

# Chapter 2

## Language

### *“Language”*

Timoth entered the room and blurted out “Isn’t it just a matter of formality?”

Rasmus looked up from the dictionary on the reading stand. “Isn’t *what* just a matter of formality?”

“This ‘register’ business everyone gets so worked up about. Wouldn’t it be easier to just say whether something was formal or informal?”

“Of course it would be easier; but it would also be terribly inaccurate.” Rasmus reached for a book on the top shelf. “Here, see this book? It lists hundreds of professional fields and identifies the requirements of each.” Rasmus placed the book on the desk, opened it, and continued, “Here near the beginning is ‘Architecture’, near the middle is ‘Medicine’, and at the end is ‘Zoology’.”

Timoth sat down at the desk across from Rasmus. “I’ll bet there’s a point to all of this somewhere... I can just feel it.”

“Yes, there is. Think of your average informal conversation on the street. Now, how would people in the fields I just mentioned communicate differently with their fellow peers on the job?”

“Well, they would likely use some specific vocabulary like ‘I-beam,’ or ‘scalpel,’ or ‘invertebrate’... stuff like that.”

“Yes, they are all likely to have different special vocabularies, although the medicine folks are likely to overlap a bit with the zoology folks. But suppose a group of zoologists went out for lunch at a restaurant. Would they talk to each other in the same way as they did at work?”

Timoth gazed out the window, hoping to see if any zoologists were outside. “I don’t know.”

“Well, you were the one who brought up the ‘formal’ versus ‘informal’ dichotomy. Wouldn’t you consider the work place more formal and the restaurant less formal?”

"I suppose it depends on which restaurant they go to," said Timoth, with a laugh.

"Aha! So the physical environment might actually make a difference in how they communicate? Suppose two zoologists are talking at work and their supervisor comes in. Would their manner of communication change at all?"

Timoth desperately wanted a zoologist or two to slip into the room at this moment. "Well, I suppose it might depend on what they were talking about before the supervisor came in and whether the supervisor was going to join that conversation or tell them to get back to their zoology." Timoth decided a smile might be better than a laugh this time.

"Well, done!" said Rasmus. "You've backed into the third variable: Topic. What the conversation is about might influence how it is discussed."

"Third variable? What were the other two?"

Rasmus held out three fingers and pointed to each in turn: "First you have the physical setting, second you have the participants themselves along with their relative status, and third you have the topic of their discussion."

Timoth extended the same three fingers and pointed silently to each. "So just three variables? Is it really that easy?"

Rasmus smiled. "I'm glad you are starting to consider these things easy. Yes, three primary variables; but also how the communication took place: writing, signing, speaking, shouting, etc. That's the fourth and final variable to what we call 'Register'."

"So formality can't exist without all four of these factors. Formality is only the tip of the iceberg. It's not that register is a matter of formality, but that formality is a matter of register!"

"By George, I think you've got it!"

## Chapter 2 - Language

### **2.0 Overview**

This chapter investigates language and its place as a subdivision of human communication. The technical term for using language to talk about language is *Metalinguistics*. The words “noun”, “verb” and “adjective” are excellent examples of metalinguistics because they are words (pieces of language) that describe pieces of language. Any book on interpreting or translation is a metalinguistic work. You have a metalinguistic discussion any time you talk with peers or consumers about language. One of the advantages of metalinguistic ability is that it helps children (and adults) to learn second languages (O’Malley & Chamot, 1990). Another advantage is it allows us to analyze interpretations and the process of interpreting.

This chapter will provide a systematic explanation of language structure that will help organize our understanding of what language is and how it relates to interpreting and transliteration. We will review different ways of expressing and perceiving language and will then explore “*The Linguistic Pyramid*” which organizes seven interactive levels of language. *Chapter Three* will explore language use. Subsequent chapters will explore language variation and other aspects of language.

### **2.1 What is Language?**

Any animal may use symbols (such as sounds or body movements) to convey information between members of a community, but the word *language* can only describe certain types of communication systems. The previous chapter defined communication as follows: one mind’s perception of a message, which another mind has expressed. *Language* is a specific kind of communication that meets all four of the following additional requirements:

- 1) The communication must be *systematic*: it must have rules that apply to the production and organization of the symbols (i.e. grammatical rules).
- 2) The communication system must allow for an *infinite* number of ways to encode any given message.
- 3) The communication system must pass between at least *two generations* of active users.
- 4) The communication system must be flexible enough to accept *change over time* and between users.

In sum, **language is the systematic use of symbols to express and perceive information between members of a community, in which the system is rule-governed, has infinite production possibilities, is intergenerational, and changes over time.** Humans are the only species on Earth that have the ability to communicate via language.

Prior to 1960, the definition of language specifically *excluded* gestural communication systems because another part of the definition of language was that it be spoken. In 1960, William Stokoe became the first person to systematically study a signed language. He began by exploring the first part of the definition: Stokoe analyzed the rules for the formation and organization of the symbols. In the landmark work he published that year, *Sign Language Structure*, he identified three basic parts which come together to form signs: handshape, location, and movement. In 1970, Robbin Battison

(among others) identified a fourth characteristic: palm orientation. The importance of facial movements was eventually recognized (for example, Liddell, 1977).

Stokoe later expressed all of these various aspects of signed languages as an even simpler notion of two things: *actor* and *action*. In other words, something *acts* (a hand at the side of the head, the muscles in the cheek to one side of the nose) and an *action* takes place (the tip of the hand taps the side of the forehead, the cheek muscle contracts and “wrinkles” one side of the nose). Other researchers identified the rules for ordering the signs (grammar), the ability to follow the rules while encoding the same message in an infinite number of ways (productivity), the fact that the language has been handed down through multiple generations of users (intergenerational transmission), and the ability for the language to adapt and change over time (chronological change).

With all of these requirements met, the old requirement that language must also be spoken has since been eliminated. Linguists around the world now acknowledge rule-governed signed communication systems as languages. William Stokoe was the person who gave the name “American Sign Language” to the signed language used in the United States of America and most of Canada. Other signed languages have different symbols, and different rules than ASL. These signed languages generally reflect the names of the countries or provinces in which they are used such as British Sign Language, Australian Sign Language, French Sign Language, Italian Sign Language, Quebec Sign Language, etc. So far there have been no signed languages that have been shown to follow exactly the same rules for any spoken language. In other words, French Sign Language (LSF) is not based upon spoken French; and Italian Sign Language (LSI) is not based upon spoken Italian. These titles simply indicate that the people who use LSF generally reside in France and the people who use LSI generally reside in Italy. Likewise the title ASL identifies that the users of the language generally reside in (North) America (the United States and Canada).

## **2.2 Channels and Modes**

Now that we understand language as a subset of communication, we can further explore a few more ideas about language. To begin, let’s consider the three possible language channels. *Language Channels* are the three basic ways of expressing language: signed, spoken, and written. English can be expressed in two channels (written English and spoken English) while American Sign Language is most commonly expressed in one channel (signed ASL) but may also be expressed in one of several writing systems proposed for ASL (although none are widely used at this time). *Channels* are distinct from *Modes*.

