1984:126)

And if one assumes that "rock hard surface" is a valid English sentence, "rock" modifies "hard" which is an adjective and only modifiable by an adverb in classical grammar.

> "Past participles thus illustrate well the tendency for
> the parts of speech to be very clearly different at

their centres but much less distinguishable at their
margins. We can range them from most verbal to most
adjectival with at least three intermediate positions."

(Huddleston 1984:324)

Two word classes that are still useful across most language families. "Some general categories are universal: all languages, for example. distinguish between noun and verb" (Huddleston 1988:4). An example of a word class with fuzzy edges is the *adverb*. "Early grammarians often had the bad habit of assigning 'adverb' to almost any troublesome word they didn't know what to do with such as *not*, *almost* and *very*" (Trask 1999: 5). It seems much easer to identify two classes of words some of which "are large and open and can readily accept new members: these are called open classes. Others are small and accept new members only with difficulty: these are closed classes" (Trask 1999: 226). Classical grammar is based on unique system evolved from Greek through Latin. By far the most important adaption of the Greek alphabet was by the Romans who, around 600 BC, encountered Greek writing... [they] hardly changed the Greek original" (Fischer 1999:100). In languages that "do have a grammatical system of tenses, a past/present/future distinction is rare. It is found in Classical Greek but few other languages. The most common tense system has just two choices, past and non past" (Dixon 1997:119).

Much of nineteenth century scholarship was directed to defining language families and redefining the logical and objective form of the languages held to be idealized forms and attempting to restructure English and other languages on the Latin model. "Indo-European...comprises the most studied family of languages on Earth and, in the eighteenth and ninetieth centuries, served, principally through Sanskrit, as a fountainhead of modern linguistics" (Fischer 1999:81). Language investigations continued at an expanded pace as literacy and education around the world grew for the common people.

"In those societies in which literacy is limited to a select few, it
appears that writing has little effect on the spoken language. But in
societies in which literacy is widespread, the impact of writing is
profound. Writing preserves spoken language, it levels, standardizes,
prescribes, enriches many other language oriented process with far reaching
social implications."

(Fischer 1999:88)

The study of languages is now called Linguistics and includes not only semantics, syntax , word conjugations and declensions but a new look at phonics and phonemes (Aitchison, 1999). "Linguistics is defined as "the scientific study of language," unlike the ancient studies of language where "most of these investigations...were solely confined to studying the local prestige language" (Trask 1999:171). The change to scientific description of language is generally attributed to "the Swiss scholar Ferdinand de Saussure (1857-1913) who is sometimes labeled 'the father of modern linguistics'" (Aitchison 1992:24). Next is a short review of Seussure's legacy today.

Investigations

The human capacity for using language may well be a
biological feature, but languages, and the ways in
which people use them, vary and change considerably
across and within societies, while human brains do not.

(Mercer 2000:7)

The Chomsky Legacy

Noam Chomsky has been the American advocate for the philosophical inquiry into human's language acquisition. His earlier in-depth study of language systems is illustrated by Owen Thomas who, in 1965, gave a brief introduction to Transformational Grammar (Thomas 1956; see also Freidin,1992). In 1991, Lilian Haegman produced a six hundred seventy page tome for an Introduction to Chomsky's

Government and Binding Theory stating that "the basic unit with which a grammar is concerned is the sentence"(Heageman 1991:33; see also Heageman 1994). The latest in this school of thought is Chomsky's 1993 Minimalist system. In this essay, Chomsky states "[a] recurrent theme has been the role of 'principles of economy'" (Chomsky 993:1-52). Others have expanded and staked out overlapping and modified grammatical structures that attempt to fill in the gaps left by Chomsky include Case Grammar exemplified by Blake who describes cases "as having function (e.g. object) or meaning (e.g. source)" (Blake 1994:3). Head Driven Phrase Structure by Pollard and Sag who say "the phenomena with which we will be concerned are among those that have occupied center stage within syntactic theory for well over thirty years: the control of 'understood' subjects. Long distance dependencies" (Pollard & Sag 1994:1). Another work cited is Dalrymple's Lexical, Functional Grammar (Dalrymple 1999).

Other Models

Other schools of grammatical design have been proposed in some measure to expand and to close some of the gaps in the Chomskian school and also for a more satisfactory account of metaphors and anaphoras. They offer other approaches to the problem of understanding the human language acquisition. Functional Grammar in which "the form of language can be substantially explained by examining its functions....TG [Transformantial- Generative] provides a possible way of investigating those characteristics. But they clearly represent only half the story" (Thompson 1996:2; see also Lock 1996, and Halliday 1994). Another approach is "Cognitive grammar [which] is fundamentally at odds with the dominate trends in current linguistic theory. It speaks of imagery at a time when meaning is generally pursued with apparatus from formal logic" (Langecher 1987:1; see also Langecher 1991). An overview of optimality theory is provided by Archangell and Langendoen. It is another approach to language theory that starts with phonology and defines what is physically and logically possible but deferring to what is actually used in a series of tableaus (Archangeli & Langendoen 1997). An expanded form defined as titled as *A Prosodic Optimality-Theoretic Approach* (Hannond 1999) uses the same types of tableaus. The research provided for the theory as a starting point makes a splendid reference for those who are interested in the allowable constants and consonant clusters in English. However, *Learnability in Optimality Theory* manages to dismiss the English language entirely with "All syllables are assumed to contain a nucleus, with optional preceding onset and following coda positions....the simplifying assumption (true of many languages) that ...the onset and coda may each contain at most one C" (Tesar 2000:21).

Typology adherents state that an expansion of the number of languages studied is necessary rather than to concentrate on a few languages in order to find the hidden underlying structure of languages. One must survey the largest collection of individual languages available and perform what amounts to a multiple regression analysis to identify the most credible answers if it is not a language universal. Still looking to solve the acquisition problem "the reason why the child acquires his first language so effortlessly is that the crucial abstract principles...are innate: they are available to the child from birth" (Comrie 1989:3 see also Shibatni and Bynon 1999). Some of the underlying assumptions required for typology are far more in the creational focus than that of the evolutionary focus. Of the assumptions;

> The population from which we draw our sample is limited to the languages actually spoken today, plus some of the better documented extinct languages....Behind this statement, there are two assumptions that are necessary to such language universals. One is that, at least within a time-span of several thousand years in either direction from the present , there has been no significant sense in which human language has evolved, i.e. no sense in which human language as a whole today is different in essence from that of ten thousand years ago; more specifically, it assumes that all human languages spoken today represent the same level of evolution".

(Comre 1989:9)

For additional text on typology see Shibatani and Bynon 1995. "Complications evolve because it is true that there is no consensus among linguists on a universal definition, valid for all languages, of the concepts of subject and object, nor even on the theoretical possibility of such a definition" (Lazard 1989).

Dixon claims that "early humans lived in a state of relative equilibrium, with developing cognitive and communicative ability but no language. He suggests that when language did come it was rather fast, only a few centuries" (Dixon 1997:4). His caveat about the fast developments keeps him in good stead with evolutionist theory. Through various mechanisms, "As languages change over time, they tend - very roughly - to move around a typical circle: isolating to agglutinating, to fusional, back to isolating, and so on" (Dixon 1997:42). Much of Dixon's work included the Australian Aboriginals with good insight into language change without the impact of mass communication involved with French, Spanish and English. Another approach to a study of grammar is from a semantic point of view. One suggestion sets up Primary A and B verbs. Then a sequence of Secondary verb types. "This book provides a fresh look at parts of the grammar of English. It pays particular attention to meaning, considering the different sorts of meanings words have, and showing how the varying grammatical behaviors of words are a consequence of their meaning differences" (Dixon,1992:3). Complications include the "four different kinds of semantic (and syntactic) link[s] between a secondary verb and the verb it semantically modifies" (Dixon 1992:90).

An additional candidate for the ever expanding models for prototypes must include one from mathematics. Harris "presents a grammar of English, as an example of how language structure can be derived from!not merely described in!a particular mathematical system" (Zigler 1982:2). "The truth is that 'rules' never existed, they have little to do with language. They were superimposed on organic word-wisdom by a set of largely clerical-minded inkhorns standing around with a lot of egg on their faces" (Geoffrey Wagner, *The words of wisdom* (1968) quoted by Aitchison 1997:1). Kehler quotes Abraham Masslow as saying "I suppose it is tempting, if the only tool you have is a hammer, to treat everything as if it were a nail" (Masslow 1966: 15-16).

A Bowl of Jell-o

The grammatical studies in the previous sections give an image of the scholar attempting to make detailed measurements and classifications on the contents of a bowl of Jell-O.

> "When faced with describing the patterns illustrated by a set of linguist data, there are a number of grammatical analyses consistent with the available facts, but ultimately inappropriate to describe the target language as a whole."
>
> (Milkech 2000:220)

Some day someone will find a principle similar to the Heisenberg uncertainty principle (Soukhanov 1999:832) in Physics: a principle in quantum mechanics holding that it is impossible to determine both the position and momentum of a particle at the same time. Prior to that revelation, scientists started with Ohm's law (Georg Simon 1787-1854), then Kirchhoff's law (Gustav Robert 1824-1887) relating electrical currents in a network. Then Quantum Theory, Niels Bohr (1885-1962) that evolved on the way to the Theory of Relativity, Albert Einstein (1879-1955) producing, among other things e=mc2. Language, analysis however appears to remain in the Ohm's law stage of philosophical evaluation. It should be noted in passing, that each of the procedures can still be applied within the confines of their sphere of activity. But until the time when such sequences of advances can be applied to Language, we must wade through a bewildering array and number of terms that appear to over lap or put a slightly different spin on of some of the concepts put forward. English arguably has the largest word selection of any world language and includes a huge meta language subset which includes such terms as aorist tense that became so entwined in various usages, the aorist is now limited to discussions of the Greek simple past tense from pulpits as the preacher attempts to sound like a scholar. The study of language in the 19th century was mostly diachronic (languages studied over time) but in the first part of the 20th century the focus changed to synchronic (languages

studied at a fixed point in time). As we enter the 21st century the focus appears to be on both aspects of language.

