

Mathew Dryer's 'Branching Direction Theory':

The notions of 'Head' and 'Dependent' are **the central notions** of linguistic theories and they have been viewed very seriously in almost all schools of thought in linguistic theorization.

They are considered important because their classification is based on the **configurational relationship** between the constituents.

We would claim at some point of our discussion that there are languages in which there seems to be a **non-configurational** relationship between their constituents also, but we have to wait!!

At the moment, it is worth examining Dryer's BD-theory first before we discuss the later type.

Mathew Dryer (1991; 92) has discussed some of the basic assumptions behind the head-dependent relationship proposed by earlier areal linguists and typologists.

He discusses and claims that one of the reasons for the lack of the predictability of the expected pattern by certain head-dependent pairs, such as Adj-N and Det-N (especially Demonstrative pronouns) is due to the fact that BD-theory can explain.

He later also draws our attention to the fact that the predicative power of these pairs (with regard to head-dependent) depends on the fact that which *element in a given pair is the HEAD*.

He further says that 'head-dependent' relationship is not tough to decide in the case of **verb-adverb**, but it may be a matter of debate for **ad-position and nouns** and **verb and auxiliaries** etc.

Dryer, in order to examine these issues in detail, proposes his BD-Theory as follows: (adopted from Whaley, 1992).

The Branching Direction Theory (BDT): *Verb pattern-ers are non-phrasal categories (i.e. non-branching) and object pattern-ers are phrasal categories (i.e. branching).*

That is, a pair of elements X and Y will employ the order XY significantly more often among VO languages than among OV languages if and only if X is a non-phrasal category and Y is a phrasal category.

Dryer's BD-theory probes the structure of languages in more careful and detailed manner.

It is very much grounded in generative paradigm and thus it makes reference to the Phrase Structure Theory.

The basic distinction is made between branching and non-branching categories.

A branching category in PS-Theory is one which has internal structure.

For example, NP such as 'books about the war' is not an atomic unit and thus should be broken down further in parts as it is shown in diagram 9.1.

