

**CROSS LINGUISTIC APHASIA STUDY**

**AGRAMMATISM  
IN  
ARABIC**

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# **PLAN**

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## **I- SUBJECTS : Agrammatic and Control Subjects**

Subjects for the present study are A.P (agrammatic patient) and C.S (control subject).

### ***I-1 Agrammatic Patient, A.P***

A.P comes from Setif, a town situated in East Center of Algeria. He lives in Algiers, he is 57 years old, employee in a national organism, married and father of 11 children.

He is observed in Neurology Service of Professor GRID, at Mustapha Hospital of Algiers, for a repeated motor deficit with loss of language.

He precisely presents three episodes of right superior member motor deficit, associated with aphasia, headache « in cask » and faintings.

#### **a- Neurological status**

- E E G : slow anomalies of slow theta type at the level of left fork diffusing sometimes at right on a profile with a normal bottom.

- Cerebral Objective Tomodensitometry: two areas are characterized by hypodensity phenomenon: one left parietal and one temporo-occipital.

Cerebral vascular onset.

A.P presents no visual nor auditive perceptive deficit.

He writes French, speaks dialectal Arabic of Setif and French. He does not write and read Arabic.

Literacy: C M 1.

Handedness (subject and family): right.

#### **b- Neuropsycholinguistic exam: February - March 1992**

A.P is submitted to Full Test Battery « Montreal-Toulouse 86 » passation. This test has prealably been adapted to algerian plurilingual situation, then standardized upon 460 (algerian) subjects (1).

A.P is examined in Arabic in oral tasks and in French in written ones.

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<sup>1</sup>-This research has been carried out as part of a cooperation project (CMEP - 91 MDU 177) co-directed by J.L.NESPOULOUS (Toulouse Le Mirail University) and N.ZELLAL (Algiers University).

## Remark

Before A.P's neuropsychological results presentation, analysis and discussion, we must underline the fact that this detailed anamnestic study goes beyond C.L.A.S objectives. We consider it useful for six reasons:

1- A.P is explored through an exhaustive psycholinguistic clinical exam. It seems pretty obvious to know his abilities in a detailed manner.

2- It is interesting to know A.P's performances to other tasks than that of C.L.A.S ones, in order to observe, through the data isolated, correlation versus dissociation processes, in the passage from one type of performance to another. That what allows us to set up his rigorous clinical profile.

3- C.L.A.S final purpose resides in a psycholinguistic interpretation of agrammatical facts (characterized, then quantified according to a given methodology). **So, how can we observe a patient in a psycholinguistic perspective, through narrative speech only?**

The present case study, based upon neuropsycholinguistic examination of A.P, gives us means to establish a parallele between C.L.A.S and MT 86 tasks results. This type of approach seems to be imperative, if we want to reach deep explanations of A.P surface structures.

4- We do not consciously insist on impairment quantification notion : see « results variability » problem in Chapter « Discussion »; and N.Z., IALP, Cairo, 1995. Let's just note that the diagram drawn on the basis of B. DUCARNE classical method (retained here because it is simple and economic, see later p. ), must be comprehended as being only a « cliché » taken at a moment « M » of A.P illness evolution. So, it is not a definitive semiologic picture.

This « cliché » is the results quantitative « sweeping » to MT 86 performances. Their psycholinguistic qualitative approach, which is proposed at the end of the monography, constitutes the obligatory complement of the facts described apart from this « sweeping » process.

5- The most important to do here, is to isolate a real agrammatic picture of this case. Effectively, every feature analyzed, allows us to verify the hypothesis of such a clinical picture. And all aphasics suffer from grammatical disorders! See Chapter « Discussion ».

6- At last, this research, carried out in Algiers, has not only a diagnostic purpose, it also aims at reeducation.

Effectively, this patient is now rehabilitated in his communicative function, and his social reinsertion is considerably improving.

Let us present now A.P results to algerian version of MT 86 Battery.

### **Directed interview**

A.P gives his age correctly:

settawxamsi:nesna<sup>146</sup>

sixty five years

*civil status:* metzu:wwedj...hdè:ch...setta ... tafla...xamsa rdjè:l...

married eleven six a girl five men

neskun fissè3è:da...doepjès kwizi:n

I live at Saada two rooms kitchen.