In the previous section we explored the five primary *modes* of expressing communication: image, odor, sound, taste, and texture. Only three expressive modalities are used to express language: image, sound, and texture. These three expressive modalities again match to our senses, which detect the elements of language. Languages are generally perceived and understood through the senses of sight, hearing, or touch. While it is clearly possible to *communicate* through food or perfume, we will exclude the senses of taste and smell from our discussion of modalities related to *language*.

*Channels* and *Modes* are related, but not as a one-to-one match. Generally, a spoken language is encoded through sound; written and signed languages are encoded through images. But spoken languages can be written in phonetic alphabets or encoded visually

with manual cues. Written symbols can be spelled out or transferred into Morse code tones. Texture is a common language-encoding mechanism for blind and DeafBlind people and can likewise encode signed, spoken, or written languages.

*Expressive Modalities* are not limited to language use. We saw in the previous chapter that they are available for all forms of communication: music uses sound; paintings use images (and some paintings of Elvis also use texture – velvet). It is quite possible, even common, to use an encoding modality *without* using language. For example, an infant’s random gestures, babbling, and occasional physical contact with a caregiver would be examples of using all three encoding modalities (images, sounds, and textures) but expressing no language at all through any of them. The child may certainly communicate, but the requirements that define language (such as being rule-governed and shared by a community) have not been met – at least, not yet.

In order to communicate, however, we must “express and perceive information between members of a community.” This means that whatever has been expressed must be perceived for the communication to take place. *Perceptive Modalities* are the means by which a message is perceived such as hearing, seeing or touching. Specifically we will identify these as *visual perception* (seeing images), *auditory perception* (hearing sounds), and *tactile perception* (feeling textures).

The three channels of written language, signed language, and spoken language can be expressed through image, sound, or texture. Within the channel of writing we might first think of printing versus cursive writing. It is also possible to express written languages through dots and dashes for Morse code (or raised dots on a flat surface for Braille). Morse code and Braille are not languages – they are *Language Encoding Systems*. ***Language Encoding Systems are finite and closed sets of symbols which express the basic structural components of a language.*** If those symbols (letters of the alphabet, dots and dashes) are embossed so that they can be detected by touch alone, they still encode a written channel but the expressive modality is texture and the perceptive modality is tactile. Figure 2.1, below, categorizes the most common *Language Encoding Systems* by *Language Channel*, and by *Expressive / Perceptive Modality*.

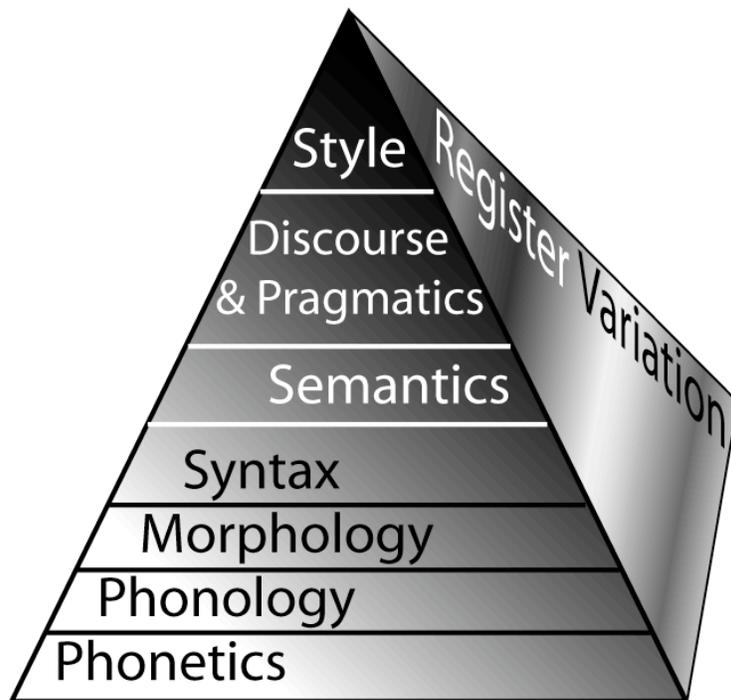
Language Channels	Expressive / Perceptive Modalities		
	Image / Visual	Sound / Auditory	Texture / Tactile
<i>Written Languages</i>	<ul style="list-style-type: none"> <li>• Written Symbols</li> <li>• Typed Symbols</li> <li>• Fingerspelling</li> <li>• Morse Code Symbols</li> <li>• Semaphore</li> </ul>	<ul style="list-style-type: none"> <li>• Morse Code Tones</li> <li>• Spelling Aloud</li> </ul>	<ul style="list-style-type: none"> <li>• Brailled Symbols</li> <li>• Raised Letters</li> <li>• Palm Printing</li> <li>• Tactile Fingerspelling</li> </ul>
<i>Signed Languages</i>	<ul style="list-style-type: none"> <li>• Signed Symbols</li> </ul>		<ul style="list-style-type: none"> <li>• Tactile Signing</li> </ul>
<i>Spoken Languages</i>	<ul style="list-style-type: none"> <li>• Phonetic Alphabets</li> <li>• Manual Cues</li> <li>• Mouth Movements</li> </ul>	<ul style="list-style-type: none"> <li>• Spoken Symbols</li> </ul>	<ul style="list-style-type: none"> <li>• Tadoma</li> <li>• Tactile Manual Cues</li> </ul>

Figure 2.1 – Language Encoding Systems

You may have noticed that one space in the middle of the grid has no examples. Signed languages are not expressed through sound nor are they perceived through auditory perception. While it is possible to make sounds while producing a signed language, these sounds do not effectively represent the basic structural components of signed languages. It is possible to use a spoken language to describe how to produce elements of a signed language. It is even possible to rearrange the order of words in a spoken language to match the word order of a signed language; however, neither of these examples can be considered a *language encoding system* for signed languages.

### 2.3 The Linguistic Pyramid

Now that we have a working definition of what language is we can explore the elements at work *within* language. One part of the definition for language is that the system is rule-governed. We will use an organizing strategy called the *Linguistic Pyramid* to identify the larger parts of the system of language. The idea of a pyramid reveals very plainly that the bottom-most layers support the weight of the layers above and so on. This provides a useful way to think of language because even the most complex use of language still requires the most basic elements to be produced. Let's have a look before defining each part of the *Linguistic Pyramid*.



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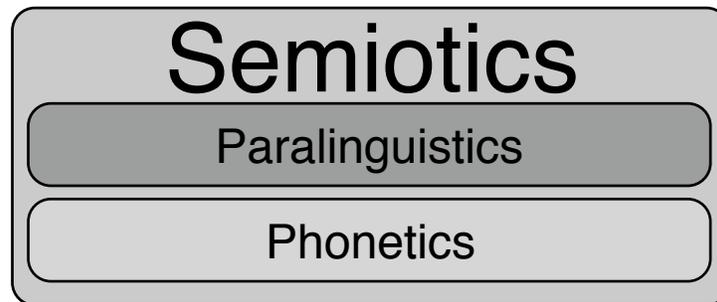
Figure 2.2 - The Linguistic Pyramid

### 2.3.1 Phonetics

Language can be thought of as a series of different skills and rules that overlap and build one upon another. At the bottom, most basic level we have *phonetics*, which consists of the foundational support of language. In spoken languages we have airflow, points of articulation within the mouth, vocal chord vibrations, and other changes in the mouth, pharynx and larynx. When all of these pieces are put together we can produce *consonants* and *vowels* and suddenly we're making the sounds of spoken languages. In signed languages we have finger, thumb and limb extensions, rotations, and contractions, which allow us to establish handshapes, orientations, and movements between locations. Without the foundation of *phonetics*, we can't get very far linguistically.