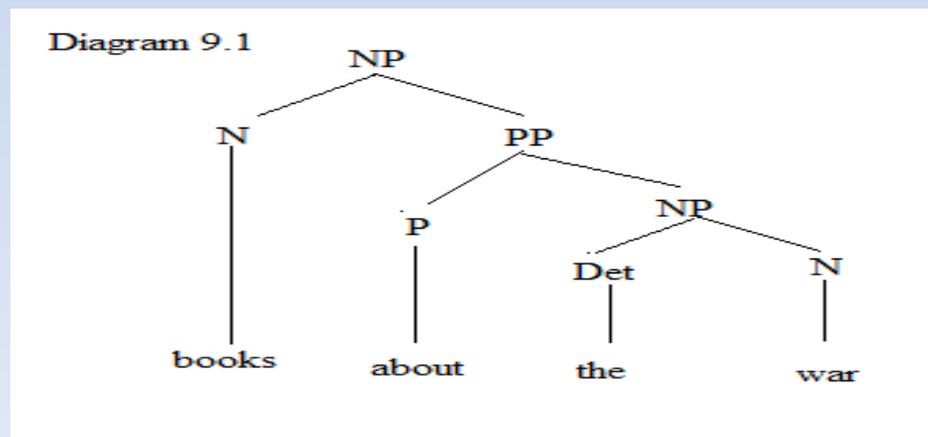


Diagram 9.2

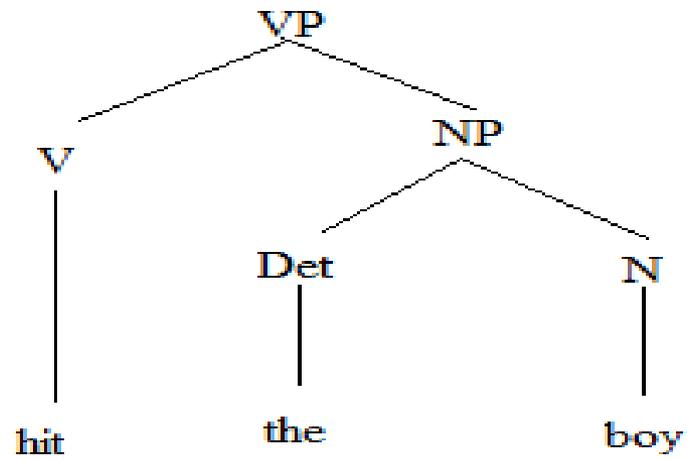
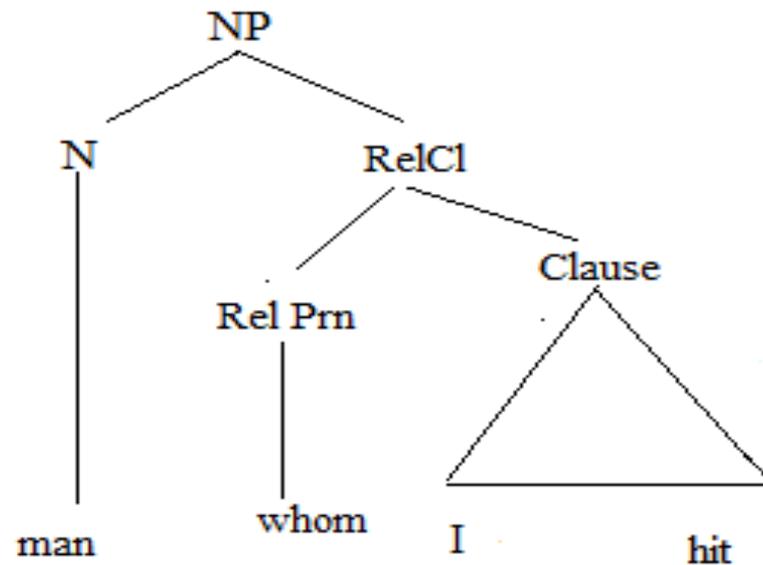


Diagram 9.3



As we see in the above diagram 9.1, the NP branches out into its two constituents.

The noun 'books' is a non-branching category as it does not have any internal syntactic structure.