*hobbies:* wè:lu

nothing.

We observe in this data: juxtaposed words, which remain in adequacy with the stimulus. Syntactic relations are absent. The utterances are emitted without grammatical morpheme: omission of definite article and verb; there is no temporal flexion.

In relation to total number of items of the original MT 86<sup>147</sup>, A.P answers to 4 items out of 12. So we quantify a success score of:

**20%** in this first task.

*History of illness and narrative discourse:* telegraphic style; agrammatism with a massive reduction of oral verbal stock, especially at the qualitative level: **SEE C.L.A.S APPROACH, CHAPTER V.**

### **Comprehension**

*words:*

100%.

*sentences:*

100%.

Diagnostic of an agrammatism, not associated with massive impairment of oral simple and complex syntactic structures comprehension, begins to take form.

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<sup>146</sup> See transcription system adopted, p.

<sup>147</sup> Here, we've retained the same items in Arabic. See « Guide d'Utilisation du M.T 86 », Ortho-Edition, Paris, 1992, pp. 13-16.

## Written comprehension

100%.

## Object manipulation through verbal stimulus

100%.

## Written language

*Copy* : this fragment of A.P written corpus shows how the non dominant hand is used :

We observe an agraphia due to a motor deficit and not to transposition one. Grapheme is correctly structured and oriented in space. However, we notice discreet impairment in their temporal arrangement. There is no dysorthographia. We observe an important fatigability in this task.

**100%**.

*Dictation*: we assist to a catastrophic reaction. Copy is easier because of the presence of visual referent.

**0%**.

## Oral expression<sup>148</sup>

Reading :

*words*:

maison:+

moi :+

bol: bi

garpon: arthric impairments

obscurité : obtiri

parents :+

que :+

transport : trankfor

ésolé :+

verger :+

distraktion : diskranon

cheval :+

hélice :+

catégorie : kalifun

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<sup>148</sup> In order to respect C.L.A.S presentation norms, we expose A.P performances to narrative tasks at the end of the monography, see Chapter V.

école :+  
se : +  
croix : cro  
chepal :+  
fougère :+  
sévère :+  
congélateur: kalat  
garçon :+  
vous :+  
chameau :+  
maigon :+  
tamis :+  
potager : popino  
ceci :+  
padents : arthric impairment  
introduction : intro.  
19 words read correctly out of 30.  
69%.

*Sentences* : A.P refuses to read sentences.  
0%.

## **Repetition**

*words* : two words out of 30 are not repeated : icher and kanvag, non words.  
93%.

*sentences* : the less complex sentence (second one) is repeated only; it is the shortest one.  
**30%**.

This remark and the clear difficulties of A.P. in text reading, show the presence of agrammatism in reading and complex grammatical structure audi-phonatory transposition.

## **Naming**

Half of items total number is named correctly. In other half, we analyze:

semantic paraphasias :

- crocodile : Biskra (South Algeria town where lives lizard).

- furniture : lkursi  
the chair

- coat : vista  
vest
- tools : machar  
saw
- fire : chadjra  
tree
- he sleeps : jertè:h  
he rests
- he swims : gestual correct answer
- lamp : daww  
light
- thermometer : gestual correct use.  
50%.

### **Written questionnaire**

Patient refuses to write because of hand motor difficulties.  
0%.

### **Production of automatisms**

He counts until 10, produces year months, week days, sings national hymn correctly.

100%.

Agrammatic clinical picture is, at this stage of analysis, more evident. If we synthesized the facts isolated until now, we should notice that A.P. presents:

- 1- difficulties at the level of non word gestion; he correctly uses familiar notions;
- 2- more difficulties with complex sentences and texts (oral comprehension and orders), than with simple stimuli ;
- 3- automatisms preservation.

Agrammatism definition is based upon these same three principles, through neuropsychological literature (see also Chapter « Discussion », about psycholinguistic interpretation of A.P performances).



## **Designation of body parts**

On the patient himself : 3 out of the 8 items proposed show errors at the level of choice of the organ :

hand : arm

tigh : leg

eyebrow : eye

3/8 errors.

