Unit 5: The Rational Language Mechanism – Generalisation

Objectives

After completing this unit, you will be able to
1. Define the concepts of
    a. **Syntax,**
    b. the **Sentence**,
    c. the **Subject**,
    d. the **Predicate**,
    e. **Parts of Speech,**
    f. **Phrases,** and
    g. **Clauses** (*all* in the context of their *use* in the sentence)
2. Explain the role of *Synthesis & Analysis* in *generalisation* & show how the structures of all human languages *embody Synthesis* & *Analysis*
3. Explain the concept of *Recursion*, showing how *generalisation* can generate an infinity of ideas through the *synthesis & analysis* of word-meanings
4. Explain the principles of *Generalising* Sentence Analysis (*G-nalysis*)

5.0 Introduction

In **Part I** of this course, we set the object of linguistic enquiry – **Language** – firmly before us; we now know that:

1. Language as a *complex whole*; a *living structure* of arbitrary symbols (word-meanings), characterised, as all living structures are, by *wholeness*, *transformation* and *self-regulation*.

2. Language is a **Gordian Knot** of distinct 'complementary facets, each depending on the other'(Re: Unit 2.1):
    a. **Psycho-Physical**:
        i. Speech sounds are only the instrument of thought, and have no independent existence. …A sound, itself a complex auditory-articulatory unit, in turn combines with an idea, to form another complex unit, both *physiologically* and *psychologically* (Saussure: 1910).
    b. **Socio-Historical:**
        i. 'Language has **an individual aspect and a social aspect**. One is not conceivable without the other' (Ibid.); it is a *social product*, given to us from *outside* by 'our fellow men and women'
        ii. Language at any given time involves **an established system and an evolution**. At any given time, it is an institution in the present and a product of the past.

3. **In the Language System**, **everything depends on relations** between signs; 'Language mechanism' consists of the *simultaneous functioning* of *syntagmatic* and *associative* relations between Linguistic Signs:

    This set of habitual relations is what constitutes linguistic structure and determines how the language functions. Syntagmatic groups … are linked by interdependence,

each contributing to all. Linear ordering in space helps to create associative connexions, and these in turn play an essential part in syntagmatic analysis (Ibid.).

4. The *essence* /*function* of Language is the creation and communication of *meaning* (abstract ideas); in contrast, animal 'languages' communicate concrete experiences/feelings/emotions (much like human laughter, crying or sneezing, etc. do).

5. **Every word of Language is already a generalisation (act of thought)**:

> … A word does not refer to a single object but to a group or to a class of objects. Each word is therefore already a generalisation. Generalisation is a verbal act of thought and reflects reality in quite another way than sensation and perception reflect it (Vygotsky: 1934).

6. **Generalisation** implies the ability to associate ideas by *Resemblance*, *Contiguity* in time or place, and *Cause* or *Effect*. These associations (i.e., abstract thought) are based on the dynamics of *analysis* **and** *synthesis*:

> … the advanced **concept** presupposes more than unification. To form such a concept, it is also necessary to abstract, to single out elements, and to view the abstracted elements apart from the totality of the concrete experience in which they are embedded. In genuine concept formation, it is equally important to unite and to separate: synthesis and analysis presuppose each other, as inhalation presupposes exhalation (Vygotsky: 1934, pp. 135-136).

7. **Intellect & Speech are not naturally connected** (initially, thought is nonverbal and speech - nonintellectual. In early childhood, we "discover" that "each thing has a name" and begin to ask what each object is called; → our speech *becomes* rational, & thought *becomes* verbal) Development of **verbal thought** is not a simple continuation of the earlier *natural* development: the _nature_ of the development changes, from *biological* to *socio-historical*

   a. **Language precedes Logic –** linguistic structures become our basic thinking structures:

   > The development of logic in the child is a direct function of his *socialized* **speech**; verbal thought is not an *innate* form of behaviour but is determined by a *historical-cultural process of language acquisition* (Vygotsky: 1934)

   b. **Verbal thought does not include all forms of thought /speech:**
      i. Some thought has no direct relation to speech (i.e., thinking involved in the use of tools, and *practical* intellect [1]in general – you don't need to think hard to look for food, when hungry)
      ii. Neither do all forms of speech arise from thought: we can speak without thinking (i.e., when reciting a poem, saying a prayer, or letting out an expletive, etc.)

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[1] **Practical intelligence** can be defined as the 'ability that individuals use to find the best fit between themselves and the demands of the environment'
Source:http://www.indiana.edu/~intell/practicalintelligence.shtml

> iii. → **Fusion of thought & speech is only** *part* **of all thinking /
> all speech**.

8. Yet, the **connection between Language and Thought is visceral**[2] – a word without meaning is empty sound, and meaning can only exist in words. ***Word-meaning*** is the smallest unit of Language – it retains the psycho-physical and socio-historical nature of Language.

9. Verbal thought /meaningful speech is a ***union*** of word and thought:

> Thought is not merely expressed in words; it comes into existence through them**.** Every thought connects something with something else, establishes a relationship between things. Every thought moves, grows and develops, fulfils a function, solves a problem (Ibid.).

This line of reasoning led us to a puzzling question: since abstract thought is not a 'natural' form of behaviour (we all <u>learn</u> to 'think *human*' as we learn our mother tongue), then WHY do we all learn to think/ generalise, i.e., to associate ideas in the same way (by Resemblance, Contiguity, and Cause/Effect), when our languages are all so different? The answer seems obvious:

> ***Generalisation*** is the mechanism of human (verbal) thought.
> Verbal Thought is Language.
> Therefore, ***Generalisation is the mechanism of Language***:

Just as the same technique of weaving results in all the colourful diversity of billums, so also the same mechanism of human understanding (generalisation) shapes all the diverse and constantly changing structures of human languages.