How does the confusion come about? Elements of syntax and phonemes for each language are assembled from subsets of syntax and phonemes available to all languages.

> A sequence *Henry ate an apple*, or *Henry an apple ate* is
> statistically more likely in languages of the world
> than *Ate Henry an apple* - even though this last order
> is not impossible, being found in Welsh for example.
> Many more preferences can be found, and they sometimes
> clash, which is why all languages are not more similar.
> But in general: preferences become tendencies,
> tendencies become habits, and habits become rules. This
> provides some clues as to why languages do not fly
> apart in crazy ways: the human mind-set pushes thoughts
> in certain directions.
>
> (Aitchison 1997:38)

Languages can then be defined as accumulated tendencies, habits and rules that allow the speaker to form a cohesive sequence of sounds and to write symbols representing sound patterns heard to make sounds permanent giving meaning to others in one's own environment over time.

Most of the work described so far has been on the basis of the written word. Scholars ventured into other tongues that required them to use tools that let them visually analyze the language at ease and reread and arrange what was said and to draw conclusions and setup various paradigms.

An Autonomous Approach

Kehler offers another version of an overview of language: they are capable of existing independently and self contained. Kehler's approach is one that appears to start in a more reasonable structure which avoids to a large extent most of the minutiae to focus on an overview of language; *Coherence*:

> There is overwhelming evidence that coherence
> establishment is central to our language understanding
> capacity, so one might naturally expect these processes
> to interact with other aspects of language
> interpretation. Indeed, it would have been surprising
> if it turned out that they did not affect the
> distribution and behavior of these phenomena.
>
> (Kehler 2002:208)

Coherence makes sense for a fresh look at language. Coherence is necessary in many forms of human achievement especially various forms of art. Taken as a whole, languages work quite well from an overview but contain all kinds of "fuzzy" categories that do not fall into neat cleanly defined hierarchies or classifications. Language elements are difficult to define but "cohesion is a rational concempt: it is not the presence of items that is cohesive, but the relation between one item and another" (Halliday & Hasin 1976:12). Language coherence is accomplished in two ways. "The guiding principle in language is that more general meanings are expressed through grammar [phoneme through syntax] and specific languages through vocabulary (Ibid: 5). The author provides a discussion "personal, demonstrative, and comparative" elements (Ibid :37).

Knott & Sanders continue the discussion with "studies suggest a decomposition of coherence relations into a number of independent relations" (Knott & Sanders1998:137). The authors continue to develop four relations when the relation is synonymous(like meaning and significance), hypermym (more general meaning) and hyponyn (more specific meaning), exclusive (exclusive *OR*: dog or cat), and contingently intersubstitutable (inclusive *OR*: one or more pet, cat or dog or fish) (Ibid :143). As

valuable as the investigations to date have been, perhaps another paradigm such as the study and evaluation of Language, may be of use, such as a coherent primordial human art.

A Primordial Art

Like much art, language includes "relationships between the sounds and meanings of spoken languages and between the gestures and meanings of sign languages are for the most part arbitrary [Technically, the morphemes are the arbitrary elements. GS]" (Fromkin 1993:26). A major context of art is creativity. And thus is a prime attribute of language. Arbitrary signs, symbols and sounds are formed by the human into cohesive meaning medium of expression.

Plastic Arts

One can define languages as the primordial human art and creativity. Current dictionary definitions of art focus on "beauty" but an old art text defines

> "the uniqueness of art is that it is dependent upon the performer for the final solution. Only he, since the activity is based on self-determination, can provide the answer. This is not to imply that various forms of assistance are unavailable for the enlightenment but rather that, unlike other activities, the conclusion cannot be found in following rules and regulations, instead, it is dependent on innovation."
>
> (Shinnereller 1968:3)

A good visual illustration of language can start with the work of Georges Seuart (1859-1891) who "developed the theory and practice of pointillism" (Soukhanov 1999:1391). The cover jacket of a volume written to display the work of Georges Seurat shows the painting *A Sunday Afternoon on The Island of La Grand Jatte* (Courthion 1988). The close up shows an emerging but perceivable outline of a man and woman created by a large assembly of colored dots that blend together but when seen from a normal viewing distance form clear and well defined objects as shown in an insert on the rear of the book's jacket. These short brush strokes illustrate a metaphor for the system of phonemes from selected any given language.

What is clearly illustrated is that many objects of art are created by small elements shaped, arranged, molded and ordered to create the final object. Most paintings are created from a multitude of individual brush strokes. The major objective of the art of painting prior to the invention of photography was realism or a stylized form of religious figures for religious objectives. Leonardo da Vinci (1452-1519) was proficient in painting and sculpture. Sculpture in stone requires one to chip away the excess material in smaller and smaller pieces until it is time to polish the final surface to a desired fineness. Plastic arts represent many repetitive creative elements such as brush strokes or cuts into wood or stone to mold the final physical form of expression. Each brush stroke or chip of stone enhances the final object to give it its distinguishing attributes.

Ephemeral Arts

Music is much like speech which can be defied as an ephemeral art with each act or performance an instance of a fleeting occurrence of unique and recognizable selection of notes, chords, loudness, tempos and vibratos. Both music and speech can be recorded and are. However when one listens to the same occurrence several times, the essence of creativity wanes. Both forms have acquired silent graphical or written forms that are obviously not the same as an audio rendering or live performance. Music carries a largely emotional message through concerti, operas, Masses and rhapsodies. Liszt who (1811-1886) provided many Hungarian rhapsodies for piano, is credited with devising the Tone Poem.which R. Strauss (1864-1949) lifted to new heights of sophistication. Poetry continues the emotional aspects but is also a more direct disclosure of human experience. When compared to human language, the Tone Poems provide a musical experience albeit a less objective form of communication. Graphical representations of Language become an art form for its own sake such as

poetry with accepted traditional, sonnets and radical forms of free or Pound's (Ezra, 1885-1972) imagism verse.

> In societies conquered by the Arab empire, the language began to be learned, and Arabic writing along with the Koran, came to be regarded as sacred. One no longer wrote only to fix a word. Writing became an exercise linked to the practice of religion, it was art, and every people put its own ornamental style into the execution of these written forms. Thus *decorative writings* flourished alongside utilitarian written forms.
>
> (Kristeva 1989:131; Examples given on page 132)

Language Arts

Language described as art is quite rational; it is not only abstract ("self-determination") but is also quite subjective ("dependent upon the performer"). Languages are subjective because the individuals can and do express ideas and opinions colored by emotions and their specific set of life experiences that can be both nonrational and nonobjective. Language learning started in a subjective venue but is equally capable of being objective. Much of the scientific reasoning in the 19th and 20th centuries was possible due to philosophical methods devised to use language in an objective phase. So, art like language can also be objectified as one sees in the "drawings" or plans for a house, bridge, office building or airplane: quite specific and objective. But language as art appears to relate more to music than to the plastic arts. Both language and music are forms of ephemeral art. Once spoken , the form is only a memory[1]. Both have recordings of several types such as tape and CD's and both also have written forms. But before recordings were available the written form and the ephemeral forms formed a dualism with much room for interpretation in some cases such as the concert score for the conductor and arranger or for an interpretation of a simple phrase as *I love you*. Any one of the three words can be emphasized individually by applying suprasegmental forms to the phrase giving various meanings from: *I don't love you* to *you are not the object of my love* and *not me, but someone else has those feelings*. Setting aside recordings and focusing on language we have a language dualism to consider.

Language Dualism

Each language has two components; each with its own unique *mental resource*. The spoken component is a human innovation that starts automatically at a few months of age for the normal human child. And uses a uniquely specialized area of the human brain on both sides of the Sylvian fissure of most each individuals. In use the oral component changes in form and phonic realization within one's life time. The written component is also clearly a human innovation but from a part of the brain that requires the use rote memory and is not automatic from the start. Historically the written component displays growth patterns and is adjusted as needed for different oral requirements (eg. Chinese characters borrowed into the Japanese and Korean systems). The written or graphical form a life that extends centuries and millennia but remains relatively fixed for long periods of time. Both components taken together are usually thought of as a single system but are not. They tend to get out of sync with each other and spelling becomes a problem as seen in English. The problem is that both have different mental sources. "Spelling and language developed in asynchronous ways" (Coulmas 1991: 271). The spoken form well be defined here is a real world language of sounds and gestures: the ephemeral aspect of language and is defined as the oral aspect of language. The ephemeral form of language that is all that is really necessary for human communication. "writing...is absent from many societies, and we do not consider this an abnormality or serious defect" (Coulmas 1991:3). Writing adds a dimension similar to musical notes, and other symbols for written form of music. Writing adds portability and permanence to the ephemeral, speech or real world form which has as its source the way the human mind/brain works. But an often forgotten underlying requirement for language is the distinction between sound forms such as the distinction provided for long and short vowels in English (Roca 1999:249). The discussion below starts with the primary or oral as the

minimal necessary form of language.

