

Unit 1. What Is Linguistics?

Objectives

After completing this unit, you will be able to

1. Define the concept of Linguistics and explain why Linguistics is a *science* (with reference to the Scientific Method and Inductive Logic) and how sciences differ from art
2. Briefly outline the major stages in the history of Linguistics (Philosophy, Philology, and Modern), and contrast linguistics to prescriptive grammar
3. Explain the concept of Dialectical Linguistics, contrasting metaphysical and dialectical reasoning
4. Discuss the role of symbols in human communication, distinguishing between iconic and arbitrary, and aural / visual symbols
5. Explain the concept of ambiguity, distinguishing between lexical and structural ambiguity

1.0 Introduction

This unit introduces you to Linguistics. We will briefly outline its history, consider its scope, and ask the rather controversial question: What makes Linguistics a *science*? Our search for answers will lead us to examine the Scientific Method and scientific reasoning. We will discover how Linguistics is different from natural sciences, and will focus on the most important feature of human language: *symbolic* representation. We will discuss different kinds of symbols and their role in human communication, paying special attention to the problem of double meaning (ambiguity). This unit aims to show how studying Linguistics can help us – not only better understand ourselves and human society, but also effectively empower us in our personal lives.

1.1 The Science of Language, known as Linguistics

As you have probably already figured out,

Linguistics is the Scientific Study of Language

Linguistics tries to describe and explain human Language and everything about it: its origins, its nature, and its role in human life. By Language, we do not mean any one language, like English, Tok Pisin, Enga, Motu, etc.; rather, we mean the universal human ability to think and to communicate their thoughts through *symbols*.

Thoughts have no physical substance – we cannot see, hear, smell, taste or touch what others think. We, *Homo sapiens*, are the only creatures on Earth that have figured out how to *represent* our thoughts through *symbols* - either by the sounds of words (that we can hear) or by signs that we can see (that is how I am sharing my thoughts with you now, through these written words).

Symbolic representation is very important in getting to understand the nature of human language, so we will discuss it in greater detail in Section 1.4 of this unit.

Why, and How, Is Linguistics a Science?

Linguistics is a science because, like all sciences, it uses the **Scientific Method** to analyze its object of study (Language). The Scientific Method involves:

1. **Observation** (based on our physical or technologically extended senses)
2. **Hypothesis** (based on logical apprehensions)
3. **Experimentation**, and
4. **Validation** with evaluation (analysis).

Reproducibility of experimental results is central to the scientific method, particularly in the domain of natural sciences. That is why we need **standards**, and to measure the standards, we also need a system of **units**. In physics, for example, we use km/hour to measure speed. In linguistics we also use standard concepts and units, such as phonemes, morphemes, phrases and sentences.

The Scientific Method was developed by an Ancient Greek philosopher **Aristotle** over 23 hundred years ago. Aristotle ‘thought with incredible clarity and wrote with superhuman precision,’ which explains why his thoughts have had such an impact on Western culture and, through science, on all modern, global culture.¹

Aristotle believed that we can understand things through observing and classifying them; i.e., that **knowledge** (which is what the word **science** means) is **empirical**, or **knowable** through the senses. Aristotle studied everything: rhetoric, language and logic, philosophy and ethics, the sciences, etc. He was one of the first to write about the importance of **evidence**. When he approached a problem, he would thoroughly examine

1. What people had written or said on the subject before him,
2. What the majority of people thought on the subject, and
3. Everything else that is part of or related to the subject.

For example, in his treatise on animals, he studied over five hundred species; in studying government, he collected and read 158 individual constitutions of Greek states as his fundamental data. This method of analysis is called **inductive reasoning**: observing as many examples as possible and then working out the general principles.

Inductive reasoning is the foundation of the Scientific Method.

Inductive logic moves from the particular to the general: observation of similarities between many particular cases allows us to draw a general conclusion. *Inductive* reasoning cannot *guarantee* the truth of the conclusion, provided the premises are true; it can only establish the **probability** of it being true. So, inductive arguments can be either strong or weak, depending on the degree of this likelihood. For example:

*Peter was alive last year.
Peter is alive this year.
Therefore, Peter will be alive next year.*

¹ <http://www.wsu.edu/~dee/GREECE/PLATO.HTM>

The strength of this inductive argument will depend on many factors, among them, Peter's age! If Peter is a hundred and ten years old, the probability of his being alive next year would be lower, than if he were 20.

Deductive logic, on the other hand, **moves from the general to the particular**, as in:

All men are mortal.
Socrates is a man.
Therefore, Socrates is mortal.

In order to understand the Scientific Method, you must understand the *reasoning* behind it.

Activity 1.1

Refer to the Reading on inductive and deductive logic in your Resource Book. Based on the examples given there, make four inductive and four deductive arguments, and explain the difference between your reasoning in each case.

The scientific study of language is not a precise science like physics, mathematics or chemistry – yet, like all sciences, it is based on observation (description), analysis, hypothesis formation, hypothesis testing and amending hypotheses. As we shall see in the following weeks, it also uses *units* of language in order to understand its structure and the way it functions.

Science vs. Arts

Science attempts to determine what is out there: the objective facts that exist in the material world, irrespective of our will. For example, why is it that ‘everything that goes up, must come down’? Or, why is there lightning / thunder, etc.?

Arts, on the other hand, are human creations; they represent the artists' perceptions and feelings about the world the way they see it, not necessarily about the way it *is*.

1.2 A Brief Survey of the History of Linguistics

The roots of linguistics go back into the mists of Time, when nobody knew how to write down their thoughts. Our ancestors' awe of Language and its mystical power survives in legends and myths of creation passed down generations in different parts of the world. For example, the sacred legends of the Quiché-Mayan Indians of Guatemala tell us that “the first man was able to **reason** and **speak** and knew all things from the beginning”

Wayne L. Allison:

In the Beginning Was the Word: The Genesis of Language.

Retrieved February 9, 2008 from:

http://w2.byuh.edu/academics/domckay/Speeches/Mckay/W_Allison.htm.

It is remarkable that people, before they even knew how to write, had linked **reasoning** with **speaking**. We can see the same connection in the origins of some familiar words:

logos: < Greek *logos* “word, speech, discourse,” also “reason,” from PIE base **leg-* “to collect” (with derivatives meaning “to speak,” on notion of “to pick out words”)
<http://www.etymonline.com/index.php?l=1&p=10>

logo: 1937, probably a shortening of *logogram* “sign or character representing a word” (1840), from Gk. *logos* “word” + *gram* “what is written” (Ibid.).

Maya folklore tells us that cosmic forces (Gods) created man by trial and error. Man turned out to have the ability to think and feel, just as they (Gods) did. This made the gods uncomfortable, so they “breathed a cloud over the mortals’ eyes, just to keep them humble. Later, when men had become extremely powerful and numerous, the gods deprived them of their original language and gave each group a language of its own. This effectively curtailed their ability to work together”
(http://w2.byuh.edu/academics/domckay/Speeches/Mckay/W_Allison.htm).