So far, we have glimpsed the *essence* of Language – the ***union*** **of** *meaning* **and** *form*. To see Language more clearly, we must now **analyse** its **parts** (structures and forms). It is through the **synthesis** of these details in the final unit of this course that we will be able to rise to a new level in the spiral of our understanding of Language.

In Part II of this course, we will zoom in on the diverse and fluid *forms* of Language, and try to see how the 'rational mechanism' of Language, *generalisation*, has shaped (and is still shaping) them. Let us now see how the two principles of human cognition – *synthesis* and *analysis* – are embodied in the sentences of all languages.

5.1 SYNTAX – Patterns of Words in the Sentence

SYNTAX – the way we put words together into phrases / sentences

The essence (and function) of language is the creation and communication of meaning. We speak in **sentences** (**chunks of meaning**). Bhartrhari (remember, that Indian scholar of the seventh century AD) regarded the sentence as a "single undivided utterance conveying its meaning 'in a flash,' just as a picture is first perceived as a unity, notwithstanding subsequent analysis into its component coloured shapes" (Robins: 1995, p.154).

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[2] **viscera** – the large organs inside the body, including the heart, stomach, lungs and intestines

Look at our Pelican one more time:

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Don't you see the pelican *first*, *before* you see the different tiles that make it up? In the same way, we understand the meaning of the whole statement first; later, we can analyse the meaning of each word, in order to see how it is conditioned by *how* we use it (*meaning as use*)!

A person may know the meaning of all the words in a language, but still be unable to communicate effectively, if he or she does not know how to put these words together in a sentence. Before we can look at how we put words together to make a sentence in order to communicate complex meanings (or at how those tiles are put together to create our pelican), we need to brush up on some basic concepts:

5.1.1 Revision of Basic Concepts – 'Tools' for Sentence Analysis

In order to understand the mechanics of sentence structure, we need a few 'tools' for sentence analysis:

(1) What are Parts of Speech?
Syntax, or the arrangement of words in the sentence, is determined primarily by word *functions,* otherwise called *Parts of Speech.* So Parts of Speech are really the *functions* of words, phrases, or whole clauses within the larger context of the sentence. We can use words (or groups of words) in different ways:

	Function	*Questions they answer*
Nouns	name things	(***What? Who?***)
Pronouns	stand instead of nouns	(***What? Who?***)
Adjectives	describe (modify) nouns	(***Which? What kind?***)

Verbs   name actions or states of being; apart from *naming* actions, they carry in them the meaning of time:

> 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*** (Aristotle).

Adverbs   modify/ describe verbs   (***How? Where? When? Why?***, etc.)

Conjunctions join similar grammatical items (words, phrases, clauses, etc.)

Prepositions show relative 'positions' of things in space and time

Interjections expressions of feelings and attitudes interjected, or 'thrown into' the midst of a clause (they are our 'raisins in the cake')

Word-meanings in all languages have ways of doing these eight 'jobs' and, *depending on **what they do*** in the sentence, they will function as one or another part of speech:

> **Parts of Speech are the functions of words in the sentence.**

Some words may have only one function (for example, *and* as a conjunction). Others may be used in different ways (for example, *fancy*, which is a noun in the phrase *'flights of fancy'*, a verb in *'Fancy that!'* and an adjective in *'a fancy hat'*). Some other examples:

> A characteristic *feature* (noun)
> To *feature* in a film, etc. (verb)
> A *feature* film (adjective)
>
> Ann came in *early* (adverb)
> She is an *early* bird! (adjective)
>
> The divide between the *rich* and the *poor* is growing wider (nouns)
> The *poor* people get poorer, whereas the *rich* elite get richer (adjectives)
>
> *Figure* of speech (noun)
> It is difficult to *figure* out his meaning (verb)
> *Figure* skating (adjective)
>
> The killer *bicycles* away (verb)
> Barack Obama gave a '*get-down-to-business*' speech (adjective)

Most of these are examples of single words doing different 'jobs.' However, *groups of words* can also 'team up' and work together as one unit, fulfilling one function (Re: the 'Barack Obama' speech example, where 4 words are used as one *adjective*, to describe the *kind* of speech he gave). Groups of words working together as one part of speech are called ***phrases*** or ***clauses.***[3] What are they? We already know that both are groups of words. The difference between them is structural: phrases do not have their own subject-predicate patterns, whereas clauses do.

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[3] Re: notes below

(2) What is a Sentence?
A sentence is not just any group of words, such as 'beyond high mountains and deep blue seas,' for example; it's **a group of words that *says something <u>about</u> something*.** For example, '*I breathe'* is a sentence, because it says something about me.

A sentence, then, has 2 parts: **what we speak *about*** (its **Subject**) and **what we say *about* the Subject** (the **Predicate**, or the verb together with all the words that go with it). In the examples below, the Subjects are in bold, and the Predicates are underlined:

> **Every word of language** <u>is a generalisation</u>.
> **Every sentence** (*thought*) <u>is a generalisation</u>.

(3) Basic Sentence Pattern (S/V/C). In English, most declarative sentences follow the S/V/C pattern: the **Subject** + its modifiers (**what we speak about**) fill the first slot / the **Finite Verb** and its modifiers fill the second slot / and **Compliment** (optional) takes the third slot (S/V/C).

Linguists usually refer to the third sentence component as Object (S/V/O). We will call it Compliment, because objects are not the only things that can fill that third slot:

1. **Zero Compliment**: I breathe. I think.
2. **Predicate Adjective** (PA): Life is interesting. Work is hard.
3. **Predicate Noun** (PN): Life is hope. Knowledge is Power.
4. **Direct/ Indirect Object** (DO/IO): Peter fries fish for his friend.