Speech

The music of language dose not use notes as such but is even more original and wide ranging abilities in within the human body. Some claim the origin of language is found in Gen.1:26 " Then God said, 'Let Us make man in Our image, according to Our image, according to Our likeness'" (NKJV). From this point of view then, Language is not a gift as such but a reflection of the Creator. Others say "One of the reasons God was invented was to be the mind that formed and executed life's plan" (Pinker 1998: 157). All normal humans have ability for processing creating and hearing or distinguishing sounds and gestures that form the input and output (I/O) with what may be conveniently described as a juncture with computer analogy as a complex *mind/brain interface*. "A number of case studies have shown that language can be separated from general intelegance [examples cited] suggests that language has its own specialized circuit within the mind/brain" (Atchison 1996:46). It must be remembered that phonemes are still abstractions with millions of phonic realizations for each one: but a small subset of English phonemes change and are driven by clearly observable rules defined as allophones of speakers in oral presentations. Most differences in the phonic realization of phonemes are not rule driven but formed by each individual's own physical organs of speech. Also much of the allophonic and non allophonic variations are ignored by the human organ of hearing. Each individual's mental function can be described as a complex connection via the senses to the external world (an analogy to computer interrupt vectors) controlled by a central processing unit (CPU) that for this purpose is identified as *short term memory* which is the volatile element. It is tempting to extend the analogy a bit by using computer hard drive terminology. But that will not work. Hard drive connections are highly organized and vectored to the exact locations required to reduce disk access times. The brain half of the analogy can be visualized as *long term memory* where information is stored as in an individual's memory including one's mental lexicon and visualized total environment used in language competence describing all learned aspects of language including the phonics, morphology, semantics and how they all may be related to one or more hierarchies along with visual and abstract concepts.

Long term memory may be defined here as stored elements accessed by a matrix of networks that for some are a bit recalcitrant at times. Long term memory is heightened and enhanced on an individual basis, by the emotional content, repetition, and like visual nerve fibers "...carry as much information down from the higher, conceptual levels as up from the lower levels" (Pinker 1998 :287). According to Jerry Fodor, Pinker's system is "commitment to Turner's *syntactic* account of the mental process" (Fodor 2001:6). The system is dynamic but not always easy to control. For example one may return to a cross word puzzle and notice one or more words that appear obvious after even a short absence from the task. Then there is the time when we are asked for a word or name and find it 'on the tip of my tongue' but must wait to recall the name or look it up in a directory: the person's face or the concept 'comes to mind' along with its denotation and connotation but only its phonic realization escapes momentarily. Pinker's mechanical process does not do justice to the human mental process. This is not a new phenomenon: several centuries ago Paul wrote to the Romans "in our weakness...we do not know what we should pray...but the Spirit Himself makes intercession for us" (Romans 8:26; NKJV). The hard disk of the analogy then is a poor but usable as a mental image for the long-term storage of the brain.

The Brain

"Recent studies suggest that approximately 97% of the population has language predominantly in the left hemisphere. Of the remaining 3%, most are left handed. Since we estimate that some 10% of the population is left-handed, this means that the majority of left handed people also have language represented in their left hemisphere" (Obler and Gjerlo,1999:28). A great deal of information about language and the brain was reviled over many years from brain damaged individuals. Two language areas were identified. One is located in the frontal lobe just above the Sylvian fissure. Brain damaged area of patients who had "Great difficulties with producing speech became known as Broca's aphasia." (Obler and Gjerlo 1999:38) Aitchison further subdivides Broca's area into "a cluster of interconnected areas. At least four subsections can be identified" as she cites T. W. Deacon in *Brain-language Coevolution* in Hawkins & Gel-Mann (1992). Listed in order from front to back include

Word associations, If...then conditions, Sequential order and Speech output. (Aitchison 1996:90) The second area is located below the Sylvain fissure in the temporal lobe and is identified with Wernike (Obler and Gjerlo 1999:19).

> In 1874 the German neurologist Carl Wernike presented
> information on two patients whose speech was markedly
> different from that of Broca's patient. There speech
> was relatively 'fluent' that is, the intonation and
> pace appeared normal - but it contained unusual
> semantic features. The patients would frequently use
> elaborate descriptions, called
> 'circumlocutions,' [indirect way of saying something:
> the use of more words than necessary to express
> something, especially to avoid saying it directly]
> instead of simple words. Sometimes words would be only
> barely recognizable because of phonemic substitutions.
>
> (Oblier, 1999: 41-2)

Broca's area is thought to control the motor functions for speech and Wernicke's area is thought to allow for good comprehension (Oblier 1999:43). Evidence indicates that for one's lexicon as "the language area around the Sylvian fissure is crucial for the production of lexical items. [and] posterior regions within this area are required for generating target words themselves: the entire path must be available for speaking the entire string of phonemes in appropriate order" (Oblier and Gjerlow 1999: 58-9).

The Mind

As observed previously with the computer analogy, the brain is used for storage of language among many others elements. For language, a mental lexicon is used which includes how sounds are abstracted in the process of creating meaningful words and how these sound sequences are linked to provide and receive well formed strings of sounds that we identify as phrases and clauses used to encode one's thoughts and produce sound sequences so as to express one's thoughts to others. The operation is dynamic and continuous from short spurts of conversation to longer discourses such as instructions. Stored algorithms for language including lexical, syntactic, hierarchal positions are used as needed by an emotional tinged process. "In these intertwined systems that constitute a language, a large part is played by hierarchy. There is a hierarchy of units: phoneme, morpheme. Word, phrase. Clause, sentence. Within the sentence itself, there is a hierarchical structure... Subject and Predicate, in each of which there is a main part and a subordinate part" (Barber 1993:23). Some report that they think in language. Those who do, however, are seriously limited in their thought process. One must assume that various amounts of language are habitually used by some more than others. One does not usually need say to oneself or to others that "I must get up from this chair and open the front door" in response to someone ringing the door bell. A more normal response would be "I'll get it" if any one else is within earshot. Humans have for a long time had clues as to how the human mind functions with language by using figures (or patterns) of speech. The metaphor is probably the most common (for an introductory study see Kövecses 2002).

Acquisition

The human language acquisition of language somewhat under states the case. With the correct environment, children learn one or more languages in their phonic environment and can create a whole new language. Anyone that doubts the child's language acquisition window should view the 60 minutes II tape the *Birth of a Language* aired 10/17/00 by CBS. The tape shows graphically how a group of street urchins in Nicaragua, who were made deaf in infancy by high fevers caused by one of several uncontrolled childhood illness spontaneously created a unique sign language of their own. Linguist Judy Kegel discovered that the communication was a true language with its own semantics, syntax and expanding growth pattern. Other children with similar maladies but who were raised in isolation in speaking environments not only could not speak or sign but who did not even know their own names or

that of their own children. Another example of language generation is that of close siblings. Known as "twin language" or cryptophasia, even in a well defined and prominent language environment, close siblings often generate their own language as illustrated by Diehl and Kolodzey. "Since about 1957, sisters Katherine and Sarah Kolodzey have communicated with each other by means of a unique private language they call Spaka, which incorporates a surprisingly large set of non-English syntactic and phonological rules (Diehl & Kolodzey 1981: 406).

The human growth pattern is like a time release capsule with various abilities developing on a predetermined agenda: as they age they learn to crawl, walk and then speak. Additional processes are invoked as the individual becomes an adolescent. The time of interest here is variously defined as the language acquisition window of the maturing individual. "The reason why a child acquires his first language so effortlessly is that the crucial abstract principles of grammar are innate: they are available to the child from birth (or perhaps, are available from a certain period soon after birth as part of a maturation process, but at any rate are preprogrammed at birth)...." (Comrie 1989: 3). During this time one starts to learn one or more languages depends upon the individuals language environment. "Deaf children, who are unable to hear sounds of spoken language, do not acquire spoken languages as hearing children do. However, deaf children of deaf parents who are exposed to sign language learn sign language in stages parallel to language acquisition by hearing children learning oral languages" (Fromkin 1998: 20). Individual elements are added or recorded rapidly during the language acquisition stage and continually updated at a reduced pace over one's life span. The mind part of the analogy is thought of as the main, dynamic or volatile memory of the computer that is used to evaluate inputs from selected elements of one's lexicon a and event memory along with real and fantasied world as revealed by all of the body's senses. Conclusions of the rational element are also stored or recorded in the brain for future reference and allowed to over write or modify original evaluations.

A human's language acquisition window is simply an acceleration of normal language learning ability brought on by an unusual supply of synopses provided at birth. The same logic sequences are used during language accusation as they are at other times except a larger collection of synapses are oriented toward language and which are reduced as one approaches puberty. Child prodigies can be thought of as individuals who have extended the accusation window to other uses or areas of the brain. Children acquire language almost as an instinct. "Five-year-old children are almost as proficient at speaking and understanding as are their parents. Yet the ability to carry out the simplest conversation requires profound knowledge that most speakers are unaware of" (Fromkin and Rodman 1993: 4). Abstraction in language at the word level grows largely from the method of acquisition wherein a child tends to over generalize. For example, "they ... overgeneralize the meaning of words. They may learn a word such as papa or daddy which they first use only for their own father and then extend its meaning to apply to all men" (Fromkin and Rodman 1993: 410). Much of the abstractness remains and is carried into adulthood. Not only the word level, but the logic of the language begins to surface when children start to learn verbs. The acquisition of verbs therefor goes beyond the acquisition of single words. It also entails the acquisition of argument structures" (Chiat 2000: 148).