However, the PP in the same diagram shows up as a branching category.

A PP must to be further divided into a prepositional head and an NP, a complement to the head.

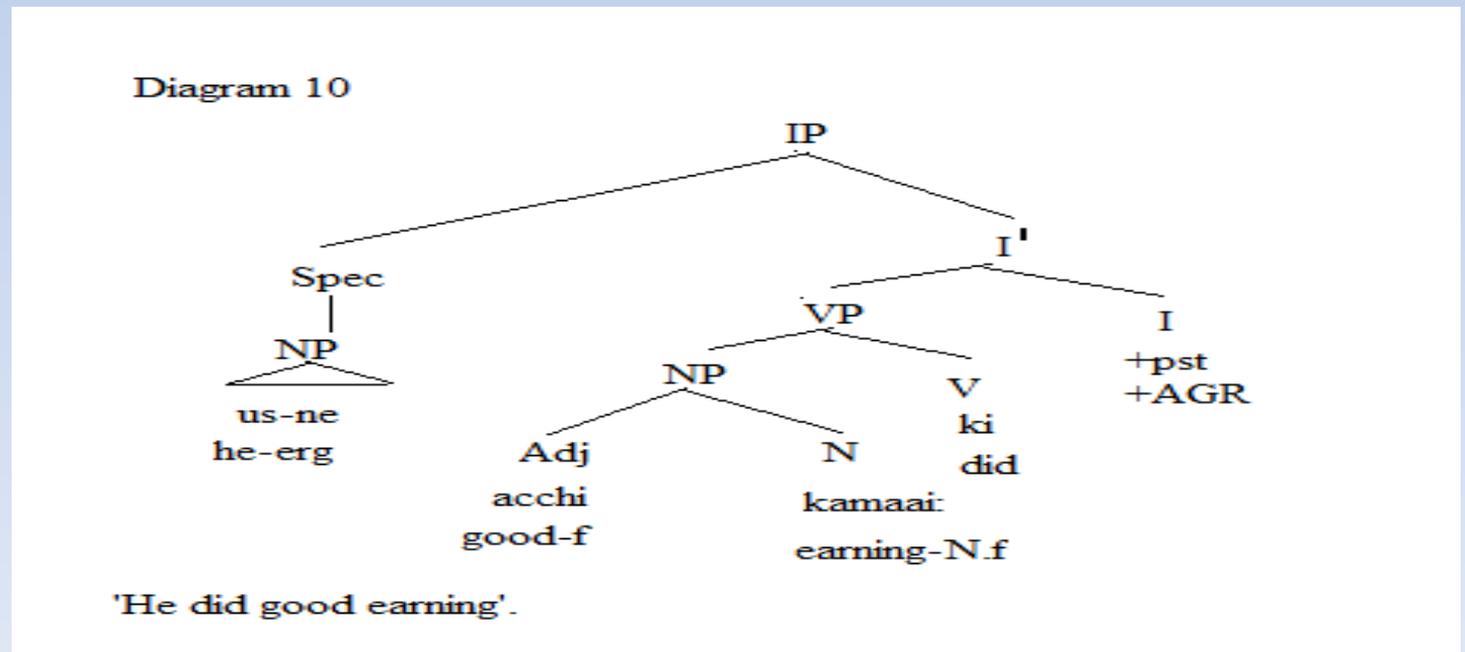
Dryer (ibid) sets up a requirement for his BD-theory here.
A category is only considered branching for the purpose of the BD-theory if it consists of a non-branching head and a phrasal complement.