Maya myths also tell us that the gods had created animals, and had commanded them to speak, but the beasts could only hiss, growl, cackle or moo. Because they could not worship their creators in a “proper manner,” animals “were condemned to be killed and eaten by mankind” (Ibid.).

Activity 1.2.1

Do your people have stories of Creation or legends about your Tok Ples? Share them with us! Write them down, and send them to your instructor (check address details in your Course Outline).

Invention of the Alphabet in Egypt approx. 2,000 BC

About 4000 years ago now, ancient Egyptians invented these little shapes you are looking at right now: the letters of the alphabet (they did look different then, and they may look different in many modern languages, but the *principle* of using *written symbols* to represent individual sounds that combine to make a word is the same). Unlike the earlier, non-alphabetic systems (pictograms, hieroglyphs, etc.), this was the most efficient and ‘user-friendly’ way of writing down /representing ideas.

It was one of the most important inventions of all time! The Alphabet transformed the ancient world: it enabled people to communicate their thoughts /ideas over distance, and through Time! Through *writing*, our ancestors speak to us directly, communicating to us their thoughts, beliefs, and experiences. In the Judeo-Christian tradition, the Book of Genesis tells us that man was created in God’s image, and with the power of speech:

“And out of the ground the Lord God formed every beast of the field, and every fowl of the air; and brought them unto Adam to see what he would call them: and whatsoever Adam called every living creature, that **was** the name thereof” (Genesis 2:19).

St. John’s Gospel gives us an even more beautiful (from the philosophical point of view) account of how life began:

“***In the beginning was the Word, and the Word was with God, and the Word was God***” (St. John’s 1:1).

Activity 1.2.2

How did the invention of the Alphabet affect human history? Why, do you think?

Linguistics Developed Independently in Several Societies

Speculations about Creation and human nature gradually focused on Language, which sets us apart from all other living things. We now know that linguistic thought developed independently in several societies, such as Mesopotamia (present-day Iran and Iraq), Ancient Greece, India, China, and Arabia. How can we be sure of that? Our knowledge comes from the surviving written records – we can only know what has been, if we have evidence of it. And if you are wondering, why linguistic thought had developed independently in different societies, just imagine what life was like in those days: there was little contact between isolated communities, most people never traveled far from their villages, and, as there were no telephones or Internet that now ‘connect’ the world, people were unaware of what was going on in far away places – they did not even know they existed!

In some cultures, early linguistic analysis was part of religious thought and writings (particularly in discussions of the religiously preferred spoken and written forms of sacred texts in Hebrew and Arabic).

In ancient India, people also thought about and analyzed their language, **Sanskrit** (which means, *perfect*, or *complete*) for many centuries. They noticed that there were different *kinds* of Sanskrit: the language of the **Vedas** (Sanskrit for *Divine Knowledge*), vernaculars, etc. **Panini**, the Indian grammarian who lived over 2,500 years ago, described the entire grammar of the Sanskrit language in just 4,000 *sutras* (sentences). Panini’s Grammar, translated in the West only in **1891** – imagine that! – is one of the world’s earliest works of **descriptive linguistics**.²

Both India and China had produced native schools of linguistic thought, foreshadowing equivalent Western ideas by more than a thousand years! However,

² **descriptive linguistics** - a description (at a given point in time) of a language with respect to its phonology, morphology, syntax and semantics without value judgments.

Source: <http://www.thefreedictionary.com/descriptive+linguistics>

Because Europeans knew nothing about it, modern linguistics is based on European intellectual tradition, which originated in Ancient Greece. We can distinguish roughly **three major phases** in the development of linguistics:

Phase 1: Philosophy → Prescriptive Grammar & Logic

In its **earliest phase**, going back over 2,500 years ago, linguistics was part of **Philosophy**, the '*Mother of All Sciences*.'³ Ancient Greek thinkers started questioning the mystical belief that language was a gift from the gods, and saw the origins of speech in human imitation of natural sounds. They also speculated about the relationship between Language and Thinking, and so 'invented' both *Grammar* and *Logic*, laying down the rules for efficient use of both language and reason.

Activity 1.2.3

Analyze these thoughts, written over 2000 years ago, and explain them in your own words, giving relevant examples:

On Social Role & Power of Language: Gorgias (~ 485-380 BC): *Praise of Helen*
"The power of speech has the same relation to the order of the soul as drugs have to the nature of bodies. For as different drugs expel different humors from the body, and some put an end to sickness, and others – to life, so some words cause grief, others joy, some fear, others render their hearers bold, and still others drug and bewitch the soul through an evil persuasion . . ."

On Language Change: Socrates (469–399 B.C.): *Cratylus*
By the dog of Egypt! I have not a bad notion which came into my head only this moment: I believe that the primeval givers of names were undoubtedly like too many of our modern philosophers, who ... think that there is nothing stable or permanent, but only flux and motion, and that the world is always full of every sort of motion and change. The consideration of the names which I mentioned has led me into making this reflection.

On the Symbolic nature of Language: Aristotle (384-323 BC):
Spoken words are the symbols of mental experience and written words are the **symbols** of spoken words. Just as all men have not the same writing, so all men have not the same speech sounds, but the mental experiences, which these directly symbolize, are the same for all, as also are those things of which our experiences are the images.

A verb is that which, in addition to its proper meaning, **carries with it the notion of time** ... It is a sign of something said of something else. (*On Interpretation*)

³ Up until just over a hundred years ago, science was even called natural philosophy; in ancient times, philosophers studied the natural, as well as human world. As knowledge was accumulated in specific areas, sciences began to split off from the body of philosophy. This 'branching off' process is still ongoing - a number of interdisciplinary sciences emerged quite recently, i.e., biochemistry (the chemistry of the living cell), quantum mechanics, cybernetics (computer science), etc.

Prescriptive Grammar

Ancient Greek philosophers ‘invented’ the so-called **Prescriptive Grammar** (the kind you learnt in school). It prescribes ‘correct’ and condemns ‘incorrect’ usage, which ultimately promotes more effective communication through standardizing language use in the society, but does not even try to understand Language as a whole. Prescriptive Grammar of Latin and Greek was taught in the monasteries of medieval Europe for centuries. Technological advancement led to a re-awakening of interest in Greek and Roman Classical writing and the emergence of prescriptive grammars for vernaculars (the printing press made education more accessible to the common man). The invention of gunpowder started a new Exploration Age, marked by European expansion (→ increased cross-cultural contacts!) and the development of science.

Phase 2: Philology⁴ → Comparative & Historical Linguistics

About 200 years ago, all the new knowledge thus acquired led to the sensational discovery that languages were in many ways alike, and could be compared with one another. Comparative studies identified remarkable *structural* similarities between Latin, Greek, and Sanskrit; these could only be due to a common source (parent language, no longer spoken).