**Phonetics is the study of how elements of language are physically produced.** This means that muscles have to move and body parts must contact each other (or nearly contact each other). Phonetics focuses on the physical elements of producing a language. These physical elements are the result of *muscle movement* and are the most observable elements of language production. Phonetics attempts to explain the behavior that produces the building blocks of language.

In the previous chapter we investigated the expression of communication as *semiotics*. *Phonetics*, being the use of muscles to express language, is a subset of semiotics. It is still possible to express communication beyond language and some of this is called paralinguistics. *Paralinguistics*, a separate subset of semiotics, includes non-linguistic vocal inflection (such as changes in pitch and volume) or facial expression (such as mouth and eyebrow movements) for *affect* and emphasis. It is important to note that vocal inflection and facial expression also have linguistic uses, specifically as a part of grammar (vocal inflections and facial expressions may be the only indicator that a sentence is a question versus a statement). Beyond *Paralinguistics* is the remainder of semiotics, which includes vocal signals, eye gaze, visual gestures, and body postures. Figure 2.3, below, shows the relationships of *Paralinguistics* and *Phonetics* as separate subsets of *Semiotics*:



**Figure 2.3 - Semiotics, Paralinguistics & Phonetics**

### 2.3.2 Phonology

It isn't good enough just to have building blocks. We need some rules to guide how the building blocks are assembled and this is the realm of *phonology*. Some languages let you put groups of consonants together at the beginnings or ends of words. In English we

have problems pronouncing things like “tlzis” or “gbrang” because we don’t like these particular consonant clusters at the beginnings of our words. American Sign Language doesn’t like having too many two-handed signs where each hand has a different hand shape. Those two-handed signs in which the hands do not use the same handshapes are generally limited: the non-dominant hand can only use a few specific handshapes (Battison, 1978).

We use slash marks (/) to indicate speech *sounds* rather than letters. What you are reading right now is composed of letters (the written channel). If you read aloud, you produce sounds (the spoken channel). Often a letter is not pronounced the way it is spelled. Some simple examples include the letters “gh” in the word “enough”, where the last sound is pronounced /f/; and the letter “c” may be pronounced as /s/ as in the word “pencil” (/pensil/) or as a /k/ as in the word “cap” (/kap/). More subtle examples include the words “caps” and “cabs” where the letter “s” sounds like /s/ in the word “caps” (/kaps/) but sounds like /z/ in the word “cabs” (/kabsz/).

**Phonology is the study of how language elements are combined.** One way to do this is to inventory the words used in a language and find patterns. One pattern in English is that we can place up to *three consonants* in a row at the beginning of our words; but to do so, the first of these must be the sound /s/, the second sound must either be /k/, /p/ or /t/ and the third sound must be either /l/ or /r/. These combinations can be found in words like “sclerosis”, “scream”, “split”, “spray”, and “street”.

Phonological analysis will always make use of the level below it: *phonetics*. Each group of sounds (in the above examples) shares certain phonetic principles. The first of these sounds, /s/, is a *sibilant*. Sibilants are produced by restricting the flow of air so that a hissing sound is generated. As it happens, /s/ is a *voiceless* sibilant, meaning that the vocal chords are not vibrating when the sound is produced. The second group of sounds, /k/, /p/ or /t/, are all *stops*. Stops are produced when the airflow is interrupted by a closure of the mouth. The sound /k/ closes the middle of the tongue against the roof of the mouth, the sound /p/ closes the lips together, while the sound /t/ places the tip of the tongue against the base of the upper teeth. All three of these sounds are *voiceless consonants*.

The third group of sounds /l/ or /r/ are both *liquids*. Liquids restrict the airflow through a partial closing of the mouth. The sound /l/ is produced almost the same way that /t/ is produced, except that the tongue is not widened to close the airflow of the mouth, therefore air travels around the sides of the tongue. The sound /r/ is often produced, in American English at least, by a rounding of the lips. Both /l/ and /r/ are *voiced*, meaning that the vocal chords are moving when these sounds are produced.

Knowing how each sound is produced (phonetics) can lead to an explanation of which sounds are allowed to combine and which are not (phonology). The fact that the first two of these sounds are voiceless helps us understand a point of similarity between them. Knowing this similarity helps us predict that mixing of voiced with voiceless consonants (such as /zk/, /zt/, /zp/, /sg/, /sb/, or /sd/) are unlikely combinations at the beginnings of English words. The fact that both the /t/ and /l/ sounds are made with nearly identical tongue placement also helps us predict that the sequence /stl/ is *not* included in the possible combinations of three consonants at the beginning of English words.

All of this is indeed very technical, but the point is to demonstrate not only that there are rules at work here, but that there is already an overlap between the levels of the

*Linguistic Pyramid*: the rules governing combinations of speech sounds in English (phonology) are related to how those speech sounds are produced (phonetics). In other words, we can't do too much work on the second level of the pyramid without building upward from the first level of the pyramid. Each step upward depends on the levels beneath.

One example of phonetics influencing the phonology of ASL is the comfort in producing certain handshapes. ASL makes use of three different handshapes that extend only one finger (or the thumb). Extending the ring finger alone is uncomfortable, and is not used in ASL. Likewise, extending the middle finger alone is also uncomfortable (and a culturally taboo handshape, as well). Pinky extension occurs in isolation, but also combines with index-finger extension and/or thumb extension. The only times that ASL uses an extended ring finger is when at least two other fingers are also extended<sup>4</sup>. In this way the phonetic limits of comfortable handshapes directly influences the handshapes that are used in ASL

### 2.3.3 Morphology

Equipped with the building blocks (phonetics) and special rules that govern the kinds of combinations that are allowed (phonology), we can now start building something meaningful. The whole point of language is to tell people what we mean; and the smallest unit of meaning, linguistically, is the morpheme. ***Morphology is the study of how bits of meaning (morphemes) combine with other bits of meaning (other morphemes) to form words.*** The individual sounds /h/, /o/, /r/, and /s/ have no significant meaning by themselves but when put together in the order above they form the English word “horse” which brings to mind rather large, four-legged animals which may be useful to cowboys, rodeo stars, and polo players: that is one basic meaning of the word “horse”.

As it happens the word “horse” contains the letters “o” and “r” which, when combined, create the English word “or”; but the concepts related to the word “or” have rather little to do with a horse. These two words, “horse” and “or”, happen to have some *phonological* similarities, but they are separate and unrelated *morphemes*. *Phonology* indicates that these are all English sounds and that these sounds are combined in ways that English allows. *Morphology* lets us understand that there are different basic meanings attached. The combination of “horse” is a four-legged animal. The combination of “or” is a conjunction which is used to join more than one noun, verb, or clause. Both of these words are *free morphemes*, which can stand alone and still have meaning. In contrast is the category of *bound morphemes*, which only have meaning when they are attached to free morphemes.

