Language is a city to the building of which every human being brought a stone.

Ralph Waldo Emerson

Viewed freely, the English language is the accretion and growth of every dialect, race, and range of time, and is both the free and compacted composition of all.

Walt Whitman

To get the right word in the right place is a rare achievement.

Mark Twain

What is "Natural Language"?

One definition:

any language arising in an unpremeditated fashion from the innate facility for language possessed by humans

But one must distinguish descriptive linguistics from prescriptive linguistics.

prescriptive linguistics:

attempts to define standard language forms and provide advice on how to use the language effectively

descriptive linguistics:

attempts to objectively study and record how a language is actually used by its speakers and writers

The notes that follow presents examples of actual use, not of prescribed use.

A *polysemous* word has <u>multiple</u> meanings:

charge

set

make

run

Meaning may be *context-sensitive*.

"The bandage was wound around the wound."

Challenges of Natural Language: Syntax

Syntax: the rules and principles for constructing phrases and sentences

Rules may be "flexible" and poorly understood.

Correctly formed sentences or phrases may still be confusing:

"The boy the man the girl kissed hit died."

"The car hit the tree so hard its engine was damaged."

Incorrectly formed sentences or phrases may not have clear meaning:

"Always wait for the white man to cross."

Language is NOT commutative.

"Santa comes only at Christmas." vs

"Only Santa comes at Christmas."



Challenges of Natural Language: Idioms

Idiom: an expression, word, or phrase that has a figurative meaning that is comprehended in regard to a common use of that expression that is separate from the literal meaning or definition of the words of which it is made.

Common usage may be counter-intuitive (and even strictly incorrect): "a blessing in disguise" "bite the dust"

"a piece of cake" "a poor man's ____

"Where's the butter?" (your mother, at the dinner table)

Common usage may just be weird:

"Just tell him I sent you, and Bob's your uncle."

"make no bones about it"

"I could care less."

"got my goat"

"don't have a cow"

Challenges of Natural Language: Spelling

Spelling – don't even get me started on that one...

- "ghoti" may sensibly be pronounced "fish"
- No real effort to standardize until the late 18-th century.
- Few rules, and those are confusing (if not confused).
- A mis-spelled word may well be another, valid word.

Eye halve a spelling chequer It came with my pea sea, It plainly marques four my revue Miss steaks eye kin knot sea. Eye strike a key and type a word And weight for it two say, Weather eye and wring oar write It shows me strait a weigh. As soon as a mist ache is maid It nose bee fore two long, And eye can put the error rite Its rare lea ever wrong. To rite with care is quite a feet Of witch won should bee proud, And wee mussed dew the best wee can, Sew flaw's are knot aloud. Eye have run this poem threw it Your sure reel glad two no, Its letter perfect awl the weigh My chequer tolled me sew. -Sauce unknown

Ambiguity: the condition that information can be fairly interpreted or understood in more than one way.

He ate the cookies on the couch.

You can't put too much water on a nuclear reactor core. (http://www.youtube.com/watch?v=6JrIYR8jArk)

We are selling an antique desk suitable for a lady with thick legs and large drawers.

You would be lucky to get Dwight to work for you.

Challenges of Natural Language: Ambiguity Natural Language 8

Some real headlines:

Iraqi head seeks arms (semantic ambiguity, doubly so)

Mrs Gandhi stoned at rally (part-of-speech ambiguity)

Teacher strikes idle kids (part-of-speech ambiguity)

Stolen painting found by tree (structural ambiguity)

The Many Forms of If...Then

In English, there are many different ways to say that "P implies Q", including:

If rain is falling, then the sky is cloudy.

Rain is falling only if the sky is cloudy.

The sky is cloudy, if rain is falling.

The sky is cloudy, provided that rain is falling.

The sky is cloudy, assuming that rain is falling.

In order for the sky to be cloudy, it is sufficient that rain be falling.

In order for rain to be falling, it is necessary that the sky be cloudy.

What speed-reading advocates say:

- 1. Don't subvocalize when you read
- 2. Read only the key words
- 3. Don't be a word-by-word reader
- 4. Read in thought groups
- 5. You can read at speeds of 1000 or more words a minute without any loss of comprehension
- 6. Don't regress or re-read

These suggestions are simply incorrect, in almost all cases.

There are no short cuts to comprehension!

Difficult material typically requires re-reading to understand.

Whimbey, Ch V