Somatognosic disorders at the level of corporeal schema, show deficits of spatial structuration in A.P., which was not evidenced by copy task (see before).

Disorders in body parts identification in pictures are apparent :

stomac : chest

wrist : hand

eyebrow : eye

chin : mouth.

4/8 errors.

Upon clinician body, difficulties are more important. 3 items are recognized.  
5/8 errors.

Total: 12/24 errors.

50%.

## **Paradigmatic lexical disponibility**

It is an excellent temporal task since patient is asked to produce rapidly (in 90 sec.) a maximum number of items ranked in a generic stimulus.

Animals, fruits, stools, are recognized but A.P cannot enunciate more than one item comprized in it's correspondant generic field, at the same time.

Thus, in this task, as in sentences and texts (which are temporal linear entities), temporal organisation deficits in A.P are confirmed.

0%.

## **Textual reading and comprehension**

Verbal alexia in word reading and litteral alexia in non word reading, are associated with a massive textual alexia.

That reinforces agrammatism hypothesis in this neuropsychological approach of A.P : scores reach their minimum in sentences planificationin visuo-

phonatory transposition operation, without perceptive visual or neurovisual impairment: A.P reads : hier...

yesturday

then he refuses to go on, despite many and diverse stimulations.

### **Praxic tasks**

#### *Bucco-facial apraxia*

In imitation, this task gives results in correlation with that of word copy.  
100%.

In oral command, instead of pulling out the tongue, A.P opens the mouth.  
Instead of blowing, he closes the mouth, then blows through it.

Thus, this task confirms spatial structuration difficulties in A.P : 2/6 errors.  
33%.

#### *Ideo-motor apraxia*

100%.

#### *Constructive apraxia*

Impossibility to use right hand : motor difficulties.  
0%.

#### *Visual agnosia*

100%.

#### *Auditive agnosia*

100%.

### **c- Summary**

The more elevated scores are those of oral and written comprehension, word repetition, automatisms, ideo-motor apraxia and agnosia tasks.

Average scores: naming, designation.

Weak scores: text reading and comprehension, sentence repetition, written questionnaire, lexical disponibility, apraxias tests.

1- Sentence or spatiotemporal morphosyntactic complex structures are damaged in every task implying a propositional programming in comprehension and expression;

2- in comprehension tasks, sentence programming is facilitated by context (familiar object in ideomotor apraxia task) ;

- 3- preservation of oral and written comprehension ;
- 4- possibility to repeat word ;
- 5- non word repetition difficulties,

confirm two important facts in conclusion to A.P clinical diagnostic :

1- existence of an agrammatism, essentially expressive, thus of Broca type, associated with textual alexia-agraphia (agraphia due to a motor deficit).

2- disorders are more important in tasks involving a high degree of CONDUCTIBILITY, i.-e. involving an EFFORT production in oral and written programming, in comprehension and expression. See notion of correlation between effort and control upon language in Chapter « Discussion ».

Now let us remind and put together the success percentages of A.P. to M.T 86 tasks in order to draw his final neuropsychological profile:

- indirect interview : 20%
- oral comprehension : 100%
- written comprehension : 100%
- dictation : 0%
- word reading : 69%
- sentence reading : 0%
- word repetition : 93%
- sentence repetition : 30%
- naming : 50%
- written questionnaire : 0%
- automatisms : 100%
- designation of body parts : 50%
- paradigmatic lexical disponobility : 0%
- text reading and comprehension : 0%
- buccofacial apraxia - imitation : 100%
- buccofacial apraxia - oral command : 33%
- ideomotor apraxia : 100%
- constructive apraxia : 0%
- agnosias : 100%.

# A.P NEUROPSYCHOLINGUISTIC PROFILE

ii

oc

wc

d

DIAGRAM

wr

sr

wr

sr

n

wq

aut

dbp

pld

trc

bfai

bfao

bfai

agn



## 1-2 Control Subject : C.S

It doesnot exist studies relating semiologic or interpretative differences between aphasics with opposite sex in aphasiologic researches field.

So, we retain as control subject a 62 years old woman.

She is arabophone and suffers from a heart illness several years ago.

