Sutra 6: The Limitations of Linguistic Arbitrariness

Generalization is the universal mechanism of Verbal Thought.

Verbal Thought = Language.
Thus, GENERALIZATION IS THE RATIONAL MECHANISM OF LANGUAGE.

6.0 Universal Human Logic limits the Arbitrariness of Grammars

Universal principles of Human Logic limit the arbitrary nature of physical grammars. Each grammar sets its own paradigms of forms (i.e., verb tenses and conjugations, declensions of the noun, word order, etc.), whose inexplicable and seemingly random diversity has led descriptive linguistics to adopt its fundamental principle that Linguistic Signs and their behavior in a language system is totally arbitrary. World grammars are so diverse, because they have been shaped over millennia by the collective minds of unique societies, each with their own histories, habits, personalities, likes and dislikes, etc.

And yet, despite their diversity, the same *Rational Language Mechanism* – generalization – has generated them all. The universal principles of human understanding, those associations by resemblance, contiguity in space-time and cause/effect are the connective tissue that holds together all language structures; if we cannot identify these logical connections, we cannot make sense of what we hear, or see; for example:

Everytime I see a math word problem it looks like this:
If I have 10 ice cubes and you have 11 apples.
How many pancakes will fit on the roof?
Answer:
Purple because aliens don't wear hats.

arrg! ecards

Recent research in cognitive science also corroborates our conclusion that some universal principles of human logic may limit the hitherto largely unquestioned arbitrariness of language:

> 'It seems that many apparently arbitrary aspects of language can be explained by relatively natural cognitive constraints – and hence that language may be rather less arbitrary than at first supposed'
>
> (Christiansen & Chater: 2007)

Having identified the general principles of human Logic (associations by resemblance, contiguity in space-time, and cause/effect), we will now examine how this Rational Language Mechanism works in practice. However, before we zoom in on the Logic of Syntax embodied in the 'flesh' of *live* sentences, we should remind

ourselves of the ***grammaticality*** concept, which reflects the generally accepted social standards of 'correctness' in each grammar.

6.1 Grammaticality refers to whether a word-mosaic (sentence) complies with wantok group habits and rules of constructing word mosaics. In English, as in all languages, every sentence is a sequence of words, but not every sequence of words is a sentence (the sentence is always a nexus – a synthesis of what we speak about, and what we say about it). Word mosaics that conform to the conventional language-specific syntactic rules are said to be grammatical, and those, which violate the socially accepted syntactic rules – ungrammatical. Only grammatical sentences form meaningful mosaics.

Grammaticality judgments are objective – they are based not on individual perceptions, but on the language habits of the speech community at a point in time.

Apart from the purely 'formal' social habits and preferences for word order in synthesis (nexus) and analysis (recursion), syntactic rules are also rooted in practical common sense. For example, the rule that a transitive verb (such as to '*have*') must be followed by a direct object (i.e., a 'dream'), and that an intransitive verb (i.e., to *sleep*) cannot take a direct object, etc. (you cannot 'sleep a baby').

Native speakers intuitively distinguish grammatical from ungrammatical strings of words because they are used to their wantoks' habits. Second language learners, on the other hand, must learn foreign words and how to put them together in a foreign language. Grammaticality refers only to the physical ***form*** of language structures, not to their logical sense; a sentence may be absurd, yet perfectly grammatical, i.e.:

Mean-looking crocodiles in sexy underwear danced foxtrot.

In fact, we can even use non-words, and still put them in grammatical sequences, like in that Jabberwocky poem from Lewis Carroll's Alice in Wonderland:

'Twas brillig, and the slithy toves
Did gyre and gimble in the wabe:
All mimsy were the borogoves,
And the mome raths outgrabe.

These sentences seem to fill our heads with ideas – only we, like Alice, don't know what they are! Grammaticality does not depend on the truth of sentences either – lies and false arguments can have perfect grammar; it is purely our knowledge of language forms and structures that permits us to make grammaticality judgments (we measure the truth value of utterances by their relation to reality).