The scientific interests are commendable and have necessary goals but have as of this time, in the author's view, they have fallen short of any grand unifying insight. One supposes that is part of the reason why Hausser's text book on Computational Linguists suggests that a human be consulted to insure that the correct nuances of translations were used." (Hausser 1999: 43) In order to uncover the veiled secrets of language several approaches have been proposed over the years to open the secrets of the child's mind workings during the accusation phase: as stated in the investigation section previously noted. Current grammar school practice is to focus as much in writing or *literacy* and the spoken form as the child builds experiences that provide opportunities to vocabulary and cultural assimilation. It is clear then that speech is a form of language that is recreated for each normal human birth. It is a repetitive function of the human.

Coherence: the automatic phase

The basic function of language is the same as that of art: expression and communication and expression. Both are capable of a wide range of truth values, emotions, objectivity and media.

Language arts can be as direct or explicit as most other art forms. However:

> The task of classifying sounds is complicated by the
> fact that no two speakers of a language form the sounds
> exactly the same way and by the fact that regional
> dialects cause quite audible differences in sound
> production. One of the remarkable characteristics of
> speech-producing module in the brain is that speakers
> can understand one another in spite of regional and
> individual differences in speech production.
>
> (Moats 2000:24)

It should be noted that: Speech sounds are classified into phonemes which are defined as distinguishing speech sounds. For example the two words *put* and *but* are distinguished by the first letter or phoneme in the each word. the manner of articulation used. There is not a one to one relation between phonemes and letters in English. Up to forty four phonemes have been detected in English with only 26 sound symbols to work with. How are the phonemes produced? Just as for music, sound articulations depend upon the specific instrument used to produce each tone and tone quality. But for language the instrument is the human vocal tract: "it is necessary to consider three parameters: (1) Place of articulation... (a) the upper lip, (b) the upper teeth, (c) the alveolar ridge {directly behind the upper teeth}, (d) The hard palate, and (e) the soft palate [velum]. (2) Manner of articulation, what is the degree of closure? (3) Voicing. Are the vocal cords vibrating." Of more focused interest here, is the manner of articulation as applied to English. First, are STOPS as air passage is completely stopped as in the phonemes /p, b, t, d, k, g/. Secondly are phonemes known as the FRICATIVES /f, v, >, ð, s, z, š, ñ/; also called continuants; since the air passes unstopped with a degree of friction and are also known as spirants or sibilants. Examples of words using fricatives include *fan*, *van*, *through*, *this*, *sip*, *zip*, *sure*, *azure*. Third are the AFFRICATES /..., &hibar;/ Affricates are phonemes that combine stops and fricatives as in *pitcher* and *ledger*. Lastly, the two are classes known as SONORANTS (Sounds which can be hummed). NASAL sonorants include the phonemes /m, n, õ/ in *mom*, *nun*, *hung*. With ORAL SONORANTS /r, l, y, w/; air flows more freely than other consonants. /r, l/ and are also called LIQUIDS. Finally /y, w/ are called GLIDES. In English, non sonorant consonants are voiced or not voiced. An example shows the distinction between the /s/ and /z/ is that the /z/ is voiced (Stockwell 2001:82-3).

One's knowledge of English 'tells' you that certain strings of phonemes are permissible and others are not. After a consonant like /b/, /g/, /k/, or /p/, another stop consonant is not permitted....If a word begins with an /l/ or /r/, every speaker 'knows' that the next segment must be a vowel....Other...constraints exist in English. If the initial sounds of *chill* or *Jill* begin a word, the next sound must be a vowel....No more than three sequential consonants can occur at the beginning of a word and these three are restricted to /s/+/p,t,k/+/l,r,w,y/. /stl/ is not permitted...but *strick* is not. (Fromkin 1993:46)

The smallest elements of language are the phones or "a single basic speech sound" (Soukhanov 1999:1355) uttered by the native speaker. Phones are then assembled by the human hearing process in a manner similar to the colored brush strokes that make up individual sections of the paintings. Like phones, each dab of paint varies in several attributes such as hue, size and shape. Phones are then collected into phonemes by a function of the specific human language paradigm and become "distinctive speech sounds." (Trask 1999:3)" The English subset of phonemes or language building blocks range in number from 35 to 44 depending on one's dialect. "English uses 24 consonant and about eleven vowel phonemes depending on the dialect." (Hammond 1999:2-3) for a total of about 22. Human language starts with the abstraction of assembling phones into phonemes which in turn are assembled into syllables and words. Syllables then form another level of abstraction and provide an arbitrary collection of sound patterns with the vowel as the one essential element. Syllables are then used alone or combined into larger groups of words and phrases as abstract and arbitrary symbols that relate to or identify real, physical or abstract actions and states or phenomena perceived or imagined real or possible world .

"Our processing of language, especially at the level of sounds, syllables, and words, is automaticSthat is, fast and unconscious" (Moats 2000: 7). The sound of the word usually has no relation to the object depicted. The first abstraction then are the strings of phones which are discerned by the human mind as a collection of phonemes that are segregated into syllables and words which are then assembled into strings of phrases and clauses that build into paragraphs and long descriptions of reality in narrations and expressions of fantasies to convey meaning to the hearer just as with the plastic or ephemeral arts. At this level, the wholly consciousness of what is produced is under the conscious control of the speaker. Returning to the phonemic level, "When words begin with affricate, a liquid, a glide, or a nasal, the next sound must be a vowel" (Motes 2000: 51).

Vowels are the heart of syllables and in English can stand alone as a word. The "a" in "a girl" and "I" in "I am" are fully functioning words. English gets even more complicated. The syllable is defined in literature with four possible components: 1) the onset which may contain zero to three consonants. 2) the rhyme which is responsible for the rhyming elements in English poetry which also consists of 3) the nucleus with one or two vowels and 4) a coda of from zero to four consonants. The vowel can be thought of as an element that is most often encrusted on one or more sides with one or more consonants. The Musical allegory of the recorder can be used to describe how the vowel is produced. The figure above pictures the single syllable word "splints" and also illiterates that in English all onsets of more than two consonants must begin with /s/. (Fromkin 1998: 238) Each the 20 vowels in the rich English vowel paradigm (Roca 1999:119) is differentiated by the sound quality "in the same way the sounds given out by different-sized recorders." By varying the placement of the tongue, the "tube" size of the recorder will produce the required different sound qualities for the vowel (Rocha 1999:116-7). In English the length of the vowel is also distinctive (Rocha 1999:249). The key here is that the syllable vowel receives the most attention and is usually emphasized.

Many restrictions apply to each language. An example for English is given by Motes: "The word *only* has to be divided between the /n/ and the /l/ because these two consonants cannot form a cluster within a syllable; they can only be adjacent across a syllable boundary similarly, *pumpkin* has to be divided between the /p/ and the /k/ because /pk/ is not an allowable consonant cluster" (Moats:51). The author's name, *Senf*, is difficult for native speakers of English to say because the /n/ /f/ coda forms a syllable boundary in English: compare infant and conflict. Tonal languages such as Mandarin Chinese place different dependencies on the vowel. Note that "&hibar;" indicates the absents of pitch change and that the English form follows the Chinese form. "m" 'feel;' "mó," 'plan;' "mò" 'end;' and "m4" 'smear.' (Roca 1999:394)

One's internal lexicon works automatically at this stage providing distinctions between the language sound system. For example most speakers of English do not consciously recognize a difference between voicing for the *th* in *thread* />/and that in *this* /ð/, because it has less value in distinguishing the two one finds little need to avoid ambiguity. A similar difference, again only in voicing, is also found between the /z/ of *zone* and the /s/ of *spell* but is much more pronounced and serves to distinguish between *sink* and *zinc* to avoid ambiguity. Out of all of the possible combinations listed in the International Phonic Alphabet, only between forty and forty five (depending on dialect and recording author) are active in English. In addition, the combinations of phonemes has limits as well and forms another subset of what is usable in a language.

To complicate things, not only does "each language possesses an inventory of distinct sounds...but each sound can have a number of different realizations...contingent on environment conditions.... The distinctive features of sounds are grounded in the gestures involved in their articulation, and thus in phonetics." (Roca 1999:1) like music, the authors compare speaking with the act of playing a recorder. Further on the authors define "phonology [as] the study of significant sound patterns....Speaking can be ...usefully compared with the act of playing a recorder." (Roca 1999:3) Sound distinctions can be shown to be a very complex issue indeed.

Control of coherence or discernment at this stage is an unconscious and often emotional and automatically managed by one's mental lexicon. After centuries of word absorption and assimilation for English, a whole host of homophones, homonyms, and homographs have evolved to complicate maters

and push the conscious *control* of coherence or its selected omission ambiguity to a higher logical level. Phonemes combine into syllables to from 162 to 23,638 possible useful combinations. (Crystal 1997a:166) One or more syllables are then combined into "words" that are arbitrary sound combinations used to identify elements from the real or abstract worlds. The task now is to relate each phoneme to a single graphic But the union of the graphic system and speech in English, for example, provide problems to ESL students with Spanish as their first language because of the English complex spelling system.