She has no professional activity, an elementary level of literacy, no perceptive, linguistic,psychological nor gnosic deficit. She is right handed.

C.S clinical performances to C.L.A.S tasks are given after those of A.P in Chapter V.

## II- DISCOURSE ANALYSIS

### II-1 Morpheme and Error Distribution

Table I summarizes morpheme production of A.P through the different chunks of corpus of the narrative discourse :

**TABLE I - MORPHEME AND ERROR DISTRIBUTION**

		Correct I		Incorrect II		Incorrect III		Total I+II+III
			%	Sub	%	Om	%	
Articles	<i>Definite</i>	36	83	0	0	7	15	43
	<i>Indefinite</i>	21	100	0	0	0	0	21
Other determinants		20	100	0	0	0	0	20
Adjectives		14	82	3	17	0	0	17
Pronouns	<i>Affixed</i>	32	80	05	17	02	05	40
	<i>Autonomous</i>	03	100	0	0	0	0	03
	<i>Clitics</i>	12	66	05	30	0	0	17
Auxiliaries	<i>kè:n</i>	02	80	01	20	0	0	03
	<i>ra:h</i>	01	25	01	25	02	40	04
Verbs		21	52	06	13	26	48	54
Adv , prep loc		06	100	0	0	0	0	06
Adverbs		21	100	0	0	0	0	21
Prepositions		30	81	05	14	02	05	37
Conjonctions		07	100	0	0	0	0	07

## Definite and indefinite articles

A.P omits definite article several times, i.e., in 15% of cases. There is no substitution process and 36 correct definite articles out of 43 produced in all.

### Remark

In arabic, it is difficult to assert whether in a context of free common noun, the definite article is omitted, or it is just a use of undetermined noun (preceded by indefinite article). In fact, indefinite article does not exist as an individual morpheme. It is included in the noun it precedes :

[bēt]  
une fille - fille  
a girl girl

[l bēt]  
la fille  
the girl.

This is the reason why we consider as an omission of definite article :

a) substantives without an article, coordinated with substantives preceded by an article, i.e., formally expressed through [e]  
the :

[kè:mju:neddra (28a)]  
camion le maïs  
lorry the truck

[tʃfal (1) m3a tafla (33a)]  
le garçon avec fille  
the boy with girl

[lqoffa kbi:r (33b)] instead of: [lqoffa lkbi:r <sup>149</sup>]  
le couffin grand le couffin le grand  
le grand couffin, the big bag.  
the big bag

[3 chré:n ju:m sbé:ta:r (17c)]  
vingt jours hôpital  
twenty days, hospital

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<sup>149</sup> See consonantic assimilation when it comes to an article that determines a noun beginning with a « solar » consonant.

[xmasta:cheju:m (17b)]  
quinze les jours  
quinze jours  
fifteen days.

**b)** substantives which would obligatory (compulsary context) be preceded by definite article:

[nwa: der tèt:3o (18a)] instead of: [nnwa:deretèt:3o]  
lunettes à lui les lunettes  
ses lunettes the glasses.  
his glasses,

See again Chapter « Possessive pronouns », hereafter.

The agreement in gender and number between the article and the determined unity is correctly used. There are 21 indefinite articles in A.P.: isolated words or preceded by « a certain » :

[wahd errab3é:n ju:m (1a)]  
un certain les vingt jours  
quelques vingt jours  
some twenty days.

### **Other determinants**

A.P uses 3 other types of determinants :

10 possessive pronouns correctly used. They concern :

**a)** the form : Noun + Possessive pronoun :

[fumm i (3a)]  
bouche ma  
ma bouche  
my mouth

[wedjdji (3a)]  
visage mon  
mon visage  
my face

[uli:di (4a)]  
my son

[rabbé (12c)]  
my God





[tlè:ta mennhom (32c)]  
3 d'entre eux  
3 of them

[wahda menn hom (34a)]  
une d'entre elles  
one of them.

The agreement in gender and number is not disturbed.

There are two determinants expressing « the other » in A.P case :

[lga:to la:xor (19c)]  
le gâteau l'autre  
l'autre gâteau

[wahda:xor (31b)]  
un autre  
another.