Together, the Verb and the Compliment make up the <u>Predicate</u>, or <u>what we say *about* the Subject</u>. The 'heart' of the predicate is the ***finite verb*,**[4] which may be separated from its Subject by modifiers (other words, phrases, or even clauses). It is important that the Subject-Verb Agreement is maintained despite the intervening words: without the Subject-Verb Agreement the sentence becomes ungrammatical (as in 'Mary, a girl in my class, am clever'). Another example:

>   S   / V /   C (PN)
> Ignorance / is / the mother of devotion. (Robert Burton)

Reminder:

Subject is what we speak about and ***Predicate*** is what we say about the subject (V/C).

The ***subject*** of the sentence is the thing we talk about with all its modifiers, e.g.:

> ***The definition of experience*** *is knowledge acquired too late.*

The ***predicate*** is made up of the finite verb (expressing action performed or received by its subject), together with all the words that go with that verb:

> *The definition of experience **is knowledge acquired too late**.*

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[4] ***Finite Verb*** is a verb *defined* by its Subject (it has the Subject's number and person, because it about its Subject: I am, You are, He is, We are, They are, etc.)

(4) Four types of sentence structure:

⇒ *Simple:* one S/V/C pattern: *All great truths begin as blasphemies.*
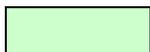
⇒ *Compound:* two or more S/V/C patterns (simple sentences), joined by a conjunction:

You can twist perceptions, but *reality won't budge.*

, but
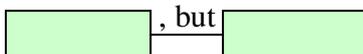
⇒ *Complex:* one main clause plus one or more dependent clause(s):

Everything you can imagine is real.

Adjective clause (Which '*Everything*'?)
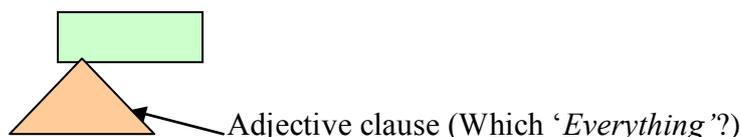
⇒ *Compound-complex:* at least two main clauses and one or more subordinate clauses:

But I forget what I to say so wanted
And ghostly thought rejoins the other shadows…

Noun clause (*What* do I forget?)
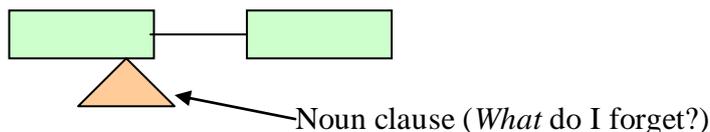
(5) What is the Difference between Phrases and Subordinate Clauses? Both are groups of words that function as one part of speech (a noun, an adjective, or an adverb). In order to understand and diagram sentence structure correctly, we must be able to *recognize* clauses and differentiate them from *phrases,* which are not shown in our schematic clause diagrams.

The difference between them is *structural*: <u>clauses have their own S/V/C pattern; phrases do not</u>:

It is a mark of an educated mind *to be able to entertain a thought <u>without accepting it</u>*

(Aristotle)

N.B.: The phrase '*without accepting it*' is an adverb modifying the infinitive verb 'to entertain' within the framework of the larger phrase '*to be able to entertain a thought <u>without accepting it</u>*' which <u>names</u> that thing that the 'mark' is. Neither of these phrases has an S/V/C pattern.

$/S_1/$ $/S_2/$ $/V_{2.1}/$ $/C_{2.1}/$ $/V_{2.2}/$ $/C_{2.2}/$ $/V_1/$ $/C_1/$
A man, *who has made a mistake and doesn't see it,* is making another mistake.

(Confucius, 'Success and Failure')

Here the clause <u>*who has made a mistake and doesn't see it*</u> is an Adjective describing the noun 'man' in the main clause.

(6) The Difference between the Main and Subordinate Clauses:

<u>**Subordinate**</u> clauses may function in three ways within the larger sentence framework:

⇒ *Noun clauses* <u>name</u> something/somebody in the main clause, i.e.:

The most incomprehensible thing about the world is <u>that it is comprehensible</u> (Einstein)

⇒ *Adjective clauses* <u>modify</u> (describe) nouns in the main clause, for example:

The person <u>who knows how to laugh at himself</u> will never cease to be amused.

⇒ *Adverb clauses* <u>describe</u> actions in the main clause, i.e.,
'We *don't see* things <u>as they are</u>. We *see* things <u>as we</u> are.' (Anais Nin)

<u>**Main**</u> clauses have no such function; they are generalizations, correlating what they speak about with what they say about it (the Subject with its Verb and all the words that go with it):

⇒ 'I hear and I forget. I see and I remember. I do and I understand.' (Confucius)

(7) What is the Finite Verb? The finite verb is a verb that has a Subject which defines its form (*number* and *person*). Subject-Verb Agreement (conjugation, 'tie' between them) is what makes a sentence. Examples of some common verb **conjugations** (= the 'tying together' of the Subject and its Verb):

Number / Person	Singular	Plural	Singular	Plural	Sing.	Plural
1st	I am	We are	I do	We do	I have	We have
2nd	You are	You are	You do	You do	You have	You have
3rd	He/she/it is	They are	He/she/it does	They do	He has	They have

Table 1 Verb conjugation

(8) What is the Infinitive Verb? Infinitive verbs have no Subjects (or *doers*; they are just names of actions, as listed in dictionaries). Since they only name actions or states of being, they function as nouns, *names* of actions /states of being. They are usually preceded by the particle 'to' when used in sentences, except after modal verbs (can, must, may, might, could, should, would, etc.). Example (infinitives are in italics):

A diplomat is someone who can **tell** you **to go** to hell and **make** you happy **to be** on your way.