For example, an adjective phrase, 'very quite' will not be a branching category because the degree word 'very' is not a full phrase, i.e. 'very' cannot be modified or expanded in any way.

The merit of the BD-theory is that it is only after Dryer's proposal of BD-theory, researchers could predict that a language tends to be regular in placing branching categories after non-branching and vice-versa.

Another way to express the same thing is that languages tend to be consistently **right branching** or consistently **left-branching**.

English is good example of right-branching and Hindi (mostly) is a good example of left-branching. For example:



So, when it comes to describe the patterns of branching in a language with OV order, what should we expect from Dryer's proposal ?

We must say that ;

The Branching Direction Theory (BDT): ***Verb pattern-ers are non-phrasal categories (i.e. non-branching) and object pattern-ers are phrasal categories (i.e. branching).***

That is, a pair of elements X and Y will employ the order YX significantly more often among OV languages than among VO languages if and only if X is a non-phrasal category and Y is a phrasal category. (i.e. X is always the 'head' and 'y' is the dependent).

Two notions; H-initial/final VS. Right/Left-branching

Diagram 9.1

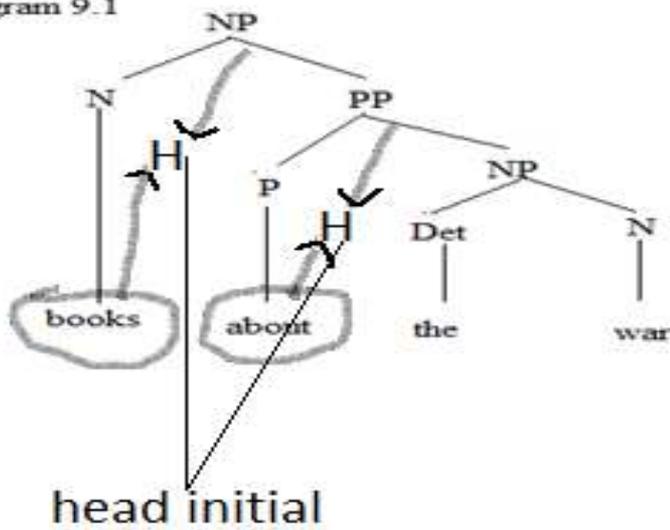


Diagram 9.1

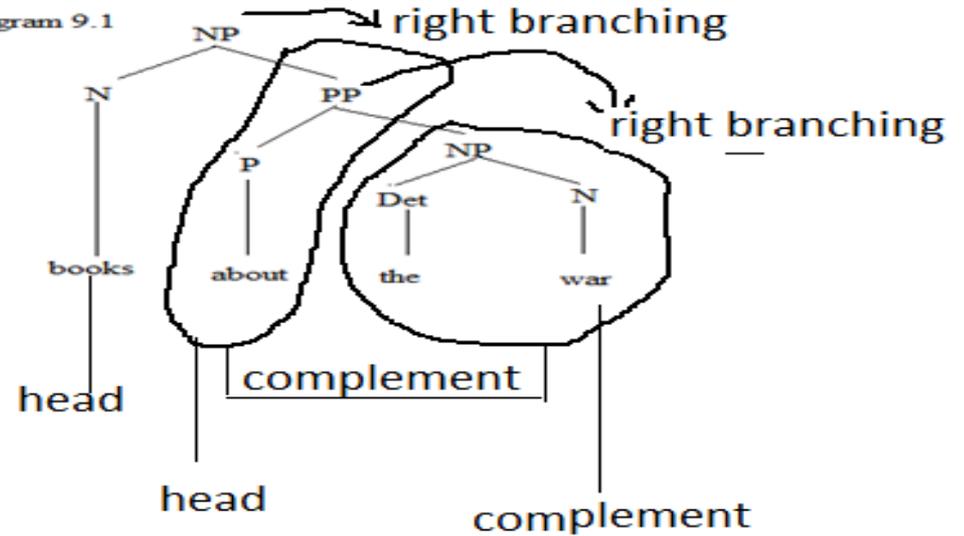
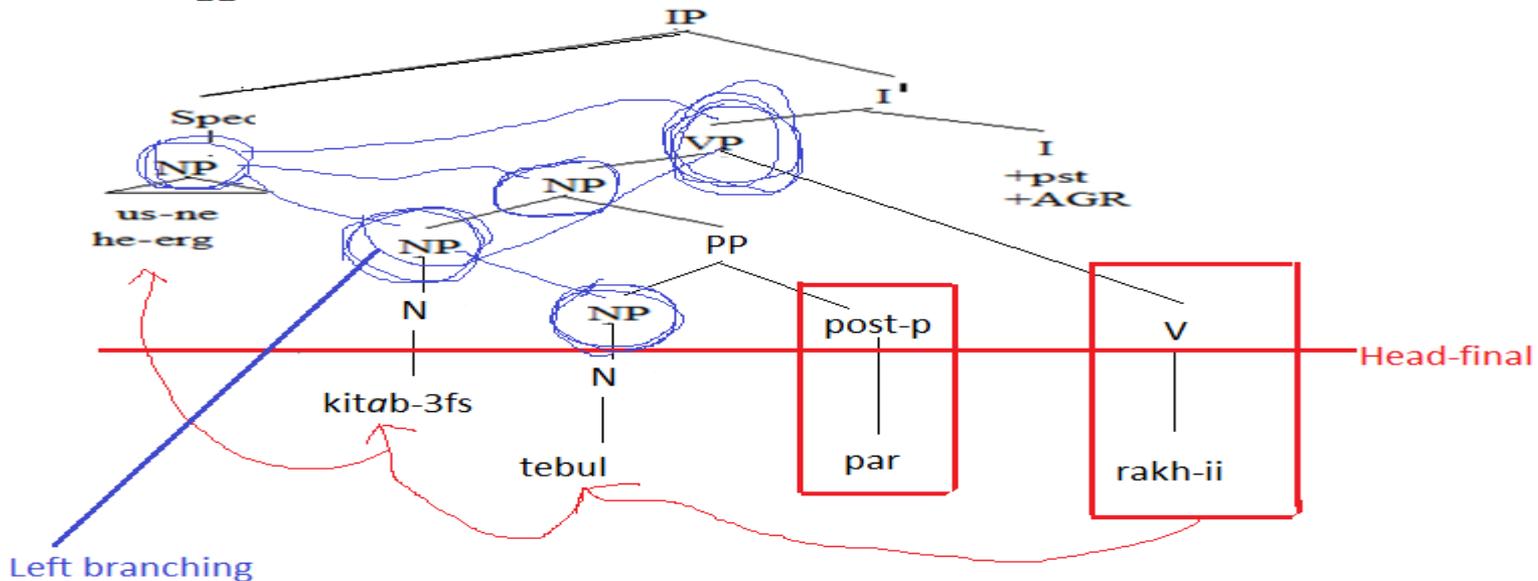


Diagram -11



Head-marking and Dependent-marking languages

This is another type of classification of languages that also helps us establish different relationship between the head and the dependents.

If a language is classified as the head-marking language, then the morpho-syntactic markers that establish the relationship between head and complements/dependents will occur with the head.

However, if the language is classified as the Dependent-marking, the same marker will occur with the Dependent.