In the mid-1850s, Darwin’s Theory of Evolution turned our understanding of the world upside down. Scholars then realized that languages were also constantly changing, just like all living species. This realization prompted, by analogy, attempts to map out the evolution of Language through the reconstruction of ‘parent’ or *proto*-languages. **Ferdinand de Saussure** (1857-1913), known as the ‘Father’ of modern linguistics, noted in his lectures that work in comparative and historical linguistics had proved that

“A bond or relationship existed between languages often separated geographically by great distances” and that “there were also great language families, in particular the one which came to be called the Indo-European family”

(Saussure: Lectures on General Linguistics, 1910-1911 Retrieved 02/17/08, from <http://www.marxists.org/reference/subject/philosophy/works/fr/saussure.htm>)

To detect changes in a language/ between related languages, *philologists* examined and compared **written records** (manuscripts and documents) from different times – that is why their method of investigation is called *diachronic*.⁵ Because comparative and historical study was mostly concerned with the *forms* of words and not with how the words were used, it was around that time that the word *linguistics* came into use, to distinguish this research from *philology*.

Phase 3: Modern Linguistics

Ferdinand de Saussure caused a major shift in the direction of linguistic research about a hundred years ago (that is why he is often regarded as the Father of modern linguistics. He criticized the then common method of linguistic investigation, i.e.,

⁴ *philology* means *love of words*: *phil* Gk = love; *logos* → *log* word / reason

⁵ *diachronic* means *across time/ of two times*: Gk. *dia* – across, through, apart; *khronos* – time; compare Latin *bi*-: "two, twice," etc., from L. *bi*-, from Old L. *dvi*- (cognate of Gk. *di*-, O.E. *twi*-)

comparing old texts or manuscripts, and argued that written words were merely dead *representations* of Language, and not its living substance:

“...the written word is confused with the spoken word; two superimposed systems of signs which have nothing to do with each other, the written and the spoken, are conflated” (Ibid.).

He thought that linguistics should aim to describe Language **as it is at any one time** (*synchronically*).

Instead of mulling over old texts, trying to figure out how selected bits and pieces of language changed over time, linguistics for the first time in history attempted to understand the mechanism of Language by looking at the **WHOLE** of linguistic structure. This explains why Saussure’s approach is referred to as **Structuralism**.

Saussure believed that, despite all their achievements, linguists up until then ‘could not see the forest for the trees’: analysis of selected parts of language cannot help us understand the **WHOLE**. To be truly scientific in their approach, he felt, linguists had to understand precisely **WHAT** they studied, and **WHY**.

Let us drop in on Saussure at one of his lecture halls, and listen in to some of what he told his students in October 1910⁶:

“The linguistics which gradually developed in this way is ... ‘the scientific study of languages’; ... it is this word **scientific** that distinguishes it from all earlier studies. What does it take

- (1) As its subject matter?
- (2) As its object, or task?

(1) A scientific study will take as its subject matter every kind of variety of human language: it will not select one period or another for its literary brilliance ... It will pay attention to any tongue, whether obscure or famous, and likewise to any period, giving no preference ... but according equal interest to so-called decadent or archaic periods. Similarly, for any given period, it will refrain from selecting the most educated language, but will concern itself at the same time with popular forms more or less in contrast with the so-called educated or literary language... Thus, **linguistics deals with language of every period and in all the guises it assumes** (Emphasis mine – OT).

Necessarily, in order to have documentation for all periods ... linguistics will have to deal with the written language, but it will always distinguish between the written text and what lies underneath; treating the former as being only the envelope or external mode of presentation of **its true object**, which is solely **the spoken language** (Emphasis mine – OT).

(2) Aim of Linguistics: The business, task or object of the scientific study of languages will be

⁶ These are excerpts from actual students’ notes, published online (Saussure: Lectures on General Linguistics, 1910-1911 Retrieved 02/17/08, from <http://www.marxists.org/reference/subject/philosophy/works/fr/saussure.htm>)

- 1) to trace the history of all known languages and language families. Naturally, this is possible only to a very limited extent and for very few languages...
- 2) to derive from this history of all the languages laws of the greatest generality. Linguistics will have to recognise laws operating universally in language.

There are more special tasks to add; concerning the relations between linguistics and various sciences. Some are related by reason of the information and data they borrow, while others supply it and assist its work. It often happens that the respective domains of two sciences are not obvious... **the relations between linguistics and psychology are often difficult to demarcate.**

It is one of the aims of linguistics to define itself, to recognise what belongs within its domain. **In those cases where it relies upon psychology, it will do so indirectly, remaining independent.**⁷

Once linguistics is conceived as concerned with language in all its manifestations, an object of the broadest possible scope, we can understand what perhaps was not always clear: *the utility of linguistics*, or its claim of being relevant to 'general culture'.

As long as the activity of linguists was limited to comparing one language with another, this general utility cannot have been apparent to most of the general public, and indeed the study was so specialised that there was no real reason to suppose it of possible interest to a wider audience. It is only since linguistics has become more aware of its object of study, i.e. perceives the whole extent of it, that it is evident that this science can make a contribution to a range of studies that will be of interest to almost anyone.

...Language plays such a considerable role in human societies, and is a factor of such importance both for the individual human being and human society, that we cannot suppose that the study of such a substantial part of human nature should remain simply and solely the business of a few specialists; everyone, it would seem, is called upon to form as correct an idea as possible of what this particular aspect of human behaviour amounts to in general."

However, because Language, the object of our study, cannot be put squarely in front of us, Saussure warned his students that

⁷ Elsewhere, he was even more categorical about the division between linguistics and psychology:

... However we approach the question, no one object of linguistic study emerges of its own accord. Whichever way we turn, the same dilemma confronts us. Either we tackle each problem on one front only, and risk failing to take into account the dualities ...; or else we seem committed to trying to study language in several ways simultaneously, in which case the object of study becomes a muddle of disparate, unconnected things. By proceeding thus, one opens the door to various sciences – psychology, anthropology, prescriptive grammar, philology, and so on – which are to be distinguished from linguistics. These sciences could lay claim to language as falling into their domain; but their methods are not the ones that are needed (Saussure: 1910).

We will discuss this issue in more detail in Unit 2.

There is no sphere in which more fantastic and absurd ideas have arisen than in the study of languages. Language is an object which gives rise to *all kinds of mirage*. Most interesting of all, from a psychological point of view, are the errors language produces. Everyone, left to his own devices, forms an idea about what goes on in language which is very far from the truth.

Source: *Saussure's Third Course of Lectures on General Linguistics (1910-1911)* publ. Pergamon Press, 1993. <http://www.marxists.org/reference/subject/philosophy/works/fr/saussure.htm> (27/06/2008)

Activity 1.2.4

1. Briefly summarize Saussure's thoughts on
 - a. The Subject Matter of Linguistics
 - b. Aims of linguistics
 - c. Relationship between linguistics and other sciences
 - d. Relevance (utility) of linguistics.
 2. Ferdinand de Saussure said that "Language is an object which gives rise to all kinds of *mirage*." Why do you think he said that?
 3. Briefly describe the main phases in the history of linguistics; how do they differ from each other?
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1.3 Dialectical Linguistics

Saussure's comprehensive approach to Language as a living interconnected *system* marked a qualitative shift from the *metaphysical*⁸ to the *dialectic* view of Language. Instead of focusing on disconnected bits and pieces of Language, linguists now glimpsed the first view of its complex, interconnected, and forever changing WHOLE.