Grammaticality exists on different levels: syntactic, lexical and semantic, and some deviations from the norm are worse than others. Even though the wrong

choice of words (lexical / semantic errors) may make something sound 'funny' or strange, we would still be able to make sense of what is said. But failure to connect the Subject (what we speak about) with the Predicate (what we say about the Subject) makes an utterance completely unintelligible. In other words, if the S/V/C structure is not properly synthesized, the statement becomes ungrammatical. So the degree of grammaticality can range between bad, worse and worst:

BAD   **WORSE**   **WORST**

Lexical / Semantic problems: BAD
Below are some actual quotes from medical Emergency Reports:

- By the time he was admitted, his rapid heart had stopped, and he was feeling better.
- On the second day, the bad knee was better and on the third day it had completely disappeared.
- The patient refused an autopsy.
- The patient has no past history of suicides.
- The patient expired on the floor uneventfully.
- Patient has left his white blood cells at another hospital

Examples below come from POMNATHS student essays (1999):

- Many young girls who cannot accommodate babies are pregnant
- With education and support, people will be able to take actions to protect infections.
- Sex education should be compulsory to make sure people know more so they don't put themselves in a situation that can be controlled. PNG needs to be educated: it's better to be safe, then sorry.
- I am quite aware of the situation the country is in and because of that the prices of goods are increasing.

Verb/Noun agreement error, tenses, etc.: WORSE

- People who have AIDS don't die straight away, but is said to have developed the HIV (Human Immune Virus).
- This bush medicine (Devil's Fig) is specified to cure natural pain, like backache, stomach ache, and many others. However, it is not recommended to be treated on children under 15, as it can affect their skin.
- AIDS is a serious disease that affect almost the entire life of PNG.
- These process should be repeated and consumed after 12hours if pain persists.

[The above examples also come from POMNATHS student essays, 1999]

Broken Phrase Structure Rules – the WORST! These render utterances virtually unintelligible:

My dog white four years has.

> Help you can him.
> Hospital ended up the patient in.
> Yes… ah…Monday ah… Dad… and Dad …ah … Hospital … and ah … Wednesday
> Wednesday … nine o'clock and ah Thursday … ten o'clock ah doctors … two … two
> … ah doctors and … ah … teeth… yah. And a doctor … ah girl … and gums, and I…

[This example of how some brain-damaged people (aphasics) struggle to express their thoughts is documented by Harold Goodglass in 'Studies on the Grammar of Aphasics' in 'Psycholinguistics and Aphasia': H. Goodglass and S. Blumstein, eds. Baltimore, MD: John Hopkins University Press, 1973.]

Phrase structure rules specify how words are combined into phrases; for example, English adjectives usually come before the nouns they describe, whereas in French they usually come after the nouns they modify (i.e., a 'black cat' vs. '*chat noir*'). Sentences that violate basic phrase structure rules are less grammatical than those that violate other rules (for example, a *cat black* is less grammatical than a *horizontal cat*).

6.2 Grammaticality vs. Ambiguity

Our syntactic knowledge goes beyond being able to decide which strings are grammatical and which are not. It also enables us to associate the same sound sequences (symbolic forms) with different meanings, depending on how we analyse them. This happens when different deep structures (underlying meanings) overlap within the same surface structure (the spoken or written form of the utterance), i.e.:
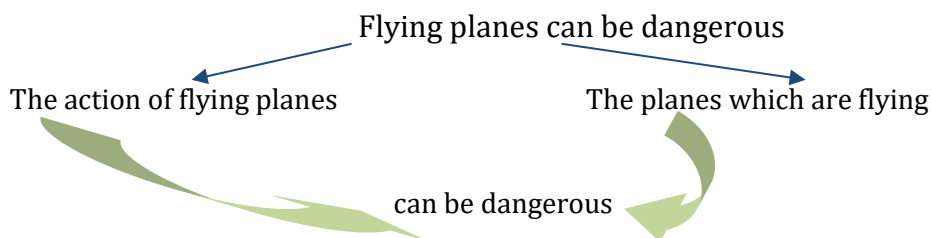
The double meaning here depends on how you understand the function of the word 'flying' – as a noun naming the action of flying planes, or as an adjective, describing the noun 'planes.' Some other examples of syntactic (structural) ambiguity:

> Energy Matters
> Alice reads books on volcanoes.
> Grover said that Dudley left in his car.
> We need more honest politicians.
> We saw man eating rats.

Grammaticality refers to the perceived 'correctness' of the form of an utterance, based on social habits of language use.