Syntactic relationship between head and dependent:

	Head	Dependent
i.	pre- post- Position	<u>Obj</u> NP
ii.	Verb	arguments
iii.	possessed Noun	possessor NP
iv.	noun	adjective

These are the main relationships between the head and dependents that we will look into and examine the areal/typological features of head-marking VS dependent-marking languages.

English:

- i. **in** [_{NP} the shower] = (Pre+ NP)
- ii. Kim love-s Lee = (S+V-Agr+ Obj)
- iii. Kim's house = (possessor NP + N)
- iv. red book-s = (Adj +N)

As a preliminary illustration, we would say that in (iii) the English noun phrase 'Kim's house', house is the head as the whole phrase is about the house not about Kim.

In English the dependent occurs in a special form; it has the possessive marker i.e. -'s.

However, in (ii) and (iv), the story is different. In these examples, the heads are the **verb** and **noun**.

In these two examples, the heads appear with special marker and the dependents are unmarked.

Thus, these two examples of English will qualify as 'Head-marking'.

Is this so simple? Is it the case that 'head & dependent marking' are found in different languages in so much classified manner? ...

1. Head pre-/post- position and its Obj NP

German

a. für mein-en Freund
for my-Acc friend
'For my friend'

b. mit mein-em Freund
with my-Dat friend
'With my friend'

We would be told that German preposition 'für' selects an NP in the accusative case and 'mit' selects its NP in dative case.

This case requirement is simply a matter of lexical property in German.

This cannot be further explained linguistically as it is an arbitrary rule similar to that of the grammatical gender in German.

- The whole NP is the complement to these prepositions which are heads in above examples.
- So, we will call these cases as ‘dependent marking’.
- This should be clear because the dependents are in marked form, and the heads occur unmarked in the above examples.
- If we examine the NP itself in both the cases, there too we would say that the head ‘Freund’ is unmarked and it is the dependent ‘mein’ bears the marker.
- Thus, these examples of German would be classify as a case of dependent marking.
- We find a similar phenomenon in Chechen language (Caucasian language SOV), where the case suffix is marked on the dependent and the head is not marked in any special way.
- For example:

Chechen

beera-na

child-Dat

'on the child'.

t'e

on

The example of Chechen also confirms that the morphosyntactic marker appears with the dependent NP, the complement of the postposition in the above example.

PS: Please note that Chechen mark the dative case of the dependent by employing a 'Dat' case with the NP and a separate case for 'LOC', but the semantic reading is dative. [something like 'bacce-ke upar/bacche-par in Hindi]

However, we if examine a parallel construction in Tzutujil, we will find that in this language, the preposition itself takes PNG of the complement noun.

Isn't this contrast interesting? Let's see the example: 14

Tzutujil:

<u>ruu-majk</u>	jar	aqchi
3 sg-because.of	the	man
<u>'by the man/ because of the man'</u> .		

The head of the phrase which is a preposition 'majk' bears the inflection marker for third person singular.

The NP, complement to this preposition, remains unmarked.

Thus, Tzutujil is a language that must be called head marking language.

In Welsh language too, we find that the morphosyntactic marker that establishes the relationship between the head and dependent appears on the **Head** word instead of the dependents. For example:

Welsh:

ar-na i
on-1S me
'on me'

ar-no fo
on-3MS him
'on him'

ar-ni hi
on-3FS her
'on her'

The dependent pronoun in the above examples remain unmarked which can be seen by comparing the morphological forms in the examples given above.

We can also compare the forms of the preposition which is 'ar', 'on' in the language.

The morphosyntactic marker occurs with the head word which is the 'preposition' and not on the complement pronoun.

This exemplifies that Welsh is also a language that is head-marking type.