## Adjectives

Out of 17 adjectives used by A.P, there are 3 substitutions and 14 correct adjectives. The substitution concerns the notion of agreement in gender between noun and adjective qualifying it:

masculine = feminine :

[lga:to 3a:lja (22b)] instead of : [3a:li]  
le gâteau (est) haute haut  
the cake (is) high high (given in feminine).

[lma ta:jha (21a)] instead of: [ta:jah]  
l'eau (est) tombante tombant ([lma] is a masc. noun in Arabic).  
the water (is) falling falling.

feminine = masculine:

[lqoffa kbi:r (33b)] instead of: [kbi:ra]  
le couffin (est) grand grande  
the bag (is) big big ([lqoffa] is a feminine noun in Arabic).

The agreement in number is not respected in:

[kè:no wè:hed (41a)]  
ils étaient un

they were one.

We think that the error here is rather of semantic type: [wa:hed] is used by A.P instead of : [bezzè:f]  
many.

1 process of omission is observed in this patient data :

[ttfal	wettafla	ra:ho...(19a)]	instead of: [... ra:hom]
le garçon	et la fille	est	sont
the boy	and the girl	is	are.

3 adverbs have the value of attribute adjectives in nominal sentences (see further on, Chapter IV):

[lhadra wè:lu (6a)]  
la parole (est) rien  
the speech (is) nothing

[ddwa bezzè:f (11a)]  
les médicaments (sont) beaucoup  
the drugs are many

[la:xor barra (38a)]  
l'autre (est) dehors  
the other (is) outside.

Concerning qualitative approach of adjective notion, see Chapter IV.

## **Pronouns**

### **a) Affixed subject pronoun**

In Arabic, pronoun is included in flexional form of conjugated verb :

[rohna (7a)]  
nous sommes allés  
we have gone

[ra:h (15a)]  
il est allé  
he has gone.

There are 32 affixed pronouns within which 7 substitutions are produced : 17%.

[lma ta:hat (21 a-b)] instead of: [lma ta:h]  
l'eau est tombée the water has fallen.

It consists in a gender agreement substitution :  
masculine = feminine.

3 substitutions follow the inversed course :  
feminine = masculine :

[cha:ré:ta drab (28b)] instead of : [ darbet]  
charrette a frappé elle a frappé  
has hit has hit

[cha:ré:ta jeddi (29a)] instead of: [teddi]  
charrette il emporte elle emporte  
he (it) takes she takes

[wahda ra:h (34a)] instead of: [ ra:hat]  
une est allé une est allée  
one has gone one has gone

[mra wè:chidi:r (37a)] instead of : [wè:cheddi:r]  
dame qu'est-ce qu'il fait? qu'est-ce qu'elle fait?  
woman what does he do? what does she do?

There are 3 substitutions concerning the agreement in number :

[ra:h jaxxadmu:h (16b)] instead of : [jaxdem]  
il est allé ils le travaillent il travaille  
il est allé le travailler he works.  
he has gone to work it

[kè:no wè:hed (41a)] instead of: [kè:n]  
ils étaient un il était  
they were one he was.

In this case, singular is replaced by plural.

[ttfal wattafla ra:ho] instead of: [ra:hom]  
le garçon et la fille est sont  
the boy and the girl are are.

Here, the inversed process takes place.

2 omissions of auxiliary occur when the whole verb is not produced :  
[ra:ho] qa:bed (38b)

[il est] tenant  
[he is] catching

[ra:hom] xa:rdji:n (39a)  
[ils sont] sortant  
[they are] going out (see « Remark » in Chapter Discussion.

### b) Strong or autonomous pronoun

It precedes the verb, it is total and expresses the emphasis given to the verbal syntagmatic form. Three first singular person [μè:na] « me » pronouns are correctly and preferentially used :

[μè:na dji:t (2b)]  
moi je suis venu  
me I came

[wè:na xa:jef (7b)]  
et moi (je suis) ayant peur  
and me being frightened

[wè:na naxdem (16a)]  
et moi je travaille  
and me I work.