One of the most obvious combinations of *free* and *bound* morphemes in English is our very predictable use of the written letter “s” being combined with nouns to mean “more than one” of the noun. When we bind the right bits together we can talk about “more than one horse” with the word “horses” because the “s” bit, which in this case conveys a

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<sup>4</sup> Note that BSL *does* have a handshape using an extended ring finger along with an extended pinky finger and that this combination is *not* an ASL handshape. Likewise BSL historically made use of the extended middle finger in BSL signs without any taboo meanings associated to it. Cultural influences, such as through American films, have begun to cause some BSL signers to modify their handshape inventory and eliminate the extended middle finger as a BSL handshape.

meaning of plurality<sup>5</sup>, gets bound to the “horse” bit. So the word “horses” contains exactly *two* morphemes.

Some people confuse the idea of a *morpheme* with that of a *syllable*. These two things (morphemes and syllables) may often overlap, but they are not the same. An example of the difference between syllables and morphemes is the English word “artichoke”, which has three syllables but contains only one meaning. The letters “art” form part of the word “artichoke” but they don’t reveal any meanings of the word “art”. In other words, the concepts of music, literature, paintings, or sculpture are not a meaningful part of the word “artichoke”. Likewise the letters “choke” form part of the word “artichoke” but, similarly, do not indicate the concept of restricted breathing as part of the word “artichoke”. So syllables and morphemes are different things: syllables are groups of *phonemes* surrounding a single vowel sound, morphemes are pieces of *meaning*.

Lets review the example of the morpheme “horse” and the morpheme “s” combining together to make the word “horses” (which is a single word with two morphemes in it). The “horse” part is a *free morpheme*, meaning that it can stand alone as a word all by itself. The “s” part is a *bound morpheme*, meaning that it cannot stand alone, but rather it must combine with a free morpheme to be meaningful. *Every word in this sentence is a free morpheme.* (Hey, wake up! Did you check that last sentence? Check it out before you keep reading).

Bound morphemes include many different pieces of meaning, including (for example) the letter “s” (which was attached to the word “morpheme” at the beginning of this sentence) and the letters “ed” which were attached (twice, now) to the word “attach” in this sentence. Those were quick examples so you might want to read the previous sentence again and find the examples. No, *really*, read it again, the examples are *imbedded* in the sentence.

Both *free* and *bound* morphemes contain phonemes (just when you thought you understood the difference between the two, now you are forced to make a connection!). Let’s return to some earlier examples: “caps” (/kaps/) and “cabs” (/kabz/). Notice that in the *spellings* of the words I used the letter “s” in both of them and that it changed the meaning to “more than one cap” and “more than one cab”. The same morpheme – a bound morpheme of plurality – was attached to each of the free morphemes “cap” and “cab”; but notice the *sounds* made for the letter “s” are different. When the plural morpheme comes after a voiceless consonant (such as /p/) then it takes the *voiceless* form /s/. When the plural morpheme comes after a voiced consonant (such as /b/) then it takes the *voiced* form /z/. When added to the word “horse” (/hors/), which already ends in the sound /s/, the plural morpheme adds a vowel and sounds like /iz/ (horsiz). The amazing thing is that we hear three different combinations of sounds (/s/, /z/, and /iz/) and still understand them to mean the same thing: more-than-one of something. This is how phonetics, phonology, and morphology overlap. We understand that this one piece of plural meaning (morphology) has three different English sounds (phonology) whose use can be predicted based on how the sounds are made (phonetics).

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<sup>5</sup> English also uses the same phonological piece “s” for possessives and to mark third-person singular subject agreement in verbs. Thus the letter “s” actually has three distinct English morphemes associated with it.

American Sign Language and British Sign Language are both morphologically rich languages in comparison to English. While English depends largely on the sequential combination of affixes (prefixes and suffixes in this case), ASL and BSL manage to use space in a very efficient way morphologically: various bits of meaning can be combined with others *at the same time*. A simple example is the use of *numeral incorporation*. The handshape component alone may represent the numerical part of a sign's meaning. But it is not possible to generate a sign with *only* a handshape. The remaining components (location, movement, and palm orientation) may represent the meaning of "weeks," for example. Both ASL and BSL use the same handshape for the number two. This handshape could then be combined with specific palm orientation, location and movement. The resulting combination would have the specific combined meaning of "two-weeks", and would be understood in both BSL and ASL to have that combined meaning.

While BSL and ASL share the same handshape for the number two, they have distinct handshapes for some other numbers. The ASL handshape for the number six is identical to one of the BSL variants for the number three (Cerney, 1987) and therefore the same physical sign production for the ASL concept of "six weeks" would be mistaken in England to mean "three weeks". While ASL and BSL do share some similarities in vocabulary (such as having identical production and meaning for the sign UNDERSTAND) they have significant differences including different sets of possible handshapes for each language (Cerney, 1987). It has been estimated that ASL and BSL share only about 30% of their respective vocabularies (James Kyle, personal communication).

#### 2.3.4 Syntax

We can take this idea one step further by arranging our bits of meaning in a line. If I have two brown horses I probably want to use a word order like "two brown horses" to talk about them in English. But if I'm not using English, I might mix up that order and talk about my "brown horses two" or even my "horses two brown." But if I know the rules of word order, or syntax, in my language, then I am likely to keep my words right order in the... I mean... in the right order. **Syntax is the study of word orders and the rules governing word orders in a language.**

One approach to syntax is that there are *basic* word orders to which rules may apply to generate more *complex* word orders. A basic word order in English is *Subject-Verb-Object*, noted simply as "SVO". If we have an object, however, that often means the verb can *act* on the object. These kinds of verbs are called "transitive". Verbs that do not act on objects are called "intransitive". The basic word order for English sentences with intransitive verbs would be SV – Subject-Verb. A verb's ability to act on an object is part of its *morphology*. So once again we see an overlap between different levels of the linguistic pyramid.

ASL shares the same *underlying* word order (SV or SVO) of English (Liddell, 1980). But this doesn't mean that every ASL sentence (or even that a majority of them) will follow the typical patterns of English. The underlying word order is only a *starting* point and many syntactic rules, such as *topicalization*, allow for changes in the word order. In ASL this might mean that my topic is the two horses and my comment is that they are *brown*; or perhaps my topic is the brown horses and my comment is that there are *two* of them.

Many people who learn about the *Linguistic Pyramid* are curious to know where “grammar” sits within the pyramid. *Grammar* is the combination of *morphology* and *syntax* and therefore it is within those two levels that “grammar” can be found. Grammar includes the correct use of *free* and *bound* morphemes to indicate plurality as well as the correct word order as in the following sentence: “Grammar has two components.” In this example sentence the word “Grammar” serves as a noun (morphology) and also as the subject of the sentence (syntax); the word “has” is the third-person, present-tense form of a transitive verb; the phrase “two components” consists first of an adjective “two” and a noun “components” which itself was constructed of the free morpheme “component” and the bound morpheme “s”.