Coherence in syntax

As suggested above, syllables do not all stand in isolation and the first element of discernment is stress. Even a sentence made up of one syllable words stress begins to play an increasing role. Still in the automatic mode, speech habits continue to develop from usage in each stage of one's development. A child's recitation of a poem will vary markedly from that of an adult and temperament. An illustration from Spike Milligan's poetry with stressed marked in capitals:

> MAry PAUGH was NEARly TWO
> when SHE went OUT of DOORS.
> She WENT out STANding UP, she DID
> and CAME back ON all FOURS
> (Rocia 1999: 312)

"We know that, for sone languages, such as Modern Greek, the stress pattern of a word is entirely arbitrary; there appear to be no generalizations concerning word stress patterns. We also know that some languages have fixed stress: the stress always falls on a given syllable (in French, for instance, it always falls on the final syllable of the word). (Carr 1999:88) The point is that stress first is related to the syllable vowel and is modified as syllables and words are assembled into larger strings of phonemes. Stress patterns in English are used to identify different meanings of a single phrase or group of words. In English, the sentence *I love you* used as an example on page 7 illustrates the change in meaning that is available with word and sentence stress patterns. For example, when one says "photograph," the /o/ (in each of the first two vowels "o" in photograph) is understandable as a distinct vowel sound. But when the stress is changed and the word becomes photographer, each of the first two vowels change to a schwa /b/ in most English dialects. A similar same thing occurs with *Catholic* and *Catholicism*. In addition, some consonants are aspirated or take on a small puff of air when spoken in word initial positions. Additional pairs are "*telegraph-telegraphy, serene-serenity, duplicate-duplicity, resign-resignation,* [and] *deprived-deprivation.*" (Stockwell 2001:74) In addition to stress patterns many languages have arbitrary grammatical gender found as found in some Indo European languages Grammatical gender works well at increasing coherence and reference by reducing discernment problems from word structure affixes up through syntax.

As stressed earlier, the salient point of the phoneme subset is the vowel: it is the center of interest of the syllable. For English most vowels are incrusted with consonants on one or both sides to complete the subset of the English sound system. It is similar to the brush strokes of the artist, the chips of stone for the sculptor, or the notes of the composer. In isolation one sees only a subset of sounds or sights that are expected. Each individual sound, paint stroke or note is assembled into meaningful combinations. Just as one sees the outline of a hat in Seurat's *A Sunday Afternoon on the Island of La Grande Jatte*; one begins to recognize a theme as notes are collected into chords and an arm becomes perceptible as the chips are brushed aside. Chips, brush strokes and notes are part of the subset the artist has to work with. A similar concept is used in language as the subset of usable sounds and syllables are formed into morphemes : "syllables have nothing to do with meaning. Syllables are units of pronunciation...A syllable is the smallest independently pronounceable unit into which a word can be divided." (Stochwell 2001:59-60) Morphology is the next higher level of abstraction and is defined as the smallest package of phonemes that identify the meaning structure of words and they span a range form one phoneme to one or more syllables.

Morphemes are "packaged with meaning,...can be recycled,...may be represented by any number of

syllables, ...and morphemes 'morph'...may have phonetically different shapes." Morphemes are of two types: one relates to word roots and involves a word-derivational process; the other is identified as inflectional. "The basic meaning from which the rest of the sense of the word can be derived." (Stochwell 2001:61) Applications of inflectional morphemes are inflexus and affixes. "Their meaning in many instances, is not clear and specific and many of them are almost completely meaningless. Compared to with the total number of roots, which is very large (thousands or tens of thousands in any language), the number of affixes is relatively small (a few hundred at most)." (Stochwell 2001:63) Most of this class are:

> called inflectional. Inflectional affixes, of which
> English has only a very small number compared to Latin
> or Greek or Old English are really part of syntax,
> though some inflectional affixes are the indicators of
> very broad semantic categories like tense ...or number.
> [fuzzy categories again]...The most typical
> inflectional affixes, in most languages, serve to
> indicate which word is subject of the sentence or which
> word is the object of the verb.
>
> (Stochwell 2001:66)

In Latin, affixes were so well defined that word order was not critical as it is in English. "Inflectional affixes are nothing more than markers of sentence structure and organization (Stockwell 2001:66).

But the affixes do not stand alone: they must be attached to a word which often changes the word's clarification. Classical English grammar divides the half million or so "words" into fuzzy classifications based largely on the paradigms used in highly inflected Greek and Latin. As mentioned, two classifications still make sense: that of *noun* and verb. "Most languages have many more nouns than verbs. In English, there are approximately three times as many nouns as verbs, according to one count [another fuzzy category]!though this figure perhaps exaggerates the difference: verbs are more polysemous than nouns, that is each verb has on average approximately three meanings attached to it, but each noun only around two. But there is still an imbalance." (Moats 2000:110) Naming things that identifies them and then by attaching an arbitrary set of phonemes which are then assembled into syllables to produce a word. It is not a simple process. Allophones are at times attached and used as allomorphs (*name - names*) and others are used provide changes to the vowels used internally (*foot - feet*) to identify quantity. Both are allomorphs of the plural morpheme. "The 'naming insight' - narrowing a name down to a single object! takes time to develop." (Atchison 1996:95) Once the process has evolved and the ambiguities reduced between naming words, their phonemes are assembled and spoken as meaningful symbols of an item identified. Words are built up from syllables (specifying the sound to be used) but adjust their syntactical linkage to other sentence components with morphemes. It's a bit more complex than that because each morpheme has its own rule-driven subset of allomorphs used to provide the discernment of linkage to the awareness or knowledge of one's perception of one's own environment as well as the sentences generated.

Morphemes and allomorphs are to sentence structure what phonemes and allophones are to the sound subset structure for establishing distinctiveness. The examples of name to names and feet to foot are allomorphs of the plural morpheme. Unlike phonemes, words are helped into one's mental lexicon on a basis of the emotional environment in which they were first presented. Nouns and verbs interact with each other and other elements of language to provide coherence known in classical grammar as a normative-accusative has evolved in the western system. Another system has evolved a similar coherence or clarifying function known as the ergative-absolutive system. Case is an inflection used to identify a noun's relation to the rest of the a sequence of words. "[some] cases are nominative, accusative, absolutive, ergative, dative, genitive,... and ablative." (Trask 1993:35) English however, is confined largely to the location, with several acceptable variations within the clause or sentence for most of the clarifying functions of nouns.

Automatic coherence continues into what classical thinkers call syntax to include inflectional forms and grammatical gender. The relation of among sentence elements provides the necessary coherence so long as what is being said keeps things understood, as an agreed order (English), or element role (Latin). Additionally, reference or linkages then identify the relations of sentence elements to reality in real life is provided by one's lexicon. But at the point of syntax when relationships between words and phrases are not maintained by speaker or author, coherence is interrupted and ambiguity enters and confusion of one's expression prohibits clear communication.

An English speaking person gets the meaning without speculating about word class nuances but uses the arbitrary words, morphology, and syllable structure provided by his lexicon and common sense. The arbitrariness of each language subset can be viewed as a specific art form or "the existence of many styles and manners of working within art should prove encouraging." (Shinnereller 1968:222) It is encouraging because arbitrariness gives us languages with a *diversity to learn*. Additionally, reference or linkages then identify the relations of sentence elements to reality in real life *understand and enjoy*.

"Creoles tend to develop three basic appendages for discernment: grams for tense, mood and aspect. Tense specifies the time of an action, mood expresses an attitude towards an event, and aspect carries information about 'the contour of an action." (Aitchison 1996:136) But "English exhibits a minimal tense system with a two-way contrast between past and non past forms...English lacks a distinctive future tense." (Trask 1993:276) The future is provided by auxiliary verbs (*shall*, *will*) and the "phrasal verb" (*going to*). In addition, verb modifiers project meaning into the future by adding *tomorrow*, *soon*, *anon*. What one is taught as the English *present tense* is not a tense as such in English but the citation or base form as found in a dictionary. For example: to say *I swim* does not mean that I'm dripping wet but that I have the ability to swim. When I am dripping wet I say that I am swimming with modification of an *auxiliary* verb. Verbs seldom exist alone; they require "the presence in its sentence of a specified set of NP arguments each of which typically represents some particular semantic role and each of which may be required to appear in some grammatical form." (Trask 1993:297) The English verb phrase then provides alternative words to replace much of the inflectional forms attached to individual verbs in Classical Greek and Latin.

On a higher level of coherence verbs take charge providing linkages with other verbal elements by their semantic and logical demands for various nouns and modifiers to act as arguments. After teaching ESL to those with Spanish as a first language, one realizes how different English processes discernment control compared to other languages. In English, the verb is the starting point for the assembling of associated words into a sequence that involves semantics and provides discernment control by defining their relations. Trask continues with a definition of a verb phrase as "a unit of sentence structure consisting of a verb and other elements closely linked to it." (Trask 1993:335) The verb is the head of a verb phrase that classical grammar defines as a *predicate*, which may use zero or up to four verb forms to make adjustments to the *aspect* of the main verb. In English aspect is much more functional than tense, which is defined here as morphological variation to the citation form of the verb.