The Clause: verb as the head and arguments as the dependents

- The main verb in any transitive clause would act as the head.
- And both the subject and direct object would be the dependents of this head due to the factor of transitivity.
- If the morphosyntactic marker occurs with the head i.e. the verb, the languages should be called ‘head-marking’.
- However, if the marking appears with the dependents, the language should be classified as ‘dependent marking’. For example:

Japanese:

<u>Taroo-ga</u>	tegami-o	kaita
<u>Taroo-nom</u>	letter-acc	wrote
<u>‘Taroo wrote a letter’.</u>		

- The verb in the Japanese sentence 'kaita, 'wrote' is the head of the sentence.
- The verb is a transitive one and thus two arguments/complements are the dependents to this verbal head.
- The case suffixes as the inflectional morphemes occur with the dependents in the sentence and thus qualifies them as dependent-marking.
- German is also a language where the morphosyntactic marker occurs with the dependents to establish their relationship to the Head.
- For example:

.German:

Der Hund sah den Vogel
The:nom dog saw the:acc bird
'The dog saw the bird'.

Den Vogel sah der Hund
The:acc bird saw the:nom dog
'The dog saw the bird'.

As we see that the change in the word order does not disturb the intended meaning of the sentence.

Interestingly, it is the case-marker and not the word-order that tells which word is the 'subject' and 'object' in the sentence and not the place/order of the words.

If we consider these 'units' as dependents, the morphosyntactic marker is with the dependents.

And even we look at the internal structure of the NP, the marker is with the dependent and not with the head.

Let us examine the languages in which the marking occurs with the head word.

In Kambera, the verb which is the head of the clause gets the affixes which show the PNG of the subject and object. For example:

Kambera:

hi ku-palu-ya
So 1 sg:Subj-hit-3 sg:Obj
'So I hit him'.

In the above example, there are no overt lexical items for 'Subject' and 'Object'. They are retrieved/reconstructed from 'ku-' and '-ya'.

These morphosyntactic markers occur with the head in the language.

On the basis of above discussion, Kambera is classified as the head-marking language.

If there is a contextual need in Kambera, the subject and object can overtly be present in the sentence.

This is done in the language specially for the purpose of emphasis, and to avoid the ambiguity.

Even when the dependents are present in the sentence, the morphosyntactic marker is present only on the head. For example:

Kambera

<u>i</u>	ama _i	na _i - <u>kei</u> -ya _j	na	<u>ri</u> _j	<u>mur</u> _u
<u>the</u>	father	3S-Subj-buy-3S-Obj	the	vegetable	green
'Father buys the green vegetable'. (Lit: 'Father he-buy-it the green vegetable)					

The above example says many things. One the verb, being the head, takes the morphosyntactic markers for all its dependents.

Two the dependents are unmarked. Three, the co-indexing of the subject and the object complements/dependents on the verb tells the fact the verb agrees with the dependents.

Finally it must be a case of head-marking language.

Head noun and the dependent possessor NP

- Ever since Nichols's paper (1986) the four parameters are used to check the head VS dependent marking in different languages.
- The marker for the morphosyntactic relationship between a possessed head noun and the possessor NP can also be marked in two ways i.e. H-marking and D-marking.
- As we have already seen that in case of English Genitive-phrase [Kim's house], the morphosyntactic marking occurs with the dependent noun.
- Here are some more examples:

English:

my
I-Gen

your
you-Gen

Tom's
tom-Gen

borhter
brother

sister
sister

wife
wife

Hindi:

mer-a
I-Gen-m

tumhar-i
you-Gen-F

tom-ki
tom-Gen-F

bhai
brother

bəhən
sister

pətni
wife

The above examples in English and Hindi prove that in every instance, the morphosyntactic marker occurs with the dependent (possessor) NP.

The head noun of the GenP (possessed noun) remains unmarked.

Thus, with regard to the head noun and dependent possessor NP, these languages are classified as dependent marking.

Now, let us compare the above examples to the example from the head-marking language called **Saliba** (Saliban family, SOV):

Saliba:

sine

woman

'the woman's child'

natu-n-a

child-Poss-3S

The above example from Saliba shows opposite structure compared to that of English and Hindi with regard to the GenP.

Interesting fact about the word-order is that it matches the order with that of the English.

The head word (possessed NP) gets the marker and the dependent remains unmarked.

Thus, Saliba presents a case of head marking type of language with regard to the GenP.

Head noun and dependent AP

We finally discuss about the last category i.e. the head noun and the dependent adjective that modifies the noun.