### c) Clitics

Clitics are related to the direct or indirect complement « affixed » pronouns. 12 clitics among which 30% of substitutions exist in A.P :

[cha:rè:ta drab ro:ho (28b)] instead of : [ro:hha]  
charrette a frappé lui-même elle-même  
a waggon has hit itself itself.

« Charrette » is in feminine in Arabic.

[lga:to fo:qha (22b-22c)] instead of : [fo:qo]  
le gateau (est) sur elle sur lui  
the cake (is) upon her upon it.

In these two cases, the confusions concern the agreement in gender between noun and object pronoun related to it.

In the first case, masculine replaces feminine, in the second, we notice the contrary.

The number is disturbed in A.P :

[tba:s xla:sha (23a)] instead of : [xla:shom]  
 assiettes (est) plus elle plus elles  
 dishes (is) more her more them

[ra:djel m3a:hom (27a- b)] instead of : [m3a:h]  
 homme (est) avec eux with him  
 a man (is) with them

[po:li:s... mennhom (32b-c)] instead of : [po:li:s...mennha]  
 police... parmi eux police...parmi elle  
 police... of them police of (or among) her.

« police » is in singular.

Thus, A.P uses more « affixed » pronouns than « strong » ones and clitics. Effectively, their production is facilitated by their more motivated character. See following table :

Different types of pronouns	Correct forms		Incorrect forms				Obligatory
	N	%	Sub cont.	%	Om	%	
<b>Total pronoun</b>	03	100	0	0	0	0	03
<b>Affixed pronoun</b>	32	80	6	17	02	6	04
<b>Clitic</b>	12	59	5	41	0	0	12

There is no relative pronoun in A.P and only one interrogative :

[wè:chidi:r (37a)]  
 que il fait  
 que fait-il?  
 what does he do?

## Verbs

A.P produces 27 strong verbs, 6 auxiliaries among which : 4 [ka:na] and 2 [ra:h]

il est il  
 est, both meaning : « to be ». See Chapter « Grammatical Arabic sketch ».

Strong verbs are more correctly used in their modalities than auxiliaries: temporal flexions, gender and number. The following tables show the difficulties in the use of number in verbal context :

### STRONG VERBS

Correct	%	Incorrect		Incorrect	
		Sub	%	Om	%
28	52	7	13	26	48

### AUXILIARIES

kè:n						ra:h					
Correct	%	Incorrect				Correct	%	Incorrect			
		Sub	%	Om	%			Sub	%	Om	%
3	80	1	20	0	0	1	25	1	25	2	40

Once the plural replaces the singular :

[kè:no wè:hed (41a)] instead of : [kè:n...]  
 they were one he was.

We observe once the reverse case :

[ttfal wattafla ra:ho (19a)] instead of : [...ra:hom]  
 le garçon et la fille il est they are  
 the boy and the girl is are.

The auxiliary [ra:h] is omitted twice (38b - 39a) : see before.

26 verbs are omitted in all, in obligatory context. It relates the « telegraphic style », typical of agrammatism clinical picture :

[ssbah... ha:mi:d... meba3dassbé:ta:r... (4a - b)]  
 le matin Hamid plus tard l'hôpital  
 the morning... Hamid...after... the hospital

[... mra... bè:nè:n... qoffa... doxxa:n f elbi:t... (24f)]  
 dame banane couffin fumée dans la maison  
 woman... banana... bag... smoke in the house...

Thus, strong verbs are often omitted: 26/54 times and rarely substituted when used : 6/28. Here are substitution processes :

[lma ta:hat (21b)]

[cha:ré:ta drab (28b)]

[cha:ré:ta jeddi (29a)]

[mra wè:chidi:r (37a)]; see translations before.

[wahda ra:h (34a)]

une il est allé

one has gone. (One is used here in Arabic in feminine).

These confusions concern gender: feminine = masculine.

[ra:h jaxxadmu (16b)] instead of: [jaxdem]

il est allé ils travaillent

il travaille

he has gone to work

he works.

Here the confusion concerns number: singular = plural.

The auxiliaries are substituted at the same rate. See table above.

### **Adverbial locutions**

The six adverbial locutions, set-phrases such as :

[menna bark (3a)]

par là c'est tout

here only

[3la kulli hè:l (22a)]

de toutes les façons

at any rate,

present no restriction. However, they have a weak occurrence frequency in comparison with verb rates.