The English verb phrase, then can use several additional auxiliary verbs that function more closely as tense and expand and define just how the main idea is to be construed in context and in its semantical relation to the rest of the cluster of words and linkage to one's emotional, physical, and conversational environments. Also, more adpositions [classical prepositions] may be included in the verb phrase to indicate a location or to show their relation to some other part of a clause and the intent and shade of meaning is modified to more accurately state one's intent. For example one could say "the dinner may well be prepared by tomorrow's deadline" using both auxiliaries and adpositions to link the speakers feelings with elements in one's current and future environments.

> In trying to make sense of what someone says, we never rely only
> on our knowledge of the basic meanings of words or our
> familiarity with grammatical construction they use. As
> listeners, we always access some additional, contextual
> information, using any explicit guidance or hints provided by a

The arbitrariness of grammar can be likened to that of the arbitrariness of words indicated by Trask as "the absence of any necessary connection between the form of a word and its meaning. Every language typically has a distinct word to denote every object, activity and concept its speakers want to talk about." (Trask 1999:19) This arbitrariness of grammar would form a small subset of the entire realm of the arbitrariness of the human vocabulary described by Crystal as about 31,500 to 76,250 words (Crystal 1997b:123). And according to Pinker, humans are capable of recognizing some 10,000 shape names. "How do people recognize shapes? An average adult knows names for about ten thousand things, most of them distinguished by shape....When we recognize an objects shape, we are acting as pure geometers, surveying the distribution of matter in space and finding the closest match in memory." (Pinker 1997:268) Thus "things" recognized by ear normally exceed those recognized by eye for the average human by a three to one ratio.

So, what can we do while waiting for a scientific break through? *Enjoy the diversity* found in our own native tongue art forms and that of others. Not all of language is limited to the language accusation process spaces of our mind or lexicon. Controlled cohesion can be thought of as an analytical system that gives a reasonable explanation of the rules of language ranging from literature to the phoneme. Rather than using syntax as a pivotal point, an elementary logical system is in place that grows into a full fledged system of arbitrary rules classically defined as grammar.. For example, a sign offering "a giant used car sale:" both "giant" and "used car" both modify "sale" and the classical grammar would require commas for the series of modifiers since all modify "sale." But in "rock hard surface, "rock" modifies hard, not surface: and in classical grammar "rock" would be considered an adverb modifying the adjective "hard" or provide some rationalization. The sayings quoted can be considered as lexical compounds. Some "compounds actually can mean what they appear to mean on the surface, but usually they mean more then that. *Sweetheart* is not just a 'sweet heart,' what ever that would be, but is an opaque compound that has been in the language since the thirteenth century." (Stochwell 2001: 14) The requirement that current active memory or the logical abilities of the mind be used to abstract the meaning of compound words or phrases. Also, rather than admitting English uses postpositions as well as prepositions, examples such as *take off*, *put down* and *give up* are identified as phrasal verbs and *call on* is a prepositional verb." (Trask 1993:208)

Literacy

Primary processes that drive reading include our
ability to associate print units (letters, letter
combinations, letter sequences, words, and punctuation
marks) with linguistic units (phonemes, onsets, rimes,
syllables, morphemes, words and phrases). Linguistics
units are neither auditory nor visual; they are
abstract, mental phenomena and can be understood even
by people who are hard of hearing. Because our
attention is on meaning, we are not aware of the code
translation process by which meaning is conveyed.

(Moats 2000:7)

Graphemes

With forty four or so phonemes and only twenty six letters plus several digraphs, one can see an additional impact of fuzziness as English speech evolves and the grapheme system remains fixed. The impact of the written form is the second factor of the Language dualism and is defined here as graphical representation of the spoken. Learning the system of writing for a language is far more laborious to acquire than *spoken*. "Languages may 'evolve [and] develop in a way that is free from willful human intervention, but writing systems are purposefully changed by human agents...over

centuries and millennia, constant small changes will result in enormous differences in the scripts appearances and use." (Fischer 1999:88) It did not start out that way at least in English but writing settled into parasitic relation with the spoken that contributed to and expanded the definition of language. "However, all writing systems, no matter how revered or innovative, are imperfect and conventional. Nearly all are an approximation, not an exact reproduction, of human speech. "In Old English the first two consonants in words like *know*, *knee* were actually pronounced as [kn-], and there are words beginning with [hn-], [hl-], [hr-, which we now consider impossible word-initial consonant clusters." (Stockwell 2001:77) Now an English single letter a can represent as many as six different sounds (depending on dialect): *am*, *was*, *paw*, *date*, *all*, and *hat*; or because of English spelling archaism, it stands for no sound at all, as in *bean*, *beau*, and *beauty*" (Fischer 1999:110) The alphabetic system used in many societies is the result of millennia of human effort.

Most writers agree on three main writing systems roots. "Egyptian hieroglyphs were employed, over a period of more than 3,000 years for writing before the Egyptian language before it fell into disuse." (Coulamas 1991:57) Of the kinds of signs were "determinatives, and are employed to specify the meaning of words that are spelled out phonetically." (Ibid 63) "Unlike the Egyptian hieroglyphs, the cuneiform script was used to write more than one language ...over a period of some 3,000 years; Sumerian, Akkadian, Babylonian and Assyrian...Old Persian and Hittite." (Ibid 72) "Determinatives were also used to specify the meaning of syllabically written words and later...for writing Akkadian, for pronunciation and grammatical ending of a word sign. (Ibid 78) Chinese "writing system serves the longest uninterrupted literary tradition of living languages. (Ibid 91) most of the Chinese character formation, "the *semantic-phonic compound* principle...each character consists of a classifier and a phonic...." (Ibid 99) Like cuneiform, the Chinese written form was adopted and modified to fit neighboring languages including Japanese, Annamese and Korean.

The basis for Greek was quite another matter. "Sir Arthur Evans distinguished [and named] three types f script used in Crete during the Bronze age. The latest of these, Linear B, has been deciphered [as an early dialect of Greek] ... Evans named these 'pictograph or 'hieroglyphic' from a superficial resemblance to the hieroglyphic script of Egypt and Linear A." (Chadwick 1987:44) Linear B has been deciphered and consists of a syllabary of 87 signs. (Ibid:22) The first two systems have yet to be fully deciphered. Unlike the cuneiform tablets, the three scripts found by Evans were recorded on clay that was not baked except for the fires that destroyed the structures that contained them. "Although the Greek alphabet was devised, probably in the early eighth century BC,...the Cypriots resisted this innovation, until the spread of the Macedonian empire under Alexander the Great led to the adoption of the standard scrip of the Greek world." (Ibid: 52) In addition, Greeks in Asia Minor in Medieval times occasionally used the Arabic alphabet and even the Hebrew to write Greek." (Joseph 1987:415)

"The decisive step in the development of writing is *phonetization*: that is, the transition from pictorial icon to phonetic symbol" (Coulamas 1991:33) The alphabetic system widely used today evolved from Mesopotamia through Syria and Palestine witch evolved from the cuneiform tradition. (Ibid: 137) "The omission of vowels was perceived as a weakness of Semitic writing, even though it was economical and sufficient for most purposes." (Ibid:147) In the process, a system "of at least 114 signs thought to be a syllabary" (ibid:139) was used in the Byblos inscription under Egyptian influence. A syllabary is another approach to writing systems used today primarily in the Japanese orthography along with a few Chinese characters as verbs. Coulmas defines two basic levels of script or writing systems. One he defines as pleremic: the level of sense-determination (meaningful elements) and cenemic: sense-discriminative (arbitrary elements). (ibid: 49) He then defines "the alphabetic [system] is a cenemic writing system consisting of meaningless letters for the representation of meaningless sounds." (Ibid: 167) In most cases the number of vowels used in a language out number the number of symbols available to vowels. In most societies the graphical representation is taught to children at the same time and assumed to be part and parcel of the same language.

But "once written norms are established, they attract emotional attachment, and hence discussion about reform of a given orthography or script often resemble a religious war." (Ibid: 240) Each language modified their chosen orthography to better match their characteristics, but "writing ...not only maps, but also imposes structure." (Ibid: 39) "As of the tenth century, two

other forms can be distinguished; Canaanite and Aramaic. The latter is of no less importance than the Phoenician because it gave rise to the most widely used modern Near Eastern scripts, Hebrew and Arabic." (Ibid:142) "With the decline of Hebrew as a spoken tongue, the introduction of vowel symbols and other diacritics became necessary. In order not to alter the original sacred, consonantal texts, this was done with added symbols, dots or other reduced-sized designs placed under, above ...and the center of the consonantal letters." (Hetzron 1987:687-8) "It is now generally agreed that the first writing system free of determinatives and logographic signs which could easily be transferred from one language to another was used by the Phoenicians in northern Syria where it was created in the second half of the second millennium." (Coulamas 1991: 138)

One of the widest graphical systems used is that of the Romans. By far the most important adaption of the Greek alphabet was by the Romans who, around 600 BC, encountered Greek writing... [they] hardly changed the Greek original. (Fischer 1999:100). .The Greeks borrowed their alphabet about 1000 B.C. from "the Phoenician consonantal alphabet." (Victoria 1998:504) "The Phoenician words were borrowed into Greek stripped of their original meanings, indicating to the Greeks nothing but their own initials. Whether the Greeks adopted the acrophonic principle together with the names of the Phoenician letters is not quite clear, but they were employed in any event, and by so doing arrived at the sound values of their letters....While Phoenician words have initial consonants, many Greek words began with vowels. Moreover, some Phoenician consonants are not phonemic in Greek and therefor not readily perceived by native speakers of Greek."(Coulamas 1991: 164)

The major advancement of the Greeks is that many of the Phoenician signs were not needed for Greek so they added them to the alphabet as vowels. Greek was the first graphic system that did not require a duality to more fully convey some aspects of the spoken form it was designed to convey. "Our brains are not as fully evolved for the processing of written language as they are for the process of spoken language, and, therefor, learning to read and write are for the processing of spoken language, and, therefor, learning to read and write are much more challenging for most of us than learning to speak." (Moats 2000:) As with the cuneiform and Chinese systems before them, the Roman version of the alphabet has been applied to many other tongues. Another adoption of the Greek system is the Cyrillic alphabet used for the Russian language and others.