(9) What are Modal Verbs? Modal verbs do not express *concrete* actions; their meanings are *abstract* – they express our *attitudes* (what we think or feel about a situation), i.e., '*They should not have gone*' or '*They might get angry*.'

Our attitudes and opinions may concern:

Ability to do something   –   **can / be able** / **manage**

He can be very persuasive.
We were able to breathe under water.
He manages* to resist the temptation every time.

8

Advisability of something   –   **should/ ought to**

> We should go now, it's getting late.
> He ought to know better than take silly risks.

Obligation /**necessity**   –   **must/ have to / need to**

> We must follow the law here.
> They have to follow the rules.
> I need* to see the doctor / Need we go there? / He need not wait.
>
> * ***Need*** can be used as an ordinary verb, meaning 'must have': *I need a new car*, etc.

Possibility/ likelihood   –   **could / can / might / may**

> He could be there.
> He may not come.
> They might not come.

Permission   –   **can / may**

> You may sit down now.
> You can go now.

Requests   –   **can / could / will / would**

> Can you sit down, please?
> Could you do it for me?
> Will you keep quiet, please?
> Would you please leave now?

(10) What are the Auxiliary Verbs? Auxiliary means 'helping'; auxiliary verbs are verbs like DO, BE, and HAVE. Apart from their 'concrete' meanings, they also help us form:
1. **Negatives**: I do not see how we can do it.
2. **Questions**: Does he want to go?
3. **Complex verb tenses**, indicating continuing or completed aspects of the action: to *be* waiting / to *have* waited / to *have* been waiting

(11) Compounding. Compounding means joining two or more *similar* items by conjunctions 'and,' 'or,' 'but,' 'either … or,' and 'neither … nor.' These conjunctions are often used to join **equal grammatical constructions** – subject and subject, object and object, adjective and adjective, verb and verb, etc. Whatever grammatical construction appears before one of these words should also appear after it.

(12) Ellipsis. Ellipsis is simply the omission of understood words in a sentence (also called *omission* or *reduction*). For example,

> [You] Help! [me]   or   [You] Put your thinking cap on [your head]!

(13) English Verb Tenses: Sentence analysis involves identifying the S/V/C patterns in sentences, and trying to figure out how all the words relate to each other / what 'jobs' they do. This means that we must be good at recognizing verbs, even when they are made up of several words (as in the complex tenses). Please review the structures and grammatical meanings of the various tenses of English verbs:

1. **<u>Simple</u>**
   a. Present Simple: regular, habitual actions; 2 forms: the base form and the '-s'-form (after 3rd person singular subjects)
   b. Past Simple: regular & irregular verbs, expressing non-specific actions in the past
   c. Future Simple: Auxilliary BE forms (will/shall) + base form of the verb; refer to any future actions.

2. **<u>Continuous</u>**:   **BE + Present Participle** (-*ing*-form of the verb), i.e., I am working, You are working, He is working, etc.; I was working, We were working, etc.; I will be working, We shall be working, etc.; Continuous tenses express ***continuing*** actions at a point in time (Present, Past, or future)

3. **<u>Perfect</u>** Tenses relate two actions; the result (effect) of the first action is present (felt) at the time of the other action, i.e., I have seen this man before, We had expected this to happen, They will have arrived at 4 pm, etc.; The general 'formula' for the Perfect tenses:

$$\textbf{HAVE + Past Participle}$$

4. **<u>Perfect Continuous</u>**: a 'cross' between the Perfect and Continuous tenses: they refer to completed actions at a point in time, but emphasize their duration (the time that they took happening), i.e., 'We *have been waiting* for you,' etc.

   The general 'formula' for the Perfect Continuous tenses:

$$\textbf{HAVE + BEEN + Present Participle}$$

(14) Passive Voice of the Verb: The **Direct Object** of the verb's action becomes the **grammatical Subject** of the Verb:

		We will be told to leave
Simple:	BE + Past Participle	We are told to leave
		We were told to leave
Continuous:	BE + being + Past Participle	We are being told to leave
		We were being taken for fools!
		We will have been taken for fools
Perfect:	HAVE + BEEN + Past Participle	We have been told to go
		We had been taken for fools!

The Future Continuous verbs are rarely used in the Passive; Perfect Continuous constructions, likewise, become too clumsy to be used in the Passive Voice.

The Passive is used when the doer (subject) of the action is either not known or is unimportant/ irrelevant: the focus shifts to the action *per se*. For example,

> A car ***is stolen*** every minute in big cities.
> Water ***is added*** to the mixture, etc.

✍ Activity 5.1

1. Conjugate the verb *do* in all the 12 tenses of the English verb;
2. Turn your sentences into the Passive Voice.
3. Identify the functions of all the words/ groups of words (phrases and clauses) in:

> A cynic is the man who knows the price of everything and the value of nothing.
>
> A gentleman is the one who never hurts anyone's feelings – unintentionally.
>
> <div align="right">(Oscar Wilde)</div>

4. Explain how modal and auxiliary verbs differ from 'content' verbs.

5.2 The 'Universal Invariables' – Synthesis & Analysis

> Every thought tends to connect something with something else, to establish a relationship between things. Every thought moves, grows and develops, fulfils a function, solves a problem.
>
> <div align="right">Lev Vygotsky</div>
>
> We connect the dots. We try to make sense of this confusion that we call the world.
> <div align="right">*Newsweek* Editor</div>

Synthesis and **Analysis** are part of *generalisation* – they drive all human Thought and form the ***matrix*** of the diverse *structures* of the world's languages. Just as inhalation and exhalation are both part of breathing, so also ***synthesis*** and ***analysis*** are part of generalisation, 'embodied' in the Sentence:

1. **Synthesis** *connects* the major parts of the sentence Subject/Verb/Compliment – their Nexus represents the linear (syntagmatic) relationship between them, and
2. **Analysis** specifies/ describes/ modifies sentence constituents; it can *specify* / *name* nouns in the S/V/C pattern (i.e., I /see/ <u>what you mean</u>/: here it names the DO of the verb) or describe /modify nouns and verbs (i.e., a *green* apple – adjective function; I think *deeply* – adverb function).