### **Adverbs**

Same observation applies: 21 adverbs correctly used.

### **Remark**

3 adverbs are used as adjectives in noun sentences :

Noun + Attribute adjective

Mubtada + Khabar (or components of noun sentence, see further § dealing with adjective treatment. Eg. :

[lhadra wè:lu (6a)]

la parole (est) rien

speaking (is) nothing.

The auxiliary « to be » is implied in the noun sentence in Arabic.

[ddwa bezzè:f (11a)]

les médicaments (sont) beaucoup

the drugs (are) many

there are many drugs

[la:xor barra (38a)]

l'autre (est) dehors

the other (is) outside.

## Prepositions

30 prepositions are correctly used out of 35 produced altogether. Five substitutions occur :

[ba3d (10a - 12a)]

après

after.

It is a cut out preposition.

[xla:s ha (23a)] instead of : [xla:s]

plus elle

no more her.

It consists in an unwelcome clitic addition.

[f wè:lu (35b)] instead of : [wè:lu]

dans rien rien

in nothing nothing.

It is an unwelcome addition of preposition [f]  
in.

[jo rabbé (12c)] instead of: [ja rabbé]



ô mon Dieu  
o my God!

Here, it is a phonemic error.  
2 omissions are described :

[3 chré:n ju:m sbé:ta:r (17c)]	instead of:	[3øchré:n ju:m fessbé:ta:r]
20 jours hôpital		20 jours à l'hôpital
20 days hospital		20 days at the hospital

[da:xal edda:r (24c)]	instead of :	[da:xal ledda:r]
rentrant la maison		rentrant à la maison
going the home		going at the home (going home)

### **Remark**

In the following sentence :

[jeddi fi:hom (29a)]  
il emporte dans eux  
il les emporte  
he takes in them  
he takes them,

[f] « in » preposition is not used incorrectly. In Arabic, indeed, the direct object form can be preceded by « f », just as it can be used independently :

[jeddihom]  
il les emporte  
he takes them.

### **Conjunctions**

A.P uses preferentially coordination conjunction (copula), which means that 7 are correctly produced.

### ***II-2 Distribution of grammatical categories in the texts***

Table II allows to compare A.P and C.S morpheme gestion in the texts :

**TABLE II - DISTRIBUTION OF GRAMMATICAL CATEGORIES IN THE TEXTS**

		A.P				C.S	
		Actual	%	Context	%	%	
<b>Articles</b>	<i>Definite</i>	36	5.3	43	16.8	44	11.9
	<i>Indefinite</i>	21	8.9	21	7.3	2	0.5
	<i>Other determinants</i>	20	8.5	20	7	21	5.5
<b>Adjectives</b>		14	5.9	17	6.3	10	3
<b>Pronouns</b>	<i>Affixed</i>	32	14	38	14	74	19.6
	<i>Total</i>	0.3	1.2	03	01	02	0.5
	<i>Clitics</i>	12	5.1	17	03	27	0.7
<b>Auxiliaries</b>	<i>kè:n</i>	03	1.2	03		4	1
	<i>ra:h</i>	02	0.8	04	1.4	4	1.3
<b>Verbs</b>		27	11.4	54	19	71	19.2
<b>Adverb. loc.</b>		06	2.5	06		08	2.2
<b>Adverbs</b>		21	8.9	21	7.3	31	8.2
<b>Conjunctions</b>		30	12.7	37	01	47	10.8
<b>Prepositions</b>		07	2.9	07	2.4	24	6.3

### **Definite and indefinite articles**

In 43 obligatory contexts, there exists in A.P 36 definite articles correctly enonciated, hence almost as many as in C.S (44). While in A.P 7 omissions occur, only one is present in C.S corpus.

The rate of production of this same morpheme in relation to all morphemes of this global corpus amounts to 11.9.

The definite article is resistant in A.P, wether it determines a unit begining with a « solar » consonant (see Chapter Grammatical Sketch of Arabic.