Adoption of the Roman letter system to English is an example of what occurs when an alphabet is applied to a new language. The last of the Roman troops left Celtic Britain about 410 AD but the Latin language did not take hold to overthrow the Celtic language as it did in what became to be known as France. (Baugh 1978:14) "Old English texts were written on parchment or vellum. The first manuscripts were written in the Roman alphabet...brought over by Irish missionaries." (Crystal 1997b:16) Since the Roman alphabet did not make an adequate match with the old English sounds, some characters were borrowed from the Germanic runic alphabet. "þ was called a 'thorn' ...[and] represented either of the 'th' sounds." (Crystal 1997b:17) The 'th' sound has two realizations, one voiced />/ as in *th*rough and unvoiced /ð/ as in o*th*er. ð was also used to form the same sounds as the thorn and latter dubbed the 'eth.' w was written using the runic symbol 'wynn,' Þ. The 'ash' borrowed from the runic was eventually replaced with the Latin ae. Other changes evolved over the centuries until the advent of printing when William Caxton (1422-1491) brought the Roman system from Cologne after an 18 month learning session and returned to England in 1473. (Crystal 1997b:56) The first English printer, established the first printing press in England (1477) and printed over 100 books, including *The Canterbury Tales*." (Soukhanov 1999:292) The fonts used by Caxton used only the Roman form so further adjustments had to be made. The most salient was the use of a lower case 'y' with an even smaller lower case 'e' positioned just above and to the right for ye the now banished thorn or eth from printing. It should be noted that the English ye has always been a personal pronoun. The current fad for distorting the ye into "Ye old flower shopp" has no basis in English.

On the basis of graphic systems being used for languages that they were not designed for, and the mistaken presumption that spoken and written form are somehow synchronous that humans have always attempted to revamp the totality of language by various means. As mentioned earlier, much of the effort has been emotional with national pride or personal opinions large contributors. Languages do and are in a constant state of flux. The relation between the graphic systems and phonological realities of languages form 'slippages' reminiscent of the earth's continental plates. The 'fixed' plate is usually the graphic system with the 'slippage' occurring in the phonological plates. And

these 'movements are caused as "the empirical evidence indicates, that linguistic selection is governed largely if not exclusively by social forces that have little or nothing to do with functional adaptiveness for communication." (Croft 2000:39) The child does not change the language during the window of language acquisition. "The child grammar and/or lexicon tend more and more to conform to the conventions (norms) of the speech of the speech community in language acquisition." (Croft 2000:47) For Croft, linguistic units including words and constructions have at least three forms 1) form or signifier, 2) meaning or signified, and 3) the social domain/community that provides the diversity. (Croft 2000:91)

Writing

"Writing systems that transcribe words incompletely or inconsistently (English is an example of the latter) may as basically mnemonic devices rather than truly efficient scripts. (Hetzron 1987:687-8) The question now becomes how well do the various script fit wither spoken counterpart? Not at all well as in English: quite well as in Spanish. Changes in the spoken form shown by "empirical evidence indicates that linguistic selection is governed largely if not exclusively by social forces that have little or nothing to do with functional adaptiveness for communication." (Croft 2000:39) changes do not depend on variations in the oral acquisition process. "It is difficult to describe the language learning process as a replication of the grammar of the parent by the child. The replication is very indirect." (Croft 2000:45) in other words the process is not fully understood as described previously. But "the child's grammar and/or lexicon tend more and more to conform to the conventions (norms) of the speech community in language acquisition...the child [does] 'unlearn' the novel forms of speech... produce[d] without explicit correction." (Croft 2000:47-8) change in languages is unavoidable and a "consequence of...change in definition is that a code has social meaning, determined by the context in which it is used as well as a referential meaning....In other words...words or constructions have not only a form (signifier) and meaning (signified) but a third dimension, the social/community in which they are used." (Croft 2000:91) The mismatch between the spoken and written has then become a war of words in attempts to fix the problem.

A War of Words

Since evidence points to social and environmental circumstances for the change in language, rather than the language acquisition process, then in order to change the "mistakes " persons make in their own language, the graphical system is used to address the supposed problems at the grammar school level. "It is much easer to tamper with the written than the spoken languageSthe history of English is littered with attempts made by well meaning individuals to improve the way writing reflects speech." (Crystal 1997b:265). For example, Stockwell, et al. claim that Spanish has forty-five to forty-eight verb forms (Stockwell 1965:122). This is evidence of tweaking a language to establish neat paradigms or categories by an educated elite using its grapheme system to increase regularity and impose them on the educational system of the time. Waterman (1976), in discussing the history of German notes that Luther, "though he did not 'create' the modern German language, he nevertheless did contribute enormously to its development and refinement as a literary instrument." (Stockman 1976:128) Changes are made by persons of influence and respect. Some are not even logical such as where in one 1762 influential grammar "*A short Introduction to English Grammar with Critical notes*,...written by Bishop Robert Lowth who was influenced by Latin grammar and personal preference, prescribed a number of new rules for English.....[He] decided that 'Two negatives make a positive'...[even though] both Italian and French did use double negatives at that time." (Fromkin 1993:14-5)

Chaucer contributed to English as the first major writer of the 14th century. "Chaucer, who makes no direct value judgements on the varieties of English he was acquainted with, introduced into English literature the first comic characters who are funny in the first instance because they speak a non-standard, indeed, specifically northern dialect." (Strang 1989:160) "Caxton , Even though Caxton set up his press as early as1473 (Crystal 1997b:56), the process did little to standardize English spelling. "Spellings varied from writer to writer, and even within the work of one writer: Shakespear...uses two different spellings of his own surname (*Shakspere* and *Shakspeare*)" (Barber 1993:208). Although "it is not always clear how much of their spelling is to be credited to them and how much to the printer. Most printers probably took advantage of the variability of English

spelling to 'justify' a line, with as little scruple about optional letters as about spaces.....one...Robert Greene is noted for spelling coney with nine variations in his pamphlet A Noticable Discovery of Coosnage (1591)." (Buegh 1978:208)

English as a language began to rid itself of some of its chaotic spelling with "the publication of Johnson's *Dictionary* [which] was certainly the most important linguistic event of the eighteenth century, not to say the entire period under discussion [modern English Period to 1800]" (Pyles 1993:74) Additional interactions between *spoken* and the English grapheme system are illustrated when "a knowledge of spelling has been responsible for changing the pronunciation of certain words whose written forms for one reason or another do not indicate pronunciation which had become traditional. For instance, simply because it occurs in writing, the *t* of *often* has come to be pronounced once again, as it was...up until...the seventeenth century." (Pyles 1993:74) The question now becomes: How do the investigators separate the influence of centuries in the cycles of interventions, changes and distortions inserted by using a writing system into text books to impact the native ability of language accusation?

Language so adjusted is taught in the class room as a writing exercise with a text open or as required reading in a concealed form of *prescription* instruction, or how one should speak or write properly describes often as "descriptive" but with subtle nuances of the author and teacher's prejudices. Prescriptivism is defined as "An approach to grammatical characterization one of whose primary objectives is the identification of forms and usage which are considered by the analysis to be 'correct' and the proscribing of forms and usages to be 'incorrect." (Trask 1993:215) The written form is the key ingredient in teaching "language" after various adjustments have been made in the text to accomplish the thrust of the author's biases. To an extent some *prescription* is necessary to instruct the young in the contemporary speech patterns in the regional dialect. The child who is on par with adults in speech and understanding must spend several years to be become competent in the graphical system of their native language. The alphabetic grapheme system were ideally designed to match the phonemes in a language at one time. Each alphabetical letter is intended to replicate the phoneme system in the language. But in "English spelling, several hundred graphemes (letter and letter combinations) to represent 40 or so speech sounds: in fact, most spellings for sounds consist of more than one letter." (Moats 2000:24-5) To add to the complication, each phoneme has a set of one or more allophones or rule driven phonic realizations or variations as actual sounds. "In each case, the vowel that reduces to schwa is in an unstressed syllable....Substitute [c] for vowels in unstressed syllables." (Milekic 2000:55)

Writing systems are a good example of the evolutionary process. Like beauty, evolution is in the mind of the beholder. Once the specific formulation is established it is used as the explanation or rationalization of how a social or physical entity came to be into its present state. From that point the theory is sent to the classroom as fact. Given the events of Medieval Europe, and the philosophical paradigms put in place by the church, plus all of the "scientific" structures used such as evolution, just when and what will the next philosophical paradigm be defined. *Speech*, defined as the oral segment of language, is created almost automatically by the normal human brain/mind for each new edition or human being. The writing system or graphical representation of *speech* has evolved over the millennia. Writing systems have been used to control spoken form for millennia. Formal institutions created and maintained official organizations such as the Académie Française for French and a parallel organization in French Canada with their own web site. Spanish has had an academy: "Since 1714, when it received a royal charter, the Real Academia de la Lengua has had normative authority over the language. Unlike its French counterpart, "the Spanish Academy is composed of linguists and philologist, with the result that its decisions, through invariably conservative, command some respect." (Green 1990:237) English, however followed the procedure of using the dictionary showing how words were used in the past and even dating them. A good work written in the manor of a mystery novel that gives an insight into the early days of the Oxford English Dictionary by Simon Winchester in 1999.