Recursion, or **insertion of phrases inside others**, so typical of all human languages, is nothing but analysis in action! An example of recursion is extending the sentence '*Peter fries fish*' to '*Peter*, <u>who likes cooking anyway</u>, *fries fish* <u>with great enthusiasm,</u> <u>because he loves eating it</u>'

Embedding in action ☺

5.2.1 Synthesis: Basic Constituent Order

Look at how Professor Terry Crowley, who also taught linguistics at the Department of Language and Literature at the University of Papua New Guinea (1979 – 1983), discusses word order rules in different languages (some of which may be familiar to you):

When I talk about *basic constituent order,* I am referring to the relative order in the sentence of the three major components, i.e. the verb and the noun phrases that are centrally associated with it, these being the subject and object noun phrases. Languages of the world can be grouped typologically according to the way that these three major constituents in the sentence are ordered.

Most languages have the order SUBJECT + VERB + OBJECT (SVO) - English is a language of this type. The next most frequently found order is SUBJECT + OBJECT + VERB (SOV). The only other commonly found order is VERB + SUBJECT + OBJECT (VSO). (There are three other logical possibilities for the order of constituents in a sentence, i.e. OVS, OSV, VOS. However, these orders are much rarer among languages of the world.)

Many of the Austronesian languages of the Pacific - along with English as I have already said - are SVO languages. The Tolai language of New Britain in Papua New Guinea is a language of this type, as shown by the following example:

```
A    pap   i    gire     tikana  tutana.
the  dog   it   see      one     man
SUBJECT     VERB   OBJECT
'The dog saw a man.'
```

The Austronesian languages of Central and Milne Bay Provinces of Papua New Guinea, however, are generally of the **SOV** type. For example, the same sentence in Motu would be expressed as:

```
Sisia ese      tau    ta    e-ita-ia.
dog   subject  man    one   it-see-him
SUBJECT        OBJECT       VERB
'The dog saw a man.'
```

The Austronesian languages of Central and Milne Bay Provinces appear to have changed their word order from the earlier order of SVO to the SOV order that they now have. Some scholars have argued that this change took place when the ancestor language from which Motu and its closer relatives are descended came into contact with the non-Austronesian languages of the area, as all of these non-Austronesian languages are SOV languages. For instance, in the non-Austronesian Koita language, which is spoken by the neighbouring group to the Motu, the sentence that I have just given for Tolai and Motu would be expressed as follows:

```
Tora        ata   be   eraɣa-nu.
dog         man   one  saw-him
SUBJECT     OBJECT  VERB
'The dog saw a man.'
```

Language contact is not the only possible explanation for a change in basic word order, as languages clearly do undergo these sorts of changes without any evidence that language contact is involved. Many languages that have one particular basic constituent order often allow competing patterns in certain structural contexts. German, for example, is an SVO language in main clauses, as shown by the following:

> **Der Mann sah den Hund.**
> The man saw the dog.

In subordinate clauses, however, German has SOV order, as shown by the following:

Ich	**glaube**	**dass**	**der**	**Mann**	**den**	**Hund**	**sah.**
I	believe	that	the	man	the	dog	saw

'I believe that the man saw the dog.'

When there are competing structures of this type, it is possible for one of the two patterns to be generalised to other contexts and for the typology of the language to change. (Note, however, that I am not trying to say here that German is moving from SVO to SOV constituent order.)

Other languages allow alternative word orders as a way of expressing purely stylistic contrasts in particular contextual environments. For instance, in an SVO language, it may be possible to focus attention on the object by moving that noun phrase to the beginning of the sentence, or by moving the subject to the end of the sentence. Even though English is an SVO language, we sometimes find OSV orders in sentences such as the following:

> **I quite like Harry, but John I just can't stand!**

Similarly, although French is an SVO language, we also find constructions such as the following in the colloquial language which appear to have a VOS order:

```
Il    aime   bien   sa    petite   fille      le    vieux   mec.
he    love   much   his   little   daughter   the   old     guy
'The old guy really loves his little daughter.'
```

Again, if constructions such as these originally purely stylistic variants were to take over from the dominant patterns, then a change of constituent order typology would have taken place (Crowley: 1997).

The **Verb is the *connector*** in the synthesis of complex meaning – it *connects* the Subject (what we speak about) with the Predicate (what we say about the Subject). No synthesis of meaning into the bigger 'chunk' of a sentence is possible without the verb 'connecting' with its subject in form (i.e., taking the Number and the Person of the

Subject). That is why the knowledge of verb tenses, verbals (Participles) and other verb forms (Active & Passive Voice, the Infinitive, etc.) is so important!

5.2.2 Analysis – Modification/ Description/ Specification

Words / groups of words can function as nouns, adjectives, or adverb**s**, depending on what they do in the sentence:

1. In **synthesis,** we *connect* words to *name* something, i.e.:
   a. *Grammar + precedes + Logic* (= 1 complex idea)
   b. *To be* or not *to be* – that is the question! (What is the question? <u>*To be*</u> or <u>*not to be*</u>)
2. In **analysis,** we *describe* (specify/ modify) things that we name (adjective or adverb function), i.e.:
   a. Synthesis and analysis presuppose each other, <u>*as inhalation presupposes exhalation*</u> (presuppose *how*? - adverb of manner)

A group of words, acting together as one Noun, Adjective, or Adverb is a **phrase**, if it does not have the S/V/C structure, and a **clause**, if it does have a S/V/C pattern in it. We identify the functions of words and groups of words in a sentence, by asking questions, to see how words relate to each other in the sentence.