Definitions of *metaphysics* on the Web include:

- ⇒ **the philosophical study of being and knowing**
wordnet.princeton.edu/perl/webwn
- ⇒ **The branch of philosophy which studies fundamental principles intended to describe or explain all that is, and which are not themselves explained ...**
en.wiktionary.org/wiki/metaphysics

This course aims to provide a *dialectical view of Language* as a complex living and interconnected system, so it is very important that you understand the difference between the metaphysical and the dialectic ways of reasoning.

⁸ **Metaphysics - Philosophy** The branch of philosophy that examines the nature of reality, including the relationship between mind and matter, substance and attribute, fact and value.

Source: <http://www.thefreedictionary.com/metaphysics>

Metaphysics is also one of Aristotle's major works, where he tried to explain reality.

1.3.1 Dialectic vs. Metaphysical Reasoning

Dialectics is the method of reasoning which aims to understand things concretely in all their movement, change and interconnection, with their opposite and contradictory sides, as opposed to the formal, metaphysical mode of thought of ordinary understanding which begins with a fixed definition of a thing according to its various attributes: 'a fish is something with no legs which lives in the water'.

Darwin however, considered fish dialectically: some of the animals living in the water were not fish, and some of the fish had legs, but it was the *genesis* of all the animals as part of a whole interconnected process which explained the nature of a fish: they *came from* something and are *evolving into* something else.

Darwin went behind the *appearance* of fish to get to their essence. For ordinary understanding there is no difference between the appearance of a thing and its essence, but for dialectics the form and content of something can be quite contradictory — parliamentary democracy being the prime example: democracy in form, but dictatorship in content!

And for dialectics, things can be contradictory not just in appearance, but in *essence*. For formal thinking, light must be either a wave *or* a particle; but the truth turned out to be dialectical — light is both wave *and* particle.

We are aware of countless ways of understanding the world; each of which makes the claim to be *the* absolute truth, which leads us to think that, after all, "It's all relative!" For dialectics the truth is the *whole picture*, of which each view makes up more or less one-sided, partial aspects.

Dialectics has its origins in ancient society, both among the Chinese and the Greeks, where thinkers sought to understand Nature as a whole, and saw that everything is fluid, constantly changing, coming into being and passing away. It was only when the piecemeal method of observing Nature in bits and pieces, practiced in Western thinking in the 17th and 18th century, had accumulated enough positive knowledge for the interconnections, the transitions, the genesis of things to become comprehensible, that conditions became ripe for modern dialectics to make its appearance. It was **Hegel** who was able to sum up this picture of universal interconnection and mutability of things in a system of *Logic* which is the foundation of what we today call Dialectics.

Source: <http://www.marxists.org/reference/archive/hegel/help/glossary.htm>

In this course, we (like Darwin) will go beyond the forms (appearances) of language, in order to get to its essence: creation of *meaning*. We will examine the dualities of Language, which make up its elusive and 'fluid' knot of contradictions, and try to discover the *mechanism* of language – how it creates Thought.

That is why it is important now to get an in-depth understanding of the concept of *dialectics*. Engels, a German philosopher, contrasted the metaphysical and dialectic reasoning in Ch. 2 of his work *Socialism: Utopian & Scientific*. The quote below explains the differences between the two ways of reasoning, and traces the evolution of our understanding of the world through the growth of sciences:

"When we consider and reflect upon Nature at large, or the history of mankind, or our own intellectual activity, at first we see the picture of an endless entanglement of relations and reactions, permutations and combinations, in which nothing remains what, where and as it was, but everything moves, changes, comes into being and passes away. We see, therefore, at first the picture as a whole, with its individual parts still more or less kept in the background;

we observe the movements, transitions, connections, rather than the things that move, combine, and are connected. This primitive, naive but intrinsically correct conception of the world is that of ancient Greek philosophy, and was first clearly formulated by Heraclitus: everything is and is not, for everything is fluid, is constantly changing, constantly coming into being and passing away.

But this conception, correctly as it expresses the general character of the picture of appearances as a whole, does not suffice to explain the details of which this picture is made up, and so long as we do not understand these, we have not a clear idea of the whole picture. In order to understand these details, we must detach them from their natural, special causes, effects, etc. This is, primarily, the task of natural science and historical research ... A certain amount of natural and historical material must be collected before there can be any critical analysis, comparison, and arrangement in classes, orders, and species. The foundations of the exact natural sciences were, therefore, first worked out by the Greeks and later on, in the Middle Ages, by the Arabs. Real natural science dates from the second half of the 15th century, and thence onward it had advanced with constantly increasing rapidity. **The analysis of Nature into its individual parts, the grouping of the different natural processes and objects in definite classes, the study of the internal anatomy of organized bodies in their manifold forms — these were the fundamental conditions of the gigantic strides in our knowledge of Nature that have been made during the last 400 years.** But this method of work has also left us as legacy the habit of observing natural objects and processes in isolation, apart from their connection with the vast whole; of observing them in repose, not in motion; as constraints, not as essentially variables; in their death, not in their life” (Emphasis mine – OT).

So, then; at the dawn of the evolution of our knowledge, we saw the world as a whole, in all its interconnectedness and motion, but we could not understand it, because we had no knowledge of its *parts* (all the different things that happen, and why). Our knowledge grew in the process of *analysing Nature into its individual parts* – we divided the world around us into distinct classes and categories and studied them separately. The habit of examining things in isolation prevented us from seeing things in a larger context; we scrutinized *parts* of a whole, but were blind to how all of them related to each other; we got used to seeing the world as ‘fixed’ and unchanging. These are the limitations of metaphysical reasoning:

“A thing either exists or does not exist; a thing cannot at the same time be itself and something else. Positive and negative absolutely exclude one another; cause and effect stand in a rigid antithesis, one to the other.

This “metaphysical mode of thought, justifiable and necessary as it is in a number of domains, sooner or later reaches a limit, beyond which it becomes one-sided, restricted, abstract, lost in insoluble contradictions. In the contemplation of individual things, it forgets the connection between them; in the contemplation of their existence, it forgets the beginning and end of that existence; of their repose, it forgets their motion. It cannot see the woods for the trees.

For everyday purposes, we know and can say, e.g., whether an animal is alive or not. But, upon closer inquiry, we find that this is, in many cases, a very complex question, as the jurists know very well. They have cudgelled their brains in vain to discover a rational limit beyond which the killing of the child in its mother's womb is murder. It is just as impossible to determine absolutely the moment of death, for physiology proves that death is not an instantaneous, momentary phenomenon, but a very protracted process.

In like manner, every organized being is every moment the same and not the same; every moment, it assimilates matter supplied from without, and gets rid of other matter; every moment, some cells of its body die and others build themselves anew; in a longer or shorter

time, the matter of its body is completely renewed, and is replaced by other molecules of matter, so that every organized being is always itself, and yet something other than itself.