Now, you may be sitting there, thinking to yourself, “gosh this sure is complex... how could I ever learn this stuff?” But the fact is that you already know how to use language. You probably had never encountered the sentence “Grammar has two components” before, but you were able to understand it. If language had no rules you wouldn’t be able to read and understand *anything*. We know and follow the rules of a language that we know, even if we can’t define or explain the rules. What the *Linguistic Pyramid* helps us to do is to organize and explain the rules that we are already following. Once we have them organized, we can use them to our advantage. But first, we need to climb a few more steps in the pyramid.

### 2.3.5 Semantics

Well all of this is fine, you say, but where does interpreting fit into all of this? It doesn’t yet. You see, we need all of the building blocks and rules to use language, but we need to have a message before language is worth much. Noam Chomsky proposed one famous example of a meaningless sentence: “Colorless green ideas sleep furiously.” Grammatically this is a legitimate English sentence, but it has no meaning. In fact, it has contradictory meaning (how can something that is colorless also be green?) There is no reasonable context in which this sentence makes any sense.

**Semantics is the study of meaning in words, phrases and sentences** (in contrast with morphology, which is the study of pieces of meaning and how the pieces combine). *Lexical Semantics* focuses on words; *Structural Semantics* focuses on the meanings built between groups of words (phrases and sentences). A common example of structural semantics is the English word “run” meaning a physical activity for joggers (“I run every morning”) but in other contexts the same word may mean an unraveling in clothing (“there is a run in my stocking”). Semantics includes the idea of *conceptual accuracy* (using the right word for the right concept). It is context that provides the ability to determine that accuracy. *Context* means more than just the surrounding words in a sentence. Let’s take an example sentence of “It will run.” Without any context we would assume the word run is being used in its *Primary Sense*: using legs to propel a person or animal forward at a quick pace. But additional context can help us understand the meaning of “it” and “run” more accurately.

Referent of "It"	Ambiguity	Clarifying Context
<i>Colored fabric fading:</i>	"It will run"	if you wash it in warm water"
<i>A stage performance:</i>	"It will run"	for two more weeks on Broadway"
<i>An automobile motor:</i>	"It will run"	once you replace the spark plugs"
<i>Fabric unraveling:</i>	"It will run"	if you snag it on something sharp"

Figure 2.4 – Meaning In Context

Semantics also includes the notion that there are various relationships of meaning between words such as *opposites* like "old" and "young" where one could say "not young" instead of saying "old". Other examples include *hierarchies* where we understand that a large general category such as "food" has many sub-categories such as "fruits" and "meats". "Fruits" contains things such as "Apples" and "Pears". "Apples" contains varieties such as "Golden Delicious" and "Granny Smith".

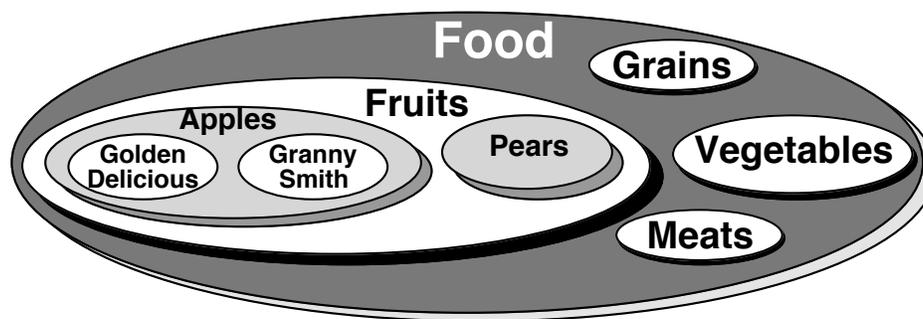


Figure 2.5 – Semantic Hierarchies

But the words "Granny Smith" might also refer to someone's elderly relative and "Apple" might also refer to a kind of computer. The context surrounding the use of the word will generally make it clear what the meaning is, but sometimes will still leave ambiguities such as in the sentence "Visiting relatives can be annoying", which may describe the task of visiting other relatives as an unpleasant one or refer to the irritation which might be caused by relatives visiting you.

Semantics began as a vague field, and, quite honestly, is still rather vague, because we cannot *see* meaning; we can only agree to what the meaning is. So when we say, "what does DOG mean in English?" we can turn to the dictionary or we can argue that it may mean certain prototypical bits and pieces of dogs (such as four legs, a snout with teeth inside, ears, fur, a tail, and so on). When the word DOG is used in context, however, it may really mean my dog, or the first dog I ever met, or that really nasty animal down the street, or for that matter, Snoopy, Lassie, Marmaduke, or Toto. So when you have all

these possibilities just for the word “DOG,” imagine the complications that can come up for a whole language full of words used in a whole world full of contexts.

So here we are with semantics. Surely that’s good enough for interpreting, right? I mean, all we have to do is understand what the words mean in the source language, find the words that mean the same thing in the target language, and say those words in complete sentences with accurate grammar and clear enunciation. Isn’t it *exactly* as simple as that? Well that’s fine if we want to turn a comedy routine into a dry and pointless lecture; but we might not get hired again in our lifetimes (and that’s not good because we need the work!)

### 2.3.6 Discourse and Pragmatics

While semantics focuses on what a word or an utterance means, given its context, we still need a higher level to investigate how people use language with each other. *Discourse* is how we use language beyond the sentence level. **Pragmatics is how social and environmental factors influence the meanings of the speaker** and is a co-partner to discourse. *Discourse Analysis* is the study of how people organize and use language to do things. When we ask, “Could you pass the pepper, please?” we aren’t really looking for a “yes” or “no” answer. We really *do* want the pepper and we want it before our food gets *cold*. The pragmatics of this situation is that we actually want the pepper, but we also need to be polite. The *discourse feature* used to accomplish this goal is the use of a yes/no question, which is culturally recognized as a polite way of making a request.

When we ask, “Could I ask a question?” we tend to ignore the fact that we just did. And when friends start lambasting a particularly nasty co-worker who, by chance, has just entered the room, you can quickly change the discussion to how odd the weather has been lately which (if your friends are paying attention) will let them know that it is time to stop the lambasting.

Let’s take an example sentence and several possible responses to it. Example: “I want the red one.” Response A: “Certainly. Is there anything else I can get for you today?” Response B: “Well, maybe, if you’re good, we can come back and get it.” Response C: “What we *want* and what we *get* don’t always match up, do they?” Response D: “Mr. Smith already purchased it.” Response E: “Oh, I didn’t know you were such a connoisseur!”

The example sentence appears to be a request, but it may simply be a statement without any intention of accomplishing a transaction. *What situations* are likely to surround each response? Probably each could be spoken in a store, but they might be uttered as people look through a catalogue, peer through a window, or survey the landscape. We simply don’t know what “one” refers to. But we would understand that whatever it *does* refer to, there is probably *only* one that is red, and very likely to be others, which have colors *other* than red.

Which responses mean “yes” and which mean “no”? Response A implies “yes” even though that word is never stated. Likewise responses C and D imply a “no” without directly saying so. Response B implies “maybe” but might actually end up meaning “no”. Response E does not seem to indicate any affirmative or negative, but rather appears to be a comment about the requester.