Ambiguity (both lexical and structural) refers to the double meaning of an otherwise grammatical utterance.

6.3 G-nalysis allows for flexibility in interpreting ambiguous structures, i.e.:

Which books? – on volcanoes (Adj. phrase)

```
    S       V      C(DO)
// Alice  / reads / books on volcanoes //.
```

```
    S         V      C(DO)
// Alice  / reads  / books /on volcanoes //.
```
Where does she read? (Adv. of place phrase)

More of who? (Noun phrase)

```
        S       V       C(DO)
    // We / need  / more honest politicians.
```
6.4What?

```
  S       V      Who?     C(DO)
// We / need  / more honest politicians.
```
What kind of politicians?
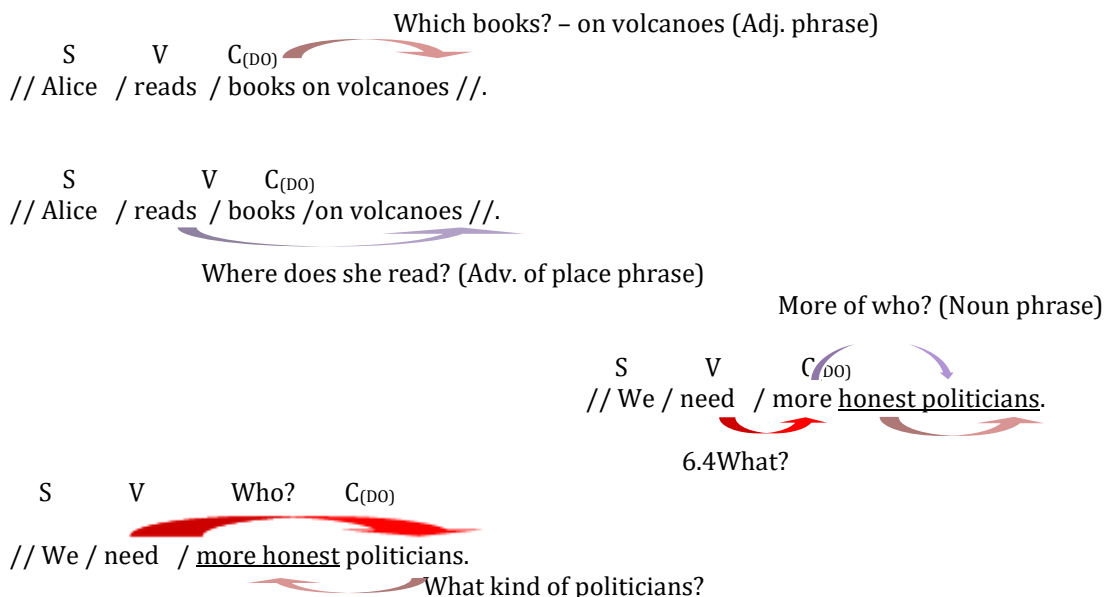
6.4 Gnalysis captures the movement of speakers' thoughts

Societies form ideas about the world they live in – those are their generalizations (word-meanings).

Our individual minds, governed by the same universal principles of human understanding, form our own, uniquely personal ideas (generalizations) by arranging those social 'nuggets' of meaning (word-meanings) into the S/V/C patterns of word-mosaics, each with its own unique meaning. How do we do it? Powered by the mechanism of Verbal Thought (generalization), we use our socially acquired grammar skills to select word-meanings out of our lexicon, and to connect them (by perceived resemblance, contiguity in space-time or cause/effect) into mosaic images (sentences) to represent our thoughts.

The ***purpose*** for which we use word-meanings (to name/describe a thing/event) determines their function in the sentence (i.e., their Part of Speech). Because the matrix of Verbal Thought (in whichever language form it is 'fleshed' out) is generalization, our purposes in using words for have been the same, 'in all times and places'; the so-called 'universal journalistic questions' capture them precisely:

What(Who)? Which? Where? When? Why?