Further, we find upon closer investigation that the two poles of an antithesis, positive and negative, e.g., are as inseparable as they are opposed, and that despite all their opposition, they mutually interpenetrate. And we find, in like manner, that cause and effect are conceptions which only hold good in their application to individual cases; but as soon as we consider the individual cases in their general connection with the universe as a whole, they run into each other, and they become confounded when we contemplate that universal action and reaction in which causes and effects are eternally changing places, so that what is effect here and now will be cause there and then, and vice versa.

Dialectics comprehends things in their essential connection, motion, origin and ending. ... Nature is the proof of dialectics, and it must be said for modern science that it has furnished this proof with very rich materials increasing daily, and thus has shown that Nature works dialectically and not metaphysically; that she does not move in the eternal oneness of a perpetually recurring circle, but goes through a real historical evolution. In this connection, Darwin must be named before all others. He dealt the metaphysical conception of Nature the heaviest blow by his proof that all organic beings, plants, animals, and man himself, are the products of a process of evolution going on through millions of years. ...

Dialectics looks at the world as a process and claims that everything is in constant motion, change, transformation, development. It attempts to understand the “internal connection that makes a continuous whole of all this movement and development. From this point of view, the history of mankind no longer appeared as a wild whirl of senseless deeds of violence, all equally condemnable at the judgment seat of mature philosophic reason and which are best forgotten as quickly as possible, but as the process of evolution of man himself. It was now the task of the intellect to follow the gradual march of this process through all its devious ways, and to trace out the inner law running through all its apparently accidental phenomena.”

Source: <http://www.marxists.org/archive/marx/works/1880/soc-utop/ch02.htm#010>

Activity 1.3

1. Explain the meaning of this statement:

Dialectics comprehends things in their essential connection, motion, origin and ending. ... Nature works dialectically and not metaphysically; she does not move in the eternal oneness of a perpetually recurring circle, but goes through a real historical evolution.

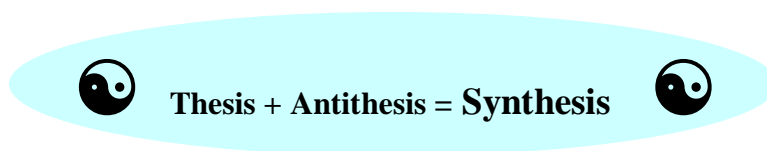
2. “*Quantity Changes the Quality*” is one of the basic laws of Dialectics. Give practical examples of when accumulation of the quantity of something would change its quality.

Re-cap: Dialectics (as opposed to metaphysics) comprehends things in their totality: essential connection, motion, and contradiction. It views development not as going around in circles, but as the *spiral of evolution*, in which each coil reaches another level of development as a result of the ‘struggle’ of contradictions:



This *spiral* image illustrates the expansion of all development (including that of human knowledge): a tall tree grows from a tiny seed; a big man grows from two microscopic cells. Our knowledge of the world has expanded, like this spiral, through the *analysis* of the different parts of Nature and *synthesis* of all our observations, which takes us to a higher level of understanding.

The world *is powered* by contradictions and imbalances. In every development, there is always a *struggle* between opposing forces, which eventually leads to a new ‘balance’ in their union; the oriental symbol of harmony (the union of Yin and Yang) illustrates this unity of ‘opposites’:



1.4 The Scope of Modern Linguistics and its ‘Core’ Domains

Ferdinand de Saussure pointed out that once linguistics takes as its object of study “language in all its manifestations, an object of the broadest possible scope,” we can then see how it is interconnected with ‘general culture.’

When the study of language was limited to comparing languages with others, he said, the study was too specialized to be of interest to non-linguists. But since linguistics has become aware of its object of study (*Language in all its manifestations*), we have realized its relevance to our personal lives, and to human society as a whole.

Linguistics as a science has two main branches:

1. One branch covers the study of languages themselves (their sounds, structures, meanings, etc.), while
2. The other covers the effects of language on the world around us (the use of language in society, etc.).

Linguistics is also the university major that many people take before going on to careers in media, law, travel, telecommunications, journalism, international business, government, computer programming, advertising and a so many other really cool, and hard to get jobs. Linguistics is closely related to Sociology and to Psychology.

The traditional ‘core’ domains of linguistics examine various aspects of language:

Phonetics studies the actual *physical sounds* of language. They study the position of the tongue, and other speech organs, during the production of sounds and they record and analyse sound waves. So, *acoustic phonetics* is rather a physical science: it is concerned with the description of speech sounds.

Phonology studies the sounds and *sound patterns* of individual languages. For example, the Japanese language does not allow for consonant clusters (i.e., ‘supun’ for *spoon*, ‘naifu’ for *knife*, ‘furaido chikin’ for *fried chicken*, etc.), whereas in Slavic languages like Polish or Russian, consonantal clusters are quite common. For example, ‘bistro’ for *quick*, ‘shchi’ for *cabbage soup*, ‘obshchestvo’ for *society*, etc..

Morphology is the study of the structure of words. Morphologists study the smallest bits of meaning, called morphemes, and the way they form words. For example, why is it that we can say *great* → *greatly* but not *big* → *bigly*? Or *laugh* → *laughable*, but not *smile* → *smilable*, *drink* → *drinkable*, but not *sip* → *sippable*?

Syntax looks at the structure of sentences. Syntacticians describe how words combine into phrases and clauses and how these combine to form sentences.

Recent usage of the term *syntax* often implies *both* the arrangement and the form of words in the larger units of phrases, clauses and sentences. This effectively puts *morphology* under the umbrella of syntax. So: **Syntax** is that part of language which *creates new levels of meaning* out of meaningful patterns of sounds *by arranging them into ever larger patterns* (morphemes, words, phrases & sentences).

Semantics is the study of *meaning*. It looks at how we create meaning by blending together smaller bits of meaning. Meaning is what language is all about (language without meaning is *meaningless*).

Pragmatics studies meaning *in context*. When we use words, their conventional meanings are not always what they actually mean

Activity 1.4

How would you define linguistics and its ‘core’ domains?
How is linguistics different from traditional school grammar?
Why do linguists regard speech rather than writing as primary?

Why should we study Language, when we know it already?

We don’t need to study grammar to speak our mother tongue. We don’t even need to learn how to read or write a language in order to use it (out of over 6000 languages spoken in the world today, only about 200 are written). So why should we study a language, if we know it anyway?

The answer, briefly, is this: the better you understand how the system you are using works – be it a computer program, a car you drive, a society you live in, a social institution you are part of, or the language you speak - the more effectively you will be able to use that system.

The study of Linguistics will help you *think* more clearly and *communicate* your thoughts more effectively; this, in turn, will give you influence in society (just look at where Barack Obama’s good language and communication skills got him! ☺).

Linguistics will also help us understand how and why government language policy can promote or inhibit a nation's development. It can also help you to understand, appreciate and, perhaps, even save your own language for future generations. Last, but not least, it opens up your mind to other peoples and cultures, and makes you see how much all people around the world are really alike.