In sentence diagrams, quadrangles indicate independent S/V/C patterns, while triangles stand for dependent S/V/C patterns (Adjective, Adverb, or Noun clauses)

The sentences of all languages, irrespective of their word order, always *connect* 'what we speak about' (the Subject) with 'what we say about it' (the Predicate), **even if the subject is only implied**, as in imperatives, for example: [You] "Come in, please," or [I wish] "Good Morning" [to you], etc.

Apart from connecting the 'limbs' of the sentence (S/V/C) in order to make one body, we can also *modify*, or *describe*, these major parts of the sentence 'anatomy':

$$\begin{array}{ccc} S & V & C_{(DO)} \end{array}$$
Doctors // treat // patients
$$\begin{array}{ccc} S & V & C_{(DO)} \end{array}$$
Young doctors // **carefully** treat // **sick** patients
$$\begin{array}{cccccc} S & V & C_{(DO)} & S_2\ V_2 & C_{2(DO)} \end{array}$$
Young doctors // **carefully** treat // **sick** patients, *because they want them to get better*.

Why?
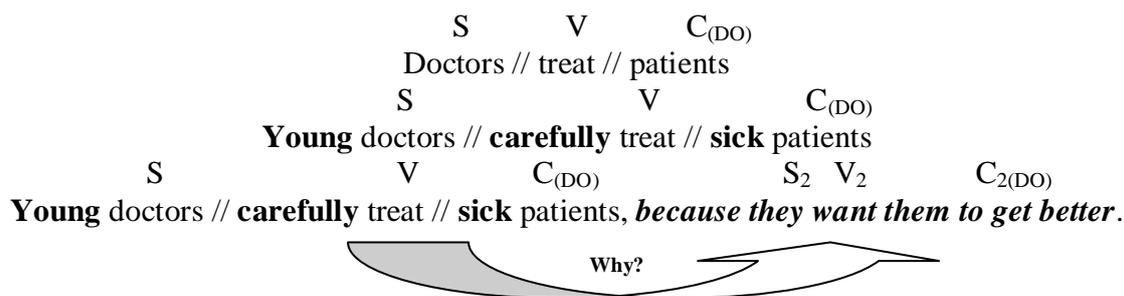
Each sentence is not understood as a sequence of words put together: the full meaning of each word is only understood in the context of its relationship with other words around it. What sort of relationships can affect word-meanings, then? They are the relationships of:

1. **Resemblance** (*red* wine, *interesting* book, *fast* car, etc.),
2. **Contiguity** in space or time (come *here*/*there*/*tomorrow*/*next year*, etc.), and
3. **Cause**/**Effect** (I think, *therefore* I am), etc.

The 'universal invariables' of **synthesis** and **analysis** underlie all generalization (thought and language/ sentence structure), irrespective of the language we speak:

(1) **Synthesis:** the Verb *connects* (conjugates) word-meanings into the S/V/C pattern, making a sentence out of a string of words. Word order varies amongst languages: most have the SVO, SOV, VSO or VOS patterns; OVS /OSV patterns are more rare they have been documented in only 0.75% and 0.25% of the world's languages, respectively (Christiansen & Chater: 2007). What matters is not the order in which they come, but the *connection* (nexus) between the principal sentence constituents; and

(2) **Analysis** of the three basic constituents allows for *recursion*, or *embedding* of phrases and dependent clauses into any of the three slots of the basic sentence pattern. The connections between word-meanings /groups of word-meanings (whether based on Resemblance, Contiguity, Cause/Effect, or a combination of all three) are the result of our reasoning/ *generalization*. For example, *Cogito, ergo sum* (I think, therefore I am).

The *functions* of words in the sentence – whether they *name* the main sentence constituents or *modify* them – determine the relationships between them. These functions (Parts of Speech[5]) are the same in all languages. When used for live communication, word-meanings form 'chunks' of meaning with others around them.

⚑ **Important Point: Syntax makes sense in more than one way!!!**

The Language Mechanism

We create bigger chunks of meaning (phrases and sentences) by:

1. **Synthesis** of word-meanings: we cannot say several words in the same breath, so the Order of Words is an important feature of every language, and

2. **Analysis** of sentence components (Subject/Verb/Compliment): i.e., associating them either by

   ⇒ *Resemblance* (Which kind? Which? How? Like what?)
   ⇒ *Contiguity* in Space (Where?) or Time (When?), or
   ⇒ *Cause/Effect* (Why? What for? With what consequence? On what condition? etc.),

Analysis may also *name* things by using all three principles (as we do in all **generalisation**)

✎ Activity 5.2

Explain how the Language Mechanism works through Synthesis & Analysis. Why is analysis (modification / specification) so important in the mechanism of creating complex meanings?

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[5] **Parts of Speech**: Nouns, Pronouns, Adjectives, Verbs, Adverbs, Prepositions, Conjunctions & Interjections are the **functions** of words in the sentence.

The Noun, Adjective, and Adverb functions can be performed by the smallest **units** of language (word-meanings), **phrases** (groups of word-meanings that act together as a Noun, Adjective, or Adverb), or dependent **clauses** (S/V/C patterns that act as a Noun, Adjective, or Adverb). Determining how words, phrases, and clauses relate to each other within the sentence is the purpose of the *generalizing* syntactic analysis that we will practice in this course – let us call it **G-nalysis**.