Traditionally, word-based prescriptive grammars distinguished EIGHT parts of speech, by 'what a word does in a sentence':

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

Verbs	name actions or states of being, while carrying also 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 actions	***How? Where? When? Why?*** etc.
Conjunctions	join similar grammatical items (words, phrases, clauses, etc.)	
Prepositions	show relative 'positions' of things in space and time [*contiguity*]	
Interjections	Express feelings & attitudes (interjected/ 'thrown into' the clause: 'raisins in the cake')	

Gnalysis focuses on the **composite meaning** of each sentence mosaic, each being the product of word ***synthesis*** into the [**S/V/C**] nexus and ***analysis*** (description) of these major nexus constituents.

In contrast to traditional school grammar, dialectical analysis recognizes that three of these functions – ***adjective, adverb***, and ***noun*** – can be performed not only by single words, but also by ***groups of words*** (phrases & clauses).

It is the ***common function*** of words <u>working together</u> in the sentence that binds them into a unit of compound meaning, intended to either *name* something in the nexus (as ***noun***) or to *describe*, add detail to a sentence constituent (as an ***adjective*** or ***adverb***). The functions of words (or of groups of words, working together), can only be understood in the context of each sentence-mosaic.

6.5 Gnalysis Diagrams

A group of words, functioning as a Noun, Adjective, or an Adverb, can be a phrase or a clause. The only difference between the two is **structural**: clauses have their own S/V/C patterns, while phrases do not. This is reflected in sentence structure diagrams, where squares represent independent clauses, and triangles represent dependent clauses. Phrases are not represented in diagrams; they are merely underlined and identified in the sentence, i.e.:

$$\text{S} \qquad \text{V} \qquad \text{C}_{(PN)} \qquad \text{Which knowledge?}$$

// Wisdom / is / knowledge <u>about certain principles and causes</u> //
Adjective phrase

S	V	C

Simple Sentence

Which everything?

$$S_{1.1} \qquad\qquad S_2 \qquad V_{2.1} \qquad\qquad V_{2.2}$$

//Everything that civilized humanity remembers and knows <u>at present</u>,

Which experience?

$$S_{1.2}$$

all the accumulated experience <u>in books, monuments and manuscripts</u> –

Which expansion?

$$S_{1.3} \qquad\qquad\qquad\qquad\qquad V_3 \qquad\qquad\qquad\qquad S_3$$

all this colossal expansion <u>of human memory</u>, without which there could be no historical & cultural development,

Which expansion?

Why? Because of what?   Which memorization?

$$V_1 \qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad C_{1\ zero}$$

/is <u>due precisely to external human memorization based on symbols</u> /   //

$S_{1.1}$, $S_{1.2}$, $S_{1.3}$	V_1	$C_{1(ZERO)}$

Adjective clauses

57

Dialectical sentence analysis is based on the ***sense*** words and groups of words make together in the nexus of a concrete sentence, not on what they look like or where in the sentence they occur. It makes generalizations about the ***logical relationships*** between words and groups of words in the sentence, using the universal principles of human understanding (associations by resemblance, contiguity in space/time, & cause/effect).

Just as denotative (socially assigned) word-meanings acquire their true meanings in *use* (***meaning-as-use***), so they also acquire their individual (as well as group) functions in *use* (***functions-as-use***).

6.6 The purpose of the GENERALIZING SENTENCE ANALYSIS (G-nalysis) is to

1. Identify all the nexal patterns in the sentence, and
2. Determine how all of the clauses (S/V/Cs), phrases (groups of words that function as adjectives, adverbs, or nouns), as well as individual words relate to each other.