The duel systems of *speech* and graphemes or *literacy* have been long used by scholars to interact with each other in both proactive and reactive ways: graphology has been used to adjust *spoken*, by tweaking the entire abstract system of a language illustrated by the Greek logic pattern of rhetoric and philology. If one can accept that human language acquisition (*spoken*) is quite different from

the grapheme acquisition, one form can visualize a reaction between the two produce the total language or *literacy*. Crystal states that grapheme forms started with cuneiform or hieroglyph symbols and evolved over the centuries into syllabaries and eventually to the alphabetic forms in the Western World from the Phoenician and into Greek alphabet with extra Phoenician symbols taken as vowels in Greek. (Crystal1999: 200-5) One citation that states the importance of language control by controlling the writing system is from the history of Chinese writing. "Inspired by the success in promoting a standard language in Japan, several scholars, mostly students returned from Japan, proposed the idea of *guóy* 'national language' which they argued should be promoted as the modern standard Chinese in China." (Chin 1999:14)

> "Concurrent with the early twentieth-century efforts to establish a standard Modern Chinese, administrative measures were put in place to promote *guóy*, particularly in primary schools across the country. Prompted by a few high-profile language reform activists, the Ministry of Education decreed in 1920 that starting from that year, the subject of Chinese taught in Year 1 and Year 2 of primary school should switch its main content from texts in *guówén* 'national writion language'."
>
> (Chin 1999:22)

Thus continued the precedence set several centuries earlier:

> After the emperor Qin Shihuang unified China for the first time in 221 BC, among the first things he did was to unify the writing system using the *xiǎozhuàn* small seal' style, burning books writen in other writing systems, and executing scholars who disagreed with the harsh measures. This laid the foundations for the standardization of the written language across the country. In the early period of the Han dynasty, the teachings of the Confucianist school were established as the orthodox school of thought, and incentives were instituted to promote it across the land.
>
> (Chin 1999:67)

The process continued to modify and simplify the language but "the general public found it difficult to accept so many unfamiliar simplified characters." (Chin 1999:160)

Diversity

Some languages have overlaps such as cognates and paradigms but "what is done by morphology in one language may be achieved through syntax in another. Latin (a language with fairly free word order) marks subject and object by nominative and accusative cases, respectively. English puts the subject before the verb and the object after it." (Dixon 1991:87). Within English, diversity is well established in some cases because English is a sponge and absorbs words and ideas from a variety of other language sources with the largest influence, at one time, from Latin and vulgar Latin tongues. English speakers attempt to Anglicize new forms and fit them into established paradigms that have also been "adjusted" by previous attempts. "Grammatical changes may be explained, in part, as analogic changes, which are simplifications or generalization. External borrowing from other languages also affects the grammar." (Fromkin 1993:87) But "Writing systems that transcribe words incompletely or inconsistently (English is an example of the latter) may as basically mnemonic devices rather than truly efficient scripts. (Hetzron 1987:687-8)

Control of Coherence: Ambiguity

The purpose of coherence in communication is to control or to minimize ambiguity. What are the controlling factors one should evaluate as the level of ambiguity control emerges from that which is preconditioned by one's lexicon and proceeds up through syntax, paragraph, essay, thesis and on to fiction? Recognize that few languages are like the Greek/Latin model and define each element in phrase and clause in the context of the immediate or deictic (depending on context for meaning). (Soutkhanov 1999:476) aspect for each element in a phrase or clause.

The functional approach emphasizes the idea of range and domain of elements external to the conversation or text. Pronouns can refer to persons both speaker and hearer know and do not require a proper noun to identify. "Hurry, she'll be here any moment now." The same is true of anaphoras. "It took long enough to get the street paved." The street pavers can be contractors or a crew from a municipality. Metaphors are "figures of speech that achieve their effect through association, comparison and resemblance." (McArther 1992:635) One of the most functional tools for any language, "metaphors are a common way of extending a the expressive resources of a language." (Trask 1999:185) The metaphor is another device to control and minimize ambiguity because it is grounded in something already well known.

In lower division English writing courses, the emphasis must be on the students need to *logically* systematize the material to be presented: to maintain coherence, continuity, cohesiveness and unity. These objectives are paramount the organization of and structure of sentences. "Sentences may be ambiguous because they contain one or more ambiguous words [or are improperly linked]. This is called lexical ambiguity. Other examples of lexically ambiguous sentences are:

(A) The Rabbi married my sister.
(B) Do you smoke after sex?
         (Fromkin 1998:130)

As an exercise, an Instructor can provide a sentence such as "She chased the man with an axe." Then ask "who had the axe?" If the final phase is a misplaced modifier, "she" had the axe. If "the man" had the axe, one would suggest that he had some reason not to defend himself. What is amazing is the variety of answers one received in response to the instructor's inquiry. Either one or the other is perfectly obvious to each respondent. As the complexity increases through the level of word, phrase and sentence, the amount of ambiguity increases until at the top most level or highest form of a language: literature. Ambiguity it can be used for dramatic effect such as in Shakespeare's *Macbeth* (Craig 1973) has the foretelling Third Apparition say;

    Be lion-mettled, proud; and take no
    care
    Who chafes, who frets, or where
    conspirers are:
    Macbeth shall never vanquish'd be
    until
    Great Brinam wood to high Dunsinane
    hill
    Shall come against him.
    (Act IV: Sc I, ll 99-103)

After Macbeth and allies become locked in mortal combat, he sees quite clearly how a "wood...shall come against him"

    'That lies like truth: Fear not
    till Birnam wood
    Do come to Dunsinane:' and now a
    wood
    Comes toward Dunsinane. Arm, arm
    and out!

```
        If this which he avouches does
        appear,
        There is no flying hence nor
        tarrying here.
        ...
        At last we'll die with harness on
        our back
        (Act V: Sc. V, ll 44-52)
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Macbeth's enemies have simply used the trees as camouflage and disguised themselves with foliage. The ambiguity is used as an element foretelling and added suspense.

On the other hand, the Bible acts to avoid ambiguity wherein a few Psalms are duplicated to establish a kind of refrain in different thematic settings: Psalm 14 is duplicated nearly verbatim as Psalm 53. Psalm 18 is a copy of the "Song of David" from 2 Samuel 22:1 just prior to "The Last Words of David." in Chapter 23 1:7. Psalm 70 is also found as part of Psalm 40: 13-17 and Psalm 108: 1-5 is an echo of Psalm 57: 7-11. The New Testament uses four accounts of the Gospel from four points of view. Fiction allows the use of more literary devices through the actions of heros, antiheroes and tragic characters. The characters interactions with others eventually, if done properly, will convey the authors intentions, beliefs and social or political agenda. Some of these concepts are illustrated by *The Glass Bead Game* by Hermann Hesse, *The Confessions of Felix Krull* by Thomas Mann, and *Catch-22* by Joseph Heller. Controlled ambiguity is also used to provide anticipation of how a mastery will be solved.

Coda

In summary, it is seen that both aspects of language is a product of human invention, with the oral much more creative than the graphical and by different mental attributes. Most systems of language study designed for the initial stage for the average college student quite adequate. But the scientific objectives for understanding human's language accusation abilities have resulted in categories with fuzzy edges or mind boggling complexity. The method of evaluating language's elements has been complicated by actual speech that has been impacted by the writing system used to record it for study, control and posterity. It has been proposed here that languages be considered as the primordial human art form that has a simple underlying concept of an automatic learning process that uses cohesion up to the inflectional and grammatical aspects of syntax. But beyond that point, control of coherence defaults to the user some for the most part to avoid or control discernment/ambiguities, to provide clarity, so that the relation between words, phrases and other utterances become clear given the meaning or semantics ascribed by one's mental lexicon.

Coherence then ties together elements of language from the phoneme as the lowest level of abstraction with automatic control through the linkage of internal and external references and a hierarchy of elements in one's mental lexicon plus experience forms a unity of one's language mastery. Literature wherein ambiguity is in the control of the author may be used as foreshadowing to produce a dramatic effect. The idea of ambiguity control is so powerful that it is challenged at every point in English by *ellipsis* which is "a wide range of phenomena in which some part of a sentence or utterance appears to be 'missing' or 'understood.'" (Trask 1999:88) Thus without the prevalence of ambiguity control, a persuasive elliptical practice would not be allowed.

As a final note, many of the works cited have as a premise the evaluation model. Science is as continuously changing and the next model will invoke a similar flood of adherents. Creationism, however remains consistent and appears to be the basis for Language paradigms.

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            The conversational process of thinking together does
            not only involve the use of particular techniques, it
            also depends on a remarkable human ability for making
            conversation flow. Every fluent, continuous and
            intelligible conversation is a showcase for human
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skills in achieving co-ordinated intellectual activity.
(Mercer 2000:56)

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Footnotes

1 Every thing heard is recorded in the brain. During brain surgery on a conscious patient, electrical stimulation will bring back events, words and feelings (personal note from Jana Shields on an edition of this paper, December 2001.)

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