5.3. Generalisation in Syntactic Analysis (G-nalysis)

G-nalysis uses the **mechanism of meaning creation**, Generalisation, to identify the ways we **connect** and **expand** simple ideas into larger chunks of meaning – word-meanings, **phrases** and **clauses** (groups of word-meanings), and **sentences**. Because this method of sentence analysis (g-nalysis) uses the way the human brain thinks naturally, it is really easy to understand, and use. To associate ideas by Resemblance, Contiguity, and Cause/Effect, we use **Synthesis** and **Analysis**:

1. **Synthesis** forms the nucleus of the sentence, its 'skeleton' (S/V/C pattern);

2. **Analysis** allows for potentially infinite expansion of S/V/C patterns (*recursion*). Any one or all of the major sentence pattern constituents (S/V/C) may be *described* through association with other ideas based on Resemblance, Contiguity, and Cause/Effect, or *named* using all three types of association, as is the case in any generalization. *Recursion* makes the Language/ Thought mechanism open-ended, allowing for infinite expansion of the original sentence meaning through embedding other S/V/Cs into the main sentence slots.

Activity 5.3.1

Look at *recursion* in action in this children's rhyme:

> This is the farmer sowing the corn
> That kept the cock that crowed in the morn
> That waked the priest all shaven and shorn
> That married the man all tattered and torn
> That kissed the maiden all forlorn
> That milked the cow with the crooked horn
> That tossed the dog
> That chased the cat
> That killed the rat
> That ate the malt
> That lay in the house that Jack built.

1. Identify all S/V/C patterns in this rhyme.

2. How do they relate to each other? What do they *do* in the main sentence?

5.3.1 Two Steps of G-nalysis:

1. The first step in G-nalysis focuses on identifying all S/V/C patterns present in the sentence.

2. The second step aims to determine the *logical relationships* between all the S/V/C patterns in the sentence. This is done through asking relevant questions (Re: 5.2.2)

Before we engage in practical sentence g-nalysis, please read one more time the description of the 'universal principle of connection' by David Hume:

Though it be too obvious to escape observation, that different ideas are connected together; I do not find that any philosopher has attempted to enumerate or class all the principles of association; a subject, however, that seems worthy of curiosity. To me, there appear to be only three principles of connexion among ideas, namely, Resemblance, Contiguity in time or place, and Cause or Effect.

That these principles serve to connect ideas will not, I believe, be much doubted. A picture naturally leads our thoughts to the original: [1] the mention of one apartment in a building naturally introduces an enquiry or discourse concerning the others: [2] and if we think of a wound, we can scarcely forbear reflecting on the pain which follows it. [3] But that this enumeration is complete, and that there are no other principles of association except these, may be difficult to prove to the satisfaction of the reader, or even to a man's own satisfaction. All we can do, in such cases, is to run over several instances, and examine carefully the principle which binds the different thoughts to each other, never stopping till we render the principle as general as possible. [4] The more instances we examine, and the more care we employ, the more assurance shall we acquire, that the enumeration, which we form from the whole, is complete and entire.

[1] Resemblance.
[2] Contiguity.
[3] Cause and effect.

[4] For instance, Contrast or Contrariety is also a connexion among Ideas: but it may perhaps, be considered as a mixture of Causation and Resemblance. Where two objects are contrary, the one destroys the other; that is, the cause of its annihilation, and the idea of the annihilation of an object, implies the idea of its former existence.

Just as Contrast (Contrariety) is the opposite of Resemblance, so Analysis is the opposite of Synthesis. Together, these opposites make one whole:

GENERALISATION

G-nalysis – Key Symbols:
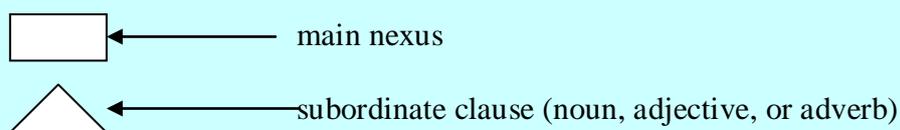
main nexus

subordinate clause (noun, adjective, or adverb)

$\qquad$ S $\qquad$ V $\qquad$ C $_{zero}$

(1) //All great truths / begin as blasphemies/   /.

$\qquad$ S$_1$ $\qquad$ V$_1$ $\qquad$ C$_{1\,(DO)}$ $\qquad$ S$_2$ $\qquad$ V$_2$ $\qquad$ C$_{zero}$

(2) //You / can twist / perceptions//, but // reality / won't budge//.

but

Which something?   *Until when?*

$\qquad$ S$_1$ $\qquad$ V$_1$ $\qquad$ C$_{1\,(PN)}$ $\qquad$ S$_2$ $\qquad$ V$_2$ $\qquad$ C$_{2\,zero}$ $\qquad$ S$_3$ $\qquad$ V$_3$
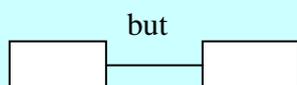
(3) //Experience / is / something // you / don't get / until just after /you / need / it//.

$\qquad$ C$_{3\,(DO)}$

Adjectival Clause (modifies 'something')

Adverbial Clause of Time (modifies 'don't get')

With what consequence?
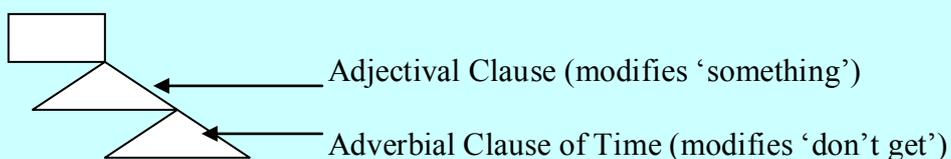
(4) //I / think //, //therefore / I / am.// ~ *Descartes*

Adverbial Clause of Consequence

$\qquad$ S $\qquad$ V $\qquad$ C$_{(DO)}$

(5) //<u>Drawing on my fine command of language</u>, / I / said / nothing//.*

How?
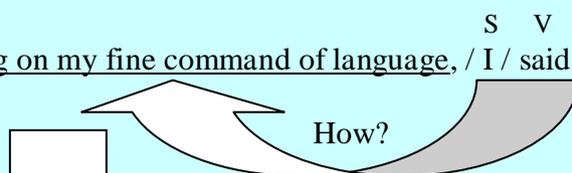
* The <u>adverb of manner phrase</u> precedes the Subject.