G-nalysis discovers these relationships through asking logical, common sense questions:
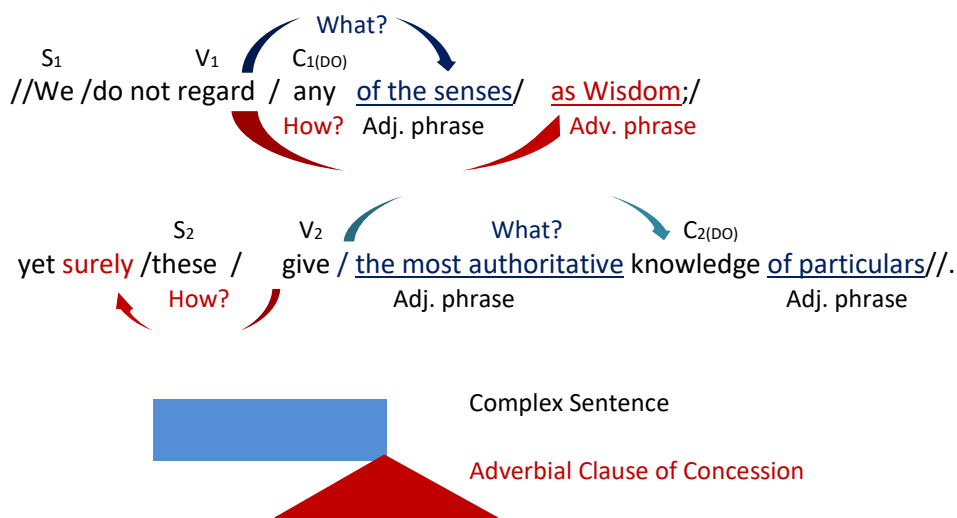
As you can see, independent nexal patterns [S/V/C] are represented as quadrangles in sentence diagrams, and dependent clauses – as triangles. Phrases, whether they act as nouns, adjectives, or adverbs, are simply underlined:

Through asking natural, common sense questions, G-nalysis discovers the grammatical relationships between words and groups of words, **because they reflect the *logical* connections between them**.

Dialectics views syntactic structures as the 'flesh' of verbal thought and uses our knowledge of the universal mechanism of human thought (generalization) to analyze and understand linguistic structures.

Dialectical linguistics is a relatively new approach to the study of language; it has not yet 'won the hearts and minds' of descriptive linguists and the adherents of structuralism/ neo-structuralism in all their permutations. However, it will, undoubtedly, gain influence in the near future, for no other reason than –
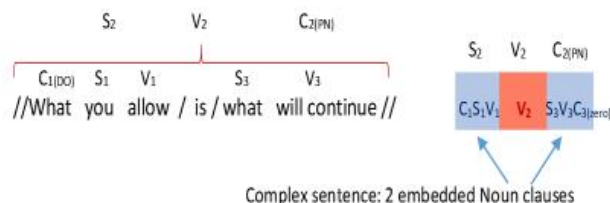**IT MAKES SENSE!**

6.7 Gnalysis Practice

Gnalysis toolbox:

- **Sentence** = word-mosaic saying something about something
- **Parts of speech** = functions of words/ chunks of words in the sentence
- **Phrase** = a group of words functioning as one adjective, adverb or noun
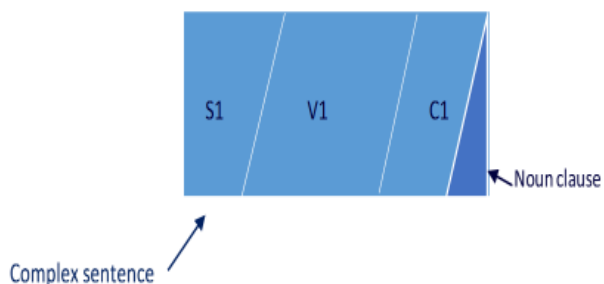- **Clause** = a phrase that has sentence structure S/V/C
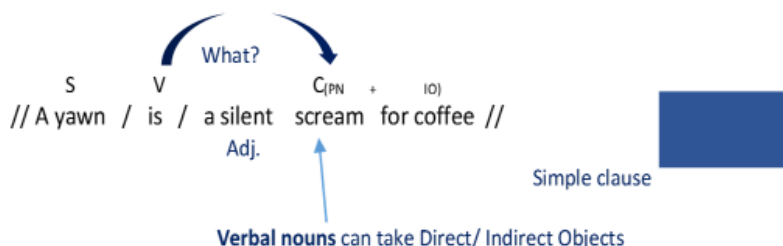
This is how baby giraffes sleep
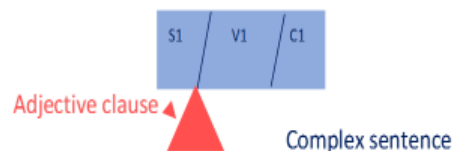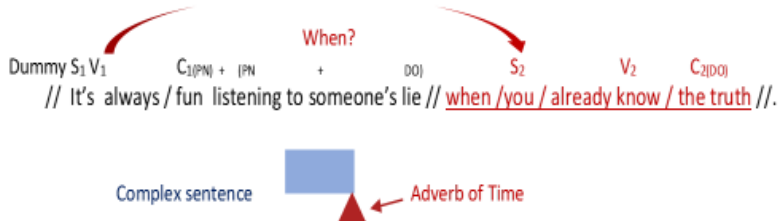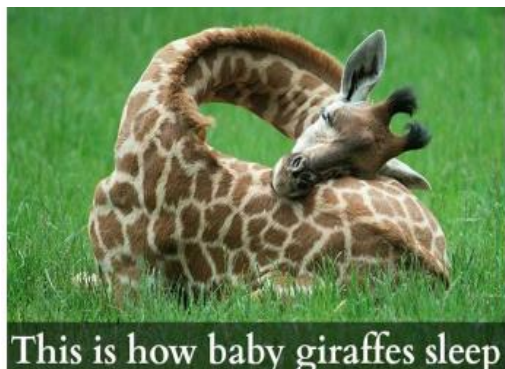
Plurality of interpretations:

1. // This / is / how / baby giraffes / sleep //
What?
Noun clause
Complex sentence

2. // This / is how / baby giraffes / sleep //
How?
Adverb of Manner Clause
Complex sentence

Which scandal? Which one? Which one?
// The scandal *that has legs* / is / the GSA one – / that/'s / the one / that /sticks //.
Adj. clause
Adjective clauses

Which scandal? Which one?
// The scandal *that has legs* / is / the GSA one – / that/'s / the one / that /sticks //.
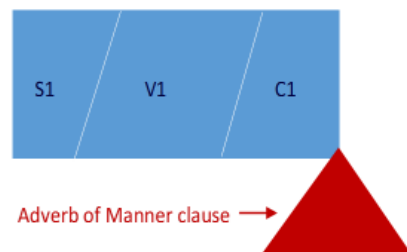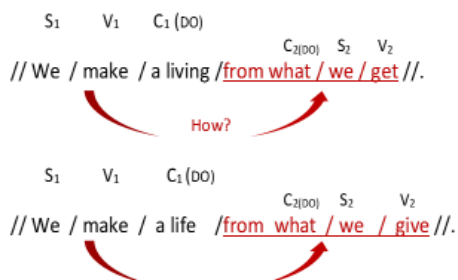Adj. clause
Adjective clause
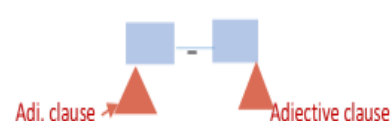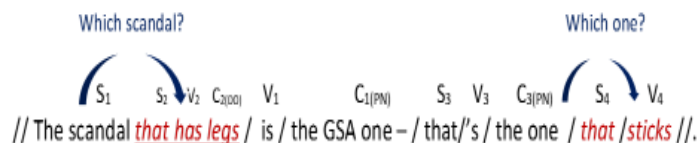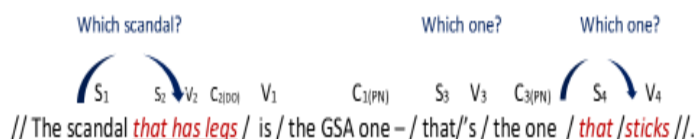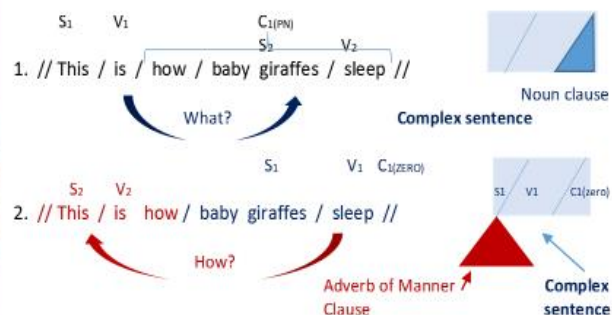
"We make a living from what we get. We make a life from what we give" - Winston Churchill

G-nalysis1:

// We / make / a living /from what / we / get //.

// We / make / a life /from what / we / give //.

S1 V1 C1
Noun clause
Complex sentence

"We make a living from what we get. We make a life from what we give" - Winston Churchill

// We / make / a living /from what / we / get //.
How?

// We / make / a life /from what / we / give //.
Complex sentences

S1 V1 C1
Adverb of Manner clause

Gnalysis Exercises