If a language is dependent-marking, it will place the morphosyntactic marker on the dependent adjective modifier of the head. Let us see an example from Spanish:

Spanish

a.	el <u>the-Mas</u> 'the small boy'	<u>niño</u> boy	<u>pequeñ-o</u> small- <u>Mas</u>
b.	la <u>the-Fem</u> 'the small girl'	<u>niña</u> girl	<u>pequeñ-a</u> small-F

Here the head nouns are 'nino' and 'nina' respectively. The special marking that occurs with the determiner and the adjective which are dependent modifier. This happens in both the examples and this proves the point that Spanish must be a dependent marking type of language with regard to the 'head noun and dependent AP'.

Now let us see the example from Hawrami (Kurdish language family SOV),

Here the head bears the special marking instead of the dependents with regard to the head noun and dependent AP. Let us see the example:

Hawrami:
æsp-i z il
horse-DegM big
The biggest horse.

If we had a similar expression in English, we would get something like [bigg-er /big-est horse] where the degree marker for the head noun could have occurred with the dependent.

However, in case of Hawrami, we see the marker appearing with the head noun itself. Thus, Hawrami should be classified as a 'head-marking' type of language.

Difference between No marking/ Dual-system and Double marking-system with regard to the head and dependent

1. No marking (Neither H nor D marking)

The language which has very little morphology or no morphology like Chinese, Vietnamese and even English are the cases which show the 'no marking' type of languages. For example

Chinese:

a.

wo changchang jian ta
I often see he

'I often saw him'.

b.

ta changchang jian wo
he often see I

'He often saw me'.

As we see in the above examples of Chinese, neither the head nor the dependents have any marking for the morphosyntactic features.

There is no case marker with any of the dependents of verb 'jian' which is the head word.

The head thus shows no relationship such that can be explained in terms of morphosyntactic marker.

The word order in Chinese, like English, is very important for the role of subject and object.

English:

The	boy	went	in	the	shower.
<u>Det</u>	N	V	Pre	<u>Det</u>	N

The	girl	went	in	the	shower.
<u>Det</u>	N	V	Pre	<u>Det</u>	N

Dual-system of marking (both the system of H and D marking)

- English:
- Kim's house Dependent marking
- The girl **hate-s** the boy. Head marking

Double marking system (The language that mark both its head and dependents)

Ayacucho (Quechuan language SOV)

a.

runq-pa

man-Gen

'a person house'.

b.

qam-pa

you-Gen

'your house'.

wasi-n

house-3-Poss

wasi-ki

house-2-Poss

These examples from Ayacucho language show that both Head noun and the dependent possessor noun bear the morphosyntactic marker.

This is very clear from the above examples where the dependent is marked with the genitive and the head bears the person specification for the genitive case.

Hindi:

ram-ne

ram-3MS-Erg

‘Ram ate the bread’.

roti

bread-3FS

k^ha-y-i

eat-perf-3FS

This is just a prototype example in Hindi as we can have many such expressions in Hindi.

In this example, the verb is the head and the subject, one of the dependents (complements) of the transitive verb, is also marked with the ergative case suffix.

The verb, which functions as the head here, also is marked with the agreement feature of the object noun which is another dependent in the sentence.

German:

a.

<u>Ich</u>	<u>sehe</u>	den	Vogel
I-Nom	see-1 S-pres	the-Acc	bird
‘I see the bird’.			

b.

<u>Wir</u>	<u>sehen</u>	den	Vogel
We-Nom	see-1Pl-pres	the-Acc	bird
‘We see the bird’.			

- These examples in German also show the similar phenomenon that we saw in Hindi with regard to the Double-marking i.e. on the head as well as on the dependent.
- The verb which functions as the head in the clause is marked with the morphosyntactic marker of tense and person.
- The dependent for example ‘the bird’ gets the accusative case marker in both the sentences.

Notional Category

Grammatical Categories in Traditional Grammar:

"[W]ords are assigned to grammatical categories in traditional grammar on the basis of their shared semantic, morphological and syntactic properties. The kind of semantic criteria (sometimes called 'notional' criteria) used to categorize words in traditional grammar are illustrated in the much-simplified form below:

Verbs denote actions (go, destroy, buy, eat etc.)

Nouns denote entities (car, cat, hill, John etc.)

Adjectives denote states (ill, happy, rich etc.)

Adverbs denote manner (badly, slowly, painfully etc.)

Prepositions denote location (under, over, outside, in, on etc.)