Which everything?
S_1 S_2 V_2 V_1 $C_{1\,(PA)}$
(6) //Everything // you / can imagine // is / real. // ~ *Picasso*

Adj. Clause
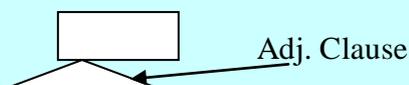
What?
S_1 V_2 S_2 V_2 $C_{2\,(DO)}$
(7) //True knowledge / exists <u>in knowing</u> / that /you / know / nothing.// ~ *Socrates*

Noun Clause
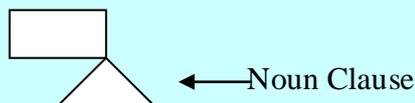
Which tracks?
$S_{1.1}$ $S_{1.2}$
(8) // Knowledge and belief / are / two separate tracks // that / run parallel to each
    other and never meet, except in the child.// ~ *Godfried Bomans: Buitelingen II*

Adjective Clause
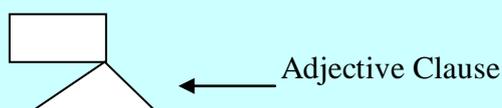
Which apparatus?   *What?*
(9) //Brain / is / an apparatus // with which /we / think / we / think.// ~ *Ambrose Bierce*

Adj. Clause

Noun Clause embedded within an Adj. Clause
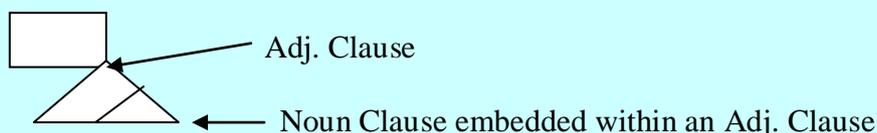
G-nalysis is flexible: it allows for ambiguity, so inherent in language. The functions
of words and groups pf words (phrases and clauses) may be analysed differently,
depending on one's perception / the kind of generalization one makes. In example (7),
for example, the phrase *in knowing* can be analysed as

      (a) **Indirect Object** (IO) in the compliment slot, if the question '(exists) *In
      what?*' is asked

or as

      (b) An **adverb of place phrase**, if the question '*Where?*' is asked instead; in
      this case, the complement would be analysed as zero.

This flexibility of G-nalysis reflects the fluid nature of 'live' meanings we create and
perceive, as we 'play our language games'; it accounts for the indeterminacy of
meaning (meaning as use) that Ludwig Wittgenstein and Bachtin wrote about.

G-nalysis reflects the natural way we think / reason, which accounts for why it both enjoyable and easy to make sense of.

✍ Activity 5.3.2

I. Study these definitions of:

Recursion
1. A programming method in which a routine calls itself. Recursion is an extremely powerful concept, but it can strain a computer's memory resources. Some programming languages, such as LISP and Prolog, are specifically designed to use recursive methods.

Mathematics:
1. An expression, such as a polynomial, each term of which is determined by application of a formula to preceding terms
2. A formula that generates the successive terms of a recursion

Etymology:
> Late Latin *recursiō*, recursiōn-, a running back, from Latin recursus, past participle of *recurrere*, to run back

Recur
1. To happen, come up, or show up again or repeatedly.
2. To return to one's attention or memory.
3. To return in thought or discourse.
4. To have recourse: *recur to the use of force.*

Etymology:
> Latin *recurrere*: re-, re- + currere, to re-run

How do these meanings relate to the concept of embedding in linguistics?

II. G-nalyse the following Tok Pisin sentences:

> Olsem yu mekim bet bilong yu, na yu ken silip long em

> Yu ken traim long haitim simuk tasol em bai kam aut yet

> Taim ai i lukim, maus i mas pas

> Olgeta man i no wankain long dispela graun, olsem na pinga tu, i no wankain

> Taim kakaruk i wait[pela], em i wait[pela]

> Wanem (h)ap ol [i] taitim /pasim kau, lo (h)ap em bai kai-kai

> Wanem samtin ren i bungim, dispela samtin em wet / [em bai wetim]

Summary

1. **Syntax** – arrangement of words in the sentence
   a. The **Sentence** – saying something *about* something
   b. The **Subject** – what we speak about
   c. The **Predicate** – what we say about the Subject
   d. **Parts of Speech** – functions of words and groups of words in the sentence
   e. **Phrases** – groups of words that function together as 1 part of speech; no SVC pattern
   f. **Clauses** – groups of words with SVC structure that function as 1 part of speech (Noun, Adjective, or Adverb)
2. *Synthesis* & *Analysis* together are *generalisation*; since the words and sentences of language are generalisations, languages structures embody *Synthesis* & *Analysis*
3. *Recursion* – the potentially unlimited extension of language structures by embedding phrases and sentences into other sentences; it shows how *generalisation* can generate an infinity of ideas through the *synthesis & analysis* of word-meanings
4. *Generalising* **Sentence Analysis** (*G-nalysis*) aims to identify S/V/C patterns and determine how they relate to each other (how they function, or what they do in the main sentence).

References

Crowley, Terry. *An Introduction to Historical Linguistics*, 3rd ed., Oxford Univ. Press, 1997

Hume, David. An Enquiry Concerning Human Understanding, Section III – Of the Association of Ideas. http://18th.eserver.org/hume-enquiry.html & http://18th.eserver.org/hume-enquiry.html#3 (27/06/2008)