*Who are the people* making these utterances? Responses A and D are likely to come from a sales clerk. Responses B and C are likely to come from a parent (or at least a person with authority for making purchases). Response E might well come from a peer.

*What is the effect* of each response? Responses A and D appear to be polite interaction. Response B may be a request for postponing while also an indication that it is time to leave. Response C may be an indication that no further requests should be made (and perhaps no further utterances at all). Response E may be a joke or at least a jovial response to indicate camaraderie.

Our use of emphasis, pauses, and repetition also influence the way we use words to communicate. Let's revisit the example from above with a few modifications: "I want the red one (pause) the red one." This might be uttered as a store clerk begins to get the pink one. Gestures, eye gaze, body posture all can influence how we understand people's intentions. Let's take the same example, but trimmed a bit: "I want that one" and combine it with a pointing gesture with eye gaze directly at the desired object and the body leaning forward. All of these additional physical behaviors are called *paralinguistic* features. Paralinguistic features are things, which are not by themselves language, but can occur simultaneously with language. They support the linguistic message and could well be investigated as part of *discourse analysis*.

Knowing *how to build* words and sentences is certainly an essential part of using language, but knowing the *way we use* words and sentences is nearly as important as what those words and sentences are. We need to know how our consumers are using the words they say in a source text; but then we also need to know the appropriate ways to say those things in the target language. This is real work, and it is also real interpreting.

### 2.3.7 Style and Idiolect

Where do we go from here? Well, there is one more upward level toward completing the *Linguistic Pyramid*: Style. When we understand the message well enough to adequately predict where it is going; and we also understand the person creating the message well enough to know her purpose, her tendencies, her idiosyncrasies of language use; then we have entered a *stylistic* understanding of the source text. **Style is how a single person organizes and uses language.**

One aspect of *literary criticism* is the investigation of the stylistics of writers; and stylistics is the capstone of this investigation into linguistics. If we look at discourse as the way a community uses language, then style is the way a single member of a community uses and organizes language. Bakhtin states that "Any utterance ... is individual and therefore can reflect the individuality of the speaker (or writer); that is, it possesses individual style." (Bakhtin, 1986: 63). When cousin Bob always mispronounces certain words, uses other words in unique ways, or, in general, has his peculiar ways with language, then we are talking about his individual linguistic style.

*Style* includes the predictable linguistic use of certain words or phrases and topics of discussion. It also includes predictable paralinguistic features such as pitch, quality of voice, gestures, and facial expressions. Paralinguistic features are most noticeable at the discourse and style levels of the *Linguistic Pyramid*. Those features that identify people's attitudes, beliefs, and emotions about their messages can be considered as stylistic.

*Style* is what impressionists and impersonators depend on for entertainment. Imitations of John Wayne, Ed Sullivan, Rod Serling, and US presidents abound in the

field of entertainment. The most entertaining are often those who most completely match the style and idiosyncrasies of the person being imitated. More specifically, a successful impressionist uses elements of a person's *Idiolect*. *Idiolect*, a subset of *Style*, is the way that an individual uses language, which includes the regular occurrence of certain behaviors that are not considered the norm for the larger language community. *Idiolect* includes regular mispronunciations, word usage, and gestural behaviors.

Beyond *Idiolect*, stylistics also includes the *organization* of a message, such as whether it starts off with the main point and then builds the arguments or, alternatively, slowly works toward a point but never directly mentions it. If a person's message is endlessly going off in different tangents then their style is very different from someone who identifies the main points and is quickly finished. The *Organizational Style* is different from *Idiolect*, because many people with very different idiolects can share very similar organizational styles.

Understanding the organization of a text is an essential aspect of being able to regenerate that text in another language. If an interpreter has access to the outline of a presentation (and if the presenter will actually follow that outline) then the interpreter will have significant ability to predict the message, understand its organization, and maintain its main point and supporting details accurately. Understanding the organizational style of a message allows the interpreter to know which elements are to be compared or contrasted. The interpreter who does not have prior access to an outline may still be able to succeed at making these kinds of predictions if presenters follow an expected organizational style or announce their intentions when they start a presentation.

A stylistic understanding of a source text can be helpful, if not essential, in the interpreting process. Understanding the organizational style helps make predictions about the source text and its creator. If we are also able to generate some form of equivalence of the presenter's individual linguistic tendencies<sup>6</sup> in the target language, then we are being about as accurate and true to the source as possible.

### 2.3.8 Register and Register Variation

Now that we have all the building blocks in place and have built the *Linguistic Pyramid* from the base of *phonetics* to the capstone of *style*, we can turn the whole thing sideways and look at one way that language gets modified. Touching on all of the levels of the *Linguistic Pyramid* is what has come to be called *Register Variation*.

Gregory and Carroll (1978) defined *register* as being composed of four elements contained in three categories: the *field* (a combination of subject matter and location or setting), the *mode* (language form or signal), and the *tenor* (relation of speakers). Register is here defined as being composed of all four of the variables identified in their three categories: *setting*, *signal*, *speakers*, and *subject*.

*Settings* could be conference rooms, lecture halls, park benches, religious sanctuaries, auto repair shops, or bedrooms. The *signal* is simply the language channel, mode, and *language encoding system* used to communicate, such as conversing in signed ASL or making a public presentation in spoken English. The *speakers* may be strangers or may know each other well. They may only interact at work or may also know each other

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<sup>6</sup> This is not to say that we should imitate our source speakers to the point of making fun of them; neither should we attempt to match extreme emotions, except in dramatic presentations.

socially. *Subjects* of discussion could be work, politics, the weather, sports, shared experiences, or learning something new. **Register Variation is the change in language based on where the communication is happening, how the communication is taking place, who is talking to whom, and about what topic: Who, What, Where, and How.**

*Register Variation* affects every level of the *Linguistic Pyramid*. The most obvious changes are in the vocabulary we use, such as “choo choo” to a child, “train” in general terms, and “the express” to people who know about trains. Another obvious area is in syntax such as “Hello there!”, “It’s nice to meet you”, and “I am so pleased to make your acquaintance.” *Register Variation* includes the different ways that we pronounce our words as in the differences between “Wha cha doin?” and “What are you doing?”

Some people prefer to think of *Register* as meaning a certain level of formality; but register is much more than just a measure of formality. Martin Joos (1961, 1968) proposed a theoretical division of the ways people talk: *intimate, casual, consultative, formal, frozen*. Many people trying to understand register variation have borrowed his five-way division, but these simple categories don’t capture the subtleties of *Register Variation* and Joos did not even use that label. His label for this five-way division of language variation was the “five clocks” (Joos, 1961, 1968). Some people have latched on to his writings as an explanation of *Register Variation*, in part because it proposes a nice small number of divisions – five (just the right number to count on your hand). While Joos’ “five clocks” and the concept of register variation are related, it is important to understand that studies of register variation do not limit themselves to only five divisions, nor are there only five kinds of register being dealt with by the consumers of interpreting services.