So, just to 'rub in' the point I made before: apart from making life interesting, and enjoyable, the Scientific Study of Language will give you insights into our common humanity, help you understand yourself and human society better, and thus, it will put you more in control of your own life.

1.5 Symbols in Human Communication

Almost everything we know, and practically everything that we learn in formal education comes to us through language. Language has the power to create and transfer thoughts from one mind to another. But, as we have noted, our thoughts have no physical substance – we can't hear, see, touch, smell, or taste them. How, then, can we share with others what we think? What is the mechanism of thought transfer?

The answer is, we use some *physical* form to **represent** our thoughts - something that we **can perceive** with our physical senses. These physical forms that we can *see* or *hear* are called **symbols**.

Just like we all have 'body and soul' (or mind), so symbols have two inseparable parts to them:

- ⇒ **form** (what they look or sound like) and
- ⇒ **meaning** (the idea / thought that they represent).

The symbols we use in communication are usually of **two kinds**: those that we can see (**visual**) and those that we can hear (**aural**).

Visual symbols are images or objects (that we *can see*), used to represent something else:

- ⇒ Pigs are a symbol of wealth in many parts of PNG.
- ⇒ The cross is the symbol of Christianity.
- ⇒ The Bird of Paradise is a national symbol of Papua New Guinea.
- ⇒ Uniform is a symbol of belonging to a group/organization.
- ⇒ The icons on your computer screen symbolize the various software programs you have (Word, Excel, Access, etc.)

The majority of written languages use visual symbols to represent speech sounds. This is how you are now able to read my thoughts; in fact, you can do much more – learn through Distance Education!



What a *visual* symbol looks like is called its *form*.

Aural Symbols are those that we *hear*. Our ears distinguish the *form* of sound combinations, just like our eyes see shapes and colours. Aural symbols are *sounds* which represent thoughts. For example, the military trumpet-calling warriors into battle, church bells-calling the faithful to the service, or the beat of a wooden drum (such as *tamtam* in Vanuatu, the ‘talking drums’ in southern Nigeria) - the traditional means of calling people to a meeting.

What an aural symbol sounds like is called its form.

In every case we associate a particular form with a particular meaning: the picture of a vicious dog evokes the same association in mind of an English speaker as the words ‘vicious dog.’

Another word for *symbol* (i.e., representing something in terms of something else) is *metaphor* (it comes from two Greek words: *meta*, meaning ‘with’/‘beyond’ and *pherein* meaning ‘to carry’). So a metaphor ‘carries’ our mind beyond one idea to another. You may remember metaphors as one of the figures of speech that you studied in your English classes. Basically, *metaphors* (i.e., calling your loved one *honey*, *sugar plum*, etc.), *simile* (explicit comparisons, such as Mohammad Ali’s famous phrase, ‘*Float like a butterfly, sting like a bee*’) and *analogy* (extended comparisons, such as this sentence you are reading) are all associations based on Resemblance. Come to think of it, all words are metaphors: they are all forms representing something else - ideas! In that sense, even the equations we learn in physics, chemistry, or mathematics are metaphors – they represent one thing in terms of another. Take, for example, the famous equation $E = mc^2$ representing Energy in terms of mass times speed of light squared (c^2). Einstein’s insight is basically metaphorical, bringing two things together, expressing one in terms of the other, and creating a new entity through establishing that link, that connection between them: mass and energy are the same, they are actually *interchangeable*.

Depending on whether a symbolic form ‘carries’ your mind automatically to its meaning or not, symbols fall into 2 broad classes: *iconic* and *arbitrary*.

***arbitrary** [ɑːbɪtrəri] adj based on personal opinion or impulse, not on any reason or system: arbitrary decisions ◦ The choice of players for the team seems completely arbitrary.

Symbols: Iconic vs. Arbitrary

Iconic Symbols are those whose *form* resembles the idea the symbol represents and so automatically ‘carries’ your mind to its meaning. For example:



Arbitrary Symbols are those whose *form* has *no* obvious link to their *meaning*, i.e.:



Iconic Symbols: Some symbolic forms actually resemble the things that they represent. For example, ‘Jolly Roger’ (skull and bones) usually means death or mortal danger; the crescent literally looks like the Moon, etc. Such symbols are like *icons*, or pictures, of real things, so we call them *iconic*. Aural symbols can also be iconic: the so-called *mimic* words like *hiss*, *buzz*, *zoom*, *squawk*, *squeal*, *shriek*, *screech*, *splash*, *plonk*, *fizz*, etc., actually mimic the sounds of the actions they represent.

Arbitrary Symbols: These symbols do not at all resemble the ideas they represent. We learn their meanings from other people. Take the stoplights, for example: a person who has never set foot in the city may not know what the green, yellow and red lights mean. Because there is no direct link between the *form* of the symbol and the *idea* it represents, only those people who know the symbol can recognize it and ‘decode’ its meaning.

The *form* of arbitrary symbols is based on *custom* (convention, common agreement), rather than on resemblance to the idea that each symbol represents.

The meaning of most linguistic symbols is unrelated to their sound forms - this explains why we call some languages foreign! Because language symbols (words) are for the most part arbitrary, only those people who are familiar with their form will be able to ‘make sense’ of them.

Activity 1.5

Look at these symbols:



1. Can you tell what each of the above symbols represents?
2. Are these symbols iconic or arbitrary? See if your friends can tell what they mean.
3. Think of some other visual symbols you would recognize.
4. Think of some traditional visual symbols used in your native community and test them on your friends from other places – can they understand what they mean?

Both iconic and arbitrary symbols have meanings. When their meanings can be interpreted / understood in more than one way, then these symbolic forms are said to be *ambiguous*. This is a word that you must try to make sense of, because *ambiguity* is natural to language.

1.6 Ambiguity

Look at the explanations below, taken from an online etymological ⁹ dictionary:

ambi- : combining form meaning “both, on both sides,” from L. *ambi-* “around, round about,” from PIE **ambhi-* “around” (cf. Gk. *amphi* “round about,” Skt. *abhitah* “on both sides,” Avestan *aibi*, O.E. *ymbe*, Ger. *um*, Gaul. *ambi-*, O.Ir. *imb-* “round about, about,” O.C.S. *oba*, Lith. *abu* “both”). The PIE root is probably an ablative plural of **ant-bhi* “from both sides,” from **ant-* “front, forehead” (<http://www.etymonline.com/index.php?l=a&p=11>).

ambiguous: 1528, from L. *ambiguus* “having double meaning, shifting, changeable, doubtful,” adj. derived from *ambigere* “to dispute about,” lit. “to wander,” from *ambi-* “about” + *agere* “drive, lead, act”; Sir Thomas More (1528) seems to have first used it in Eng., but ambiguity (from L. *ambiguitatem*) is first recorded c.1400 (Ibid.).