While the level of formality can certainly impact upon register, formality level does not equal register. Charles Ferguson (1977) gave this explanation of register:

One of the central facts about human language is the way it varies in structure depending on the use to which it is put. Every speech community and every individual user of language exhibits this kind of variation in language behavior. It is not only the semantic content which varies according to the use but also phonological and syntactic patterns, choice of vocabulary and forms of discourse. In some societies this variation can be illustrated dramatically by turning the dial of a radio to find a particular program. It often takes less than a sentence of speech to decide whether we are hearing a news broadcast, commercial message, ‘soap opera’, campaign speech, or sermon. (Ferguson, 1977: 210).

Hatim & Mason (1990) identified a helpful difference between “Language Users” and “Language Use”. Variation for *Language Users* may be based on region, social class, gender, ethnicity, and generational differences. *Language Use* is directly tied to register variation: 1) where they are talking (settings), 2) how people talk (signals), 3) who they are talking to (speakers), and 4) what they are talking about (subjects).

Significant variation may be demonstrated in the choices a person makes when they are talking to their boss or talking to their child. To the Boss - clear pronunciation of technical words and jargon with some routine phrases that are only understood in the work environment. To the child - some pronunciations of words (such as “choo choo”) that the child understands (but would not be appropriate for use with adults), simpler sentences, and occasionally incorrect morphology in an attempt to reduce the difficulty for the child to understand.

Of course we are always modifying how we communicate, even with the same people, depending on where we are and what we are talking about. We even see differences between people in the same situation talking about the same thing: Let's suppose that we wish to apologize to our boss for messing up the "Jones account." We are likely to say (rather meekly) things like "Um, boss, I'm really sorry that I messed up the Jones account and I'll never do it again." whereas our boss is likely to say (with significant force) things like "Johnson, this is the last time this company can afford to absorb your mistakes. The next time you'll be fired!"

Now let's suppose that on a different occasion you've actually impressed the boss: "Johnson, I want to tell you how pleased I am with the work you put into the Smith account. Thanks to you, this company can afford to purchase a company car for your division." To which you might reply "Thank you, sir!" or even "Gee, thanks, boss!" Each person in each exchange is speaking in very different ways, yet these would all fit in the realm of Joos' "consultative clock." So understand that register variation is a grand, all encompassing idea, not just five little divisions of communicative behavior.

As we learn a language, we continue to develop our variation in register over time. As we encounter new topics, new people, and new places we observe and adopt new ways of modifying our communication. Register development is tied to the continual expansion of our language skills. Each successive development includes every level of the *Linguistic Pyramid* as we adapt our phonology, morphology, syntax, semantics, etc to our new experiences. Figure 2.6 represents the expansion of our register development over time.

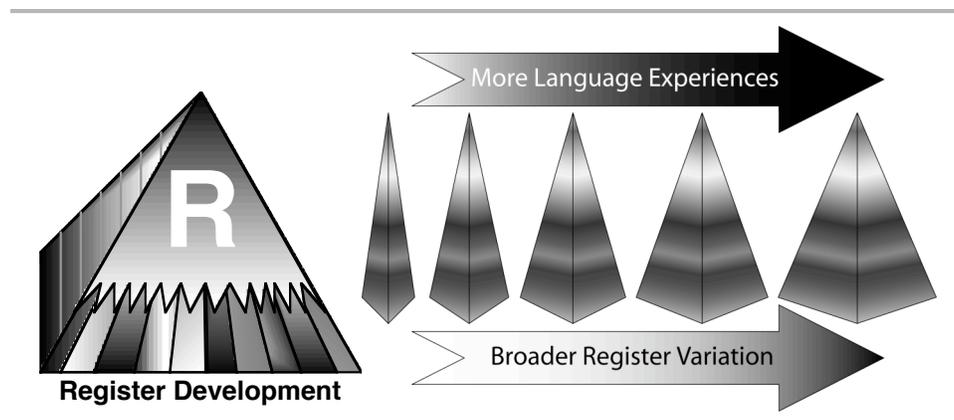


Figure 2.6 – Emerging Register Variations

#### 2.4 Language Comprehension, Expression and Development

Now that we have defined the seven levels of the *Linguistic Pyramid* we should recognize that there is a difference between language *comprehension* and language *expression*. Generally our language skills are *greater in comprehension* than in production (we understand more than we can comfortably express). We may understand a vast amount of vocabulary but only feel comfortable using a smaller part of that

vocabulary. We might be able to figure out the general meaning of a sentence with words that we don't fully understand, such as "He obfuscated for so long that they eventually just gave up." The word "obfuscate" obviously means something non-cooperative, but without a dictionary, we may be very hesitant to try to use the word in our own sentence. We also can understand significant variations of our language including dialect, sociolect, individual stylistics, and register variation; however we are not likely to *produce* more than a small portion of the varieties that we can *comprehend*. Thus the *Linguistic Pyramid* must represent both *Language Comprehension* and *Language Expression*. (Well, have you looked up the word *obfuscated* yet? I'm not going to tell you what it means, look it up yourself!)

As we have discussed previously, each language user also has the ability to vary their language production based on *where* they are, *who* they are talking with, *what* they are talking about, and *how* the communication is being expressed and perceived. These four variables constitute *Register Variation*; but our various registers are developed over time. *Register Development* depends upon multiple language experiences, such as how language is used in a church, on a soccer field, in a classroom, and so on. Each experience broadens the entire *Linguistic Pyramid* as new pronunciations, words, word orders, and meanings are understood and incorporated into one's overall knowledge of a language.

There are actually four faces of the Linguistic Pyramid: 1) the bottom represents the phonetics of perceptive and productive language. The three ascending sides represent 2) Language Comprehension, 3) Language Expression, and 4) Register Variation (represented as a collection of thin slivers, each expanding the pyramid further across its base). Figure 2.7, below, identifies each of the four faces of the Linguistic Pyramid and the names of each adjoining face. Think of it as a spatial relation test. It might actually help if you photocopy Figure 2.7, cut along the lines and tape the pieces together into a pyramid.

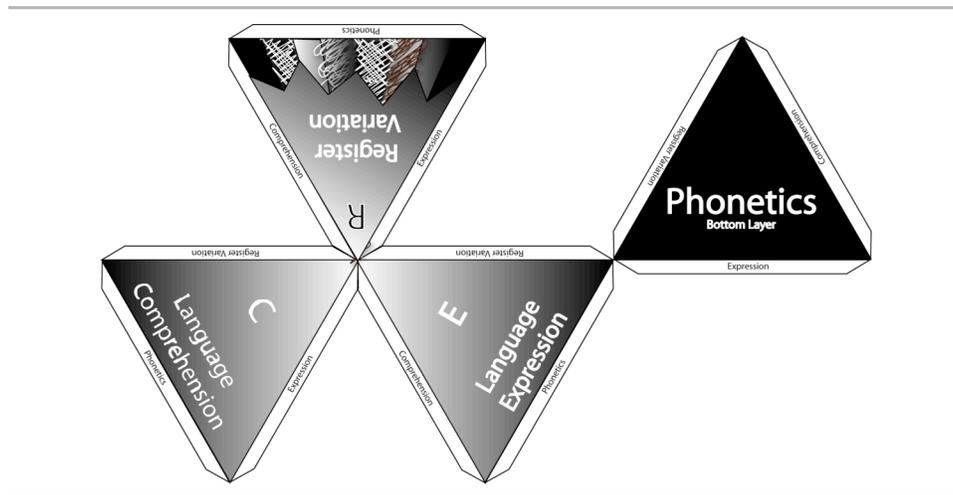


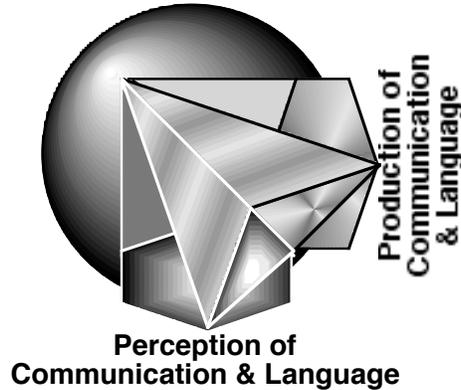
Figure 2.7 - Four Sides of the Linguistic Pyramid