Aural symbols tend to be more ambiguous, but visual symbols may also sometimes be interpreted in different ways. Look, for example, at an Italian ‘Dental Clinic’ sign that caused some merriment in blogosphere:



Much of our body language (i.e., gestures, expressions, etc.) is *instinctive*: we all cry and laugh in the same way. These instinctive, natural, inborn reactions are easy to understand, because they are common to all of our species.

However, most of our communication involves the use of *arbitrary* symbols. Their *form* does not clearly suggest their *meaning*, and therefore people often interpret these forms differently, depending on their customs, culture, circumstances and personal experience.

Signs with *more than one meaning* are called *ambiguous* (i.e., you can understand them in more than one way). Here are some examples of ambiguous visual symbols that may cause misunderstanding in cross-cultural situations:

- ⇒ Most people nod their heads to say ‘yes’ and shake their heads to say ‘no’; Bulgarians, however, as well as Tamils of South India, shake their heads from side to side to say ‘yes’ and nod their heads to say ‘no’

⁹ etymology traces the origins and history of words

- ⇒ In most European cultures, hugging and kissing on the cheek is a common greeting and expression of friendship; in Indian, Arab and most African cultures, as well as in Papua New Guinea, however, this greeting may be misunderstood.
- ⇒ The 'stop' gesture (outstretched arm with the palm of the hand tilted in the direction of the 'receiver' with fingers all spread out) is the '*waka*' gesture in Nigeria (the worst abuse you can think of!). It appears to be equally rude in Greece, too – judging by one of the HSBC advertisements ☺

Aural symbols, being mostly arbitrary, are particularly prone to ambiguity: the same combinations of similar sounds may mean absolutely different things in different languages, which often causes misunderstanding and is a rich source of 'linguistic' jokes and real-life gaffes. Here is a look at how some shrewd American business people translate their advertisements into foreign languages:

*Ad slogans - "Loco"lization*¹⁰

Chicken magnate Frank Perdue's line, "It takes a tough man to make a tender chicken," sounds much more interesting in Spanish: "It takes a sexually stimulated man to make a chicken affectionate."

When Pepsi started marketing its products in China a few years back, they translated their slogan, "Pepsi Brings You Back to Life" pretty literally. The slogan in Chinese really meant, "Pepsi Brings Your Ancestors Back from the Grave!"

When Coca-Cola first shipped to China, they named the product something that when pronounced sounded like "Coca-Cola." The only problem was that the characters used meant "Bite the Wax Tadpole." They later changed to a set of characters that mean "Happiness in the Mouth."

An American T-shirt maker in Miami printed shirts for the Spanish market which promoted the Pope's visit. Instead of "I saw the Pope" (el Papa), the shirts read "I saw the potato" (la papa).

Ambiguity: Accidental & Intentional

Sometimes, the use of ambiguity is intentional (unlike in the examples above), as in jokes, puns (or play on words), for example:

To lose one parent is a tragedy; to lose both – gross negligence! (Wilde)

Another example – a joke that made a splash in the blogosphere last year:

A missionary and an Australian shepherd faced each other in the final of a quiz show. After answering all the questions, they were neck-and-neck with the same number of points. The quizmaster had to set a tie-breaker. The task was: in 5 minutes, to compose a rhyme that would have the word *Timbuktu*¹¹ in it. After 5 minutes, the missionary presented his poem:

¹⁰ *Loco* in Spanish means mad, crazy, etc. ☺ Source: Retrieved 29/04/2008 from <http://www3.sympatico.ca/srajano/jokes.html>

¹¹ Timbuktu is a city in the West African nation of Mali. It was a major post on the trans-Saharan trade / caravan route. Timbuktu was an intellectual and spiritual capital about 500 years ago.

I was a Father all my life,
I had no children, had no wife,
I read the Bible through and through
On my way to Timbuktu...

The audience cheered, certain the missionary would win...
Then the Aussie shepherd cleared his throat, stepped forward, and recited:

When Tim and I to Brisbane went,
We met three ladies cheap to rent.
They were three and we were two,
So I bucked one, and Tim bucked two!

Poor language skills may also result in ambiguous messages, such as:

- ⇒ In a Norwegian cocktail lounge: Ladies are requested not to have children in the bar.
- ⇒ At a Budapest zoo: Please do not feed the animals. If you have any suitable food, give it to the guard on duty.
- ⇒ In an Acapulco hotel: The manager has personally passed all the water served here.
- ⇒ Customers who find our waitresses rude ought to see the Manager (Nairobi restaurant).
- ⇒ In a Paris hotel elevator: Please leave your values at the front desk.
- ⇒ In a hotel in Athens: Visitors are expected to complain at the office between the hours of 9 and 11 A.M. daily.
- ⇒ On the menu of a Swiss restaurant: Our wines leave nothing to hope for.
- ⇒ In a Hong Kong supermarket: For your convenience, we recommend courteous, efficient self-service.
- ⇒ Outside a Hong Kong tailor shop: Ladies may have a fit upstairs.
- ⇒ In a Bangkok dry cleaner's: Drop your trousers here for best results.
- ⇒ Outside a Paris dress shop: Dresses for street walking.
- ⇒ Russian translation of a sentence from a book on chess: A lot of water has been passed under the bridge since this variation has been played.
- ⇒ Please place your donation in the envelope along with the deceased person you want remembered (in a church bulletin).
- ⇒ Scouts are saving aluminium cans, bottles and other items to be recycled Proceeds will be used to cripple children.

Source: Jokes on Translation and Languages - <http://www3.sympatico.ca/srajano/jokes.html>

 **Activity 1.6.1**

Can you explain the cause of Santa's troubles?

Virtual Humor

by Kevin Duffy



**Santa's sexual harassment trial
takes a dramatic change for the worse**

Ambiguity: Lexical vs. Structural

Have you noticed that words may sound the same, but different meanings, for example, **see: sea, bread: bred, hour: our, break: brake**, etc.? Such words are called **homophones** (or 'same sounds'):

- ⇒ Bush Wins on Budget, But More **Lies** Ahead
- ⇒ Child's **Stool** Great for Use in Garden (newspaper ad)
- ⇒ My son has grown another **foot** in the past year.

Lexical ambiguity occurs when same-sounding words have different meanings (*lexis* means 'words'), as in these funny notices spotted in different places around the world:

- ⇒ The Manager has personally passed all the water served here (Hotel, Acapulco).
- ⇒ Ladies are requested not to have children in the bar (cocktail lounge, Norway).

Structural ambiguity occurs when a sentence can be understood in several ways because the words in it can be *grouped* differently, i.e.,

- ⇒ We Need More Honest Politicians (a newspaper headline)
- ⇒ Special cocktails for ladies with nuts (notice in a Tokyo bar)
- ⇒ Visiting relatives can be boring.
- ⇒ Vegetarians don't know how good meat tastes.

 **Activity 1.6.2**

Newspaper headlines must be as short as possible, so they often leave out little words like *the* and *is*, which may also cause ambiguity. Examine some real (!) newspaper headlines below, and identify cases of *lexical* vs. *structural* ambiguity:

KIDS MAKE NUTRITIOUS SNACKS
GRANDMOTHER OF EIGHT MAKES HOLE IN ONE
MILK DRINKERS ARE TURNING TO POWDER
EYE DROPS OFF SHELF
PROSTITUTES APPEAL TO POPE
STOLEN PAINTING FOUND BY TREE
QUEEN MARY HAVING BOTTOM SCRAPED
DEALERS WILL HEAR CAR TALK AT NOON
JUVENILE COURT TO TRY SHOOTING DEFENDANT
COMPLAINTS ABOUT NBA REFEREES GROWING UGLY
PANDA MATING FAILS; VETERINARIAN TAKES OVER
12 ON THEIR WAY TO CRUISE AMONG DEAD IN PLANE CRASH
SAFETY EXPERTS SAY SCHOOL BUS PASSENGERS SHOULD BE BELTED
2 SISTERS REUNITED AFTER 18 YEARS AT CHECKOUT COUNTER
MAN EATING PIRANHA MISTAKENLY SOLD AS PET FISH
ASTRONAUT TAKES BLAME FOR GAS IN SPACECRAFT
QUARTER OF A MILLION CHINESE LIVE ON WATER
INCLUDE YOUR CHILDREN WHEN BAKING COOKIES
OLD SCHOOL PILLARS ARE REPLACED BY ALUMNI
ENRAGED COW INJURES FARMER WITH AX
LACK OF BRAINS HINDERS RESEARCH
RED TAPE HOLDS UP NEW BRIDGE
SQUAD HELPS DOG BITE VICTIM

Ambiguity, or double meaning, is common in all human languages, because the words of all languages are arbitrary symbols: their sound forms do not resemble their meanings. People 'make sense' of word meanings in their individual minds. Because we all have our own minds, and our own experiences, we may associate the same words we hear with different ideas. Look, for example, at a few 'miscommunications' from a selection of things people actually said in court, word for word, taken down and now published in a book called *Disorder in the American Courts*:

Q: What gear were you in at the moment of the impact?
A: Gucci sweats and Reeboks.

Q: What is your date of birth?

A: July 15.

Q: What year?

A: Every year.

Q: Is your appearance here this morning pursuant to a deposition notice which I sent to your attorney?

A: No, this is how I dress when I go to work.

Q: ALL your responses MUST be oral, OK? What school did you go to?

A: Oral.

Activity 1.6.3

Homonyms are words spelt and pronounced in the same way, but with different meanings, i.e., lie (to tell lies) and lie, as in to lie down.

Homophones are words that sound the same, but have different spelling and meaning, such as *sea* and *see*.

Examples of homonyms from the Hula/ Aroma language, PNG:

AGI : wind; cry

AOALI: pray; put down

PAE : pig; climb

RAU : far; fly

IRU : point; nose

KEA : ear, call

LOKU : seashell; pawpaw

AVUA : to find; blow; test

KUPA : short; rain; sky

KALI : to clear, remove; afraid

PARU : anger; lizard

MA'A : eye; bottle

KWARA: arrive; shake

LAVU : to fan; strumming

VAU : stone; throw

VUA : carry; timber

Examples courtesy of Peter D. Panau of the LCH 2008 class

Study the list of HOMONYMS in your resource Book (Text 2) and decide which of them are homonyms, and which – homophones. Are there any homonyms in *your* language? Give 5 examples of those.

1.7 The Symbolic Species

The use of symbols is such a uniquely human trait that Terence Deacon, a prominent American linguist/neuroscientist, even called the human race the 'Symbolic Species'¹² in his recent book by that name. This is how he explained it:

Though we share the same earth with millions of kinds of living creatures, we also live in a world that no other species has access to. We inhabit a world full of abstractions, impossibilities, and paradoxes. We alone brood about what didn't

¹² Terrence W. Deacon: *The Symbolic Species: The Co-Evolution of Language and the Brain*. ISBN: 0393317544; First published in March 1998.

happen, and spend a large part of each day musing about the way things could have been if events had transpired differently. And we alone ponder what it will be like not to be. In what other species could individuals ever be troubled by the fact that they do not recall the way things were before they were born and will not know what will occur after they die?

We tell stories about our real experiences and invent stories about imagined ones, and we even make use of these stories to organize our lives. In a real sense, we live our lives in this shared virtual world. And slowly, over the millennia, we have come to realize that no other species on earth seems able to follow us into this miraculous place. We are all familiar with this facet of our lives, but how, you might ask, could I feel so confident that it is not part of the mental experience of other species--so sure that they do not share these kinds of thoughts and concerns--when they cannot be queried about them? That's just it! My answer ... has everything to do with language and the absence of it in other species. The doorway into this virtual world was opened to us alone by the evolution of language, because language is not merely a mode of communication, it is also the outward expression of an unusual mode of thought - symbolic representation.

Without symbolization the entire virtual world that I have described is out of reach: inconceivable. My extravagant claim to know what other species cannot know rests on evidence that symbolic thought does not come innately built in, but develops by *internalising* the symbolic process that underlies language. So species that have not acquired the ability to communicate symbolically cannot have acquired the ability to think this way either.

 **Activity 1.7**

Read 'An Evolutionary Anomaly' section of Ch. 1 of Terrence Deacon's *Symbolic Species* in your Resource Book.

1. '**Biologically, we are just another ape. Mentally, we are a new phylum of organisms**' – Do you agree with Deacon there? Why? / Why not?
2. Why is Deacon so sure that no other species have language that is similar to human language?

Summary

1. **Linguistics is the scientific study of Language**
 - a. **The Scientific Method:** 4 stages:
 - i. Observation
 - ii. Hypothesis making
 - iii. Experimentation
 - iv. validation
 - b. **Generalization** is based on drawing a general conclusion based on many individual events of the same kind (inductive logic); deductive logic moves from a general rule to an individual case in the same category.
 - c. **Science versus Arts:** Science explores reality/facts; Art represents artists' perceptions of reality
2. **A brief survey of the history of linguistics:** 3 stages
 - a. Philosophy: prescriptive grammar and logic
 - b. Philology: comparative and historical studies
 - c. Structuralism: focus on the WHOLE of Language
3. **Metaphysical reasoning** examines the 'bits and pieces' of reality without paying attention to their interrelatedness and transformation; **Dialectics** views issues in their totality, interconnectedness, and development (evolution)
 - a. Evolution is a spiral movement (not circular)
 - b. Thesis + Antithesis = Synthesis
4. **The scope of linguistics and its 'core' domains:**
 - ⇒ Phonetics & Phonology: study of speech sounds and patterns of sounds
 - ⇒ Morphology: word structure
 - ⇒ Syntax: sentence structure
 - ⇒ Semantics & Pragmatics: meaning
5. **Symbols:**
 - a. Iconic: resembling their meaning, and
 - b. Arbitrary: no link to meaning
6. **Ambiguity:** double meaning
 - a. Lexical: resulting from > one meaning of a word, &
 - b. Structural: resulting from the way words are put together in a sentence

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