We will revisit the *Linguistic Pyramid* throughout the rest of this text. It is the basis for scientifically understanding any language and we will eventually use it to systematically analyze the work of interpreting.

### **2.5 Language as a Subset of Communication**

With all of the layers of the *Linguistic Pyramid* in place we should also recognize that language, as a specific subset of communication, includes both *production* (which begins with the phonetics of language expression) and *perception* (which is essential for language comprehension). Phonetics (the most basic layer of the *Linguistic Pyramid*) is the production of all language elements. Every other layer of the Linguistic Pyramid is built on that base for both production of language and the perception of language. The production of a message depends upon muscles moving anatomy. If these movements (or they're resulting evidence, such as writing) are perceived, then the perceiving mind begins with only the results of another person's muscle movement. The perceiving mind can attempt to reconstruct the message by applying successive layers of the *Linguistic Pyramid* to the incoming pieces. The reconstruction will be guided by the perceiver's mind, background knowledge, linguistics skills, etc. Because each perceiver's mind is unique, it is possible for multiple perceivers of the same message to generate their own nuances in meaning, or even to completely misunderstand (or outright *miss*) portions of the producer's message.

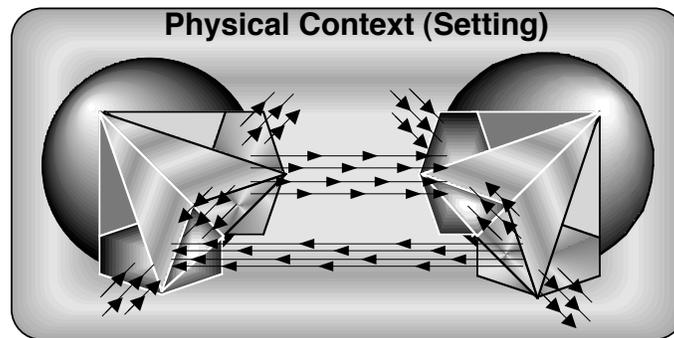
We must also recognize that additional elements of communication will generally accompany the use of language. In other words, language rarely occurs in isolation from other simultaneous paralinguistic and semiotic aspects of communication such as gestures, intonation patterns, facial expressions, etc. Therefore most attempts to communicate through language will include additional communication *outside* of language. The graphic below places the *Linguistic Pyramid* within the previous representation of communication.



**Figure 2.8 - The Mind's Linguistic Perception & Production**

Before we go much further it might be useful to review the elements of this graphic that were previously introduced. The sphere represents the *Mind* and its knowledge about communication, about people, about facts and topics, and about the physical setting. It also includes the *conscious* and/or *unconscious* intentions to communicate. The dark-shaded hexagon-cone represents *perception* and *comprehension* of communication. The light-shaded hexagon-cone represents production and expression of communication. The addition comes in the form of the *Linguistic Pyramid*, which rests between these last two elements, half representing language comprehension as a portion of overall communication comprehension, the other half representing language production as a portion of overall communication production. The capstone of the *Linguistic Pyramid* is closest to the mind of the individual, while the phonetic base of the pyramid is included in the semiotic production and perception of the communication.

But as we discovered in the first chapter, another mind is required to establish communication. Likewise two minds are required to establish *linguistic* communication, which is represented in the following graphic.



**Figure 2.9 - Linguistic Communication Within a Physical Setting**

This image is similar to the one presented in Figure 1.4 of chapter one, but this graphic has the addition of the *Linguistic Pyramid* overlaid upon each person's perception and production of communication. Figure 2.9 recognizes the previously mentioned elements of linguistic communication and places them in a physical setting, which provides part of the context for understanding the message. The physical setting also influences the clarity of the communication, as both participants perceive information from the environment that may have relevance to communication; or may cause interference by means of visual or auditory noise. Likewise both participants potentially generate movement, which may be part of communication or may add to the visual or auditory noise in the environment. In the midst of all of this perception is the participants' ability to monitor their own production of communication, language, and noise.

Finally, it is important to recognize that all the elements of *Register Variation* are represented in this model: 1) *Topic* (intention of communication within the mind) 2) *Language Use* (as part of the overall communication), 3) *Participants* (at least two minds engaged in communication), and 4) *Physical Setting* (providing context and also influencing message clarity).

### 2.6 Summary

This section has presented a number of important components of language. We began by investigating the differences between *communication* and *language*. Then we identified three distinct *channels* of language (signed, spoken, and written) along with a wide variety of *Language Encoding Systems*. Next the concept of the *Linguistic Pyramid* was introduced which identified seven interactive levels (phonetics, phonology, morphology, syntax, semantics, discourse, and stylistics) and the concept of *Register Variation*, which crosses all of these levels. Finally we placed the Linguistic Pyramid into the previous models of communication, including *productive* and *perceptive* aspects of linguistic communication.

#### 2.6.1 Review Questions

1. How is *language* different than *communication*?
2. What researcher first brought attention to signed languages as legitimate languages?
3. How many language channels are there?
4. Which senses are used to detect language?
5. What is the difference between *Language Channels* and *Modes of Perception*?
6. How many levels are there in the *Linguistic Pyramid*?
7. What is the most basic, lowest level of the *Linguistic Pyramid*?
8. What is the difference between *phonology* and *phonetics*?
9. Which two levels of the *Linguistic Pyramid* relate to grammar?
10. What is the difference between *morphology* and *semantics*?
11. What is the difference between *discourse* and *stylistics*?
12. What four variables contribute to the concept of *register*?
13. Aside from *Phonetics*, at the base of the *Linguistic Pyramid*, what do each of the three remaining faces of the pyramid represent?

#### 2.6.2 Suggested Activities

1. Think of three complete sentences (in either a signed or spoken language) that are each composed of only one word. What kinds of sentences are possible?
2. Watch or listen to a story (in either a signed or spoken language). Identify all the nouns in the first minute of the story. How many of the nouns were repeated within the first minute? How many of the nouns were replaced by pronouns during the first minute? How many of the nouns are conceptually related to one another? Now try retelling that same first minute of the story without using any of the nouns more than one time and without using any pronouns at all. How different does it seem from the original? Does it still make sense? Now try telling the same first minute of the story without any nouns and only using the appropriate pronouns. How interesting is the story without nouns?