Eg. in A.P :

[lkursi]

[lga:to] = « lunar » consonants

[lehdè:ch]

[ssbé:ta:r]

[ddwa] = « solar » consonants.

[chchorté:jja]

Let us assess now error quality in the 7 omissions process :

3 omissions in « solar » consonant context : C + C becomes : C :

[nwa:der (18a)] instead of : [nna:der]  
lunettes                                      les lunettes  
glasses                                        the glasses

[tafla (33a)] instead of : [ttafla]  
fillette                                        la fillette  
girl    the girl

[sbé:ta:r (17c)] instead of : [ssbé:ta:r]  
hospital                                        the hospital.

4 omissions in context of « lunar » consonant : l + C becomes : C :

[lqoffa      kbi:r (33b)] instead of : [lkbi:r]  
le couffin grand                                      le grand  
the big bag    the big.

[l] is omitted before adjective [kbi:r]. Effectively, the [l] is repeated before the epithet in Arabic.

[kè:mju:neddra (28a)] instead of : [lkè:mju:n]  
camion le mais                                      le camion  
lorry the truck                                        the lorry.

Here, the article is obligatory as it exists before [ddra].

[3 chré:n ju:m sbé:ta:r] instead of : [f essbé:ta:r]  
20 jours hôpital                                      à l'hôpital  
20 days hospital                                        at the hospital.

We can assume here, that preposition [f] omission leads to that of the article itself, through the absence of consonant doubling, which would mark its necessary presence.

[nwa:der tèt:3o (18a)] instead of : [nnwa:der etèt:3o]  
 lunettes à lui                                    les lunettes à lui  
 ses lunettes                                        ses lunettes  
 his glasses                                         his glasses.

In Arabic, the form : Possessive Pronoun + Noun can be expressed by the pair N + Preposition [ta3] « of » + Possessive Pronoun form [o] (third personne: « his »). [ta3] is obligatory preceded by the article [l], which, by a combinatory phonetic device, is submitted to a total anterograde assimilation process as a result of articulatory economy law. Speaker cannot effectively pronounce: l + n + C :  
 r + n + t becomes: [ret] in [nwa:deretèt:3o].

The 21 nouns emitted without article or preceded by the indefinite article « a certain » (one eg. only), are numbered as preceded by the indefinite article, which is not formally expressed in Arabic :

[sbé:ta:r] = « a hospital » = « hospital ».

In order to decide about the status of these undetermined morphemes, we refer to C.S who uses undetermined (or isolated) nouns twice only, out of 47 articles in all.

Definite article is still preferentially used in comparison with indefinite (36 as against 21), although the second category still remains fairly important: 50% of the first.

### ARTICLE SYNOPTIC TABLE

	Definite					Indefinite				
	Total	Om	%	Sub	%	Total	Om	%	Sub	%
<b>A.P</b>	36	7	19.4	0	0	21	0	0	0	0
<b>C.S</b>	44	1	2.2	0	0	2	0	0	0	0

### Other determinants

A.P uses 10 possessive pronouns correctly : Noun + Pronoun mark. Eg. : see before, 8 quantitative determinants and 2 expressing « the other », thus 20 in all.

In C.S, it exists 21 other determinants with the exclusive use of possessive pronoun, except in one eg. only, where the form :

Noun + ta3 « of » + Possessive Pronoun mark, occurs :

[rra:s etè:3é (13b)]

la tête à moi

my head.

A.P uses a great variety of morphemes in other determinants class. Yet, this variety is more affective than linguistic: time spent at hospital expressed in terms of number of days and months.

As numerous as in C.S (20 against 21), other determinants are massively used, in relation to the overall morpheme percentage: 8.5, in A.P. In C.S, we have a score of 5.5 and they are resistant.

There frequency is pertinent in agrammatism. The use of padding up forms (« formules de remplissage ») as in this type of aphasia, can account for that. In general, the notion of determinant is resistant in A.P.

### OTHER DETERMINANTS SYNOPTIC TABLE

	Correct	%	Incorrect
<b>A.P</b>	Noun+Poss. Pron. 10	50	
	N +ta3 + Poss. Pron. 1	5	
	N + the other 1	5	
	Numer.+N 8	40	
<b>S.C</b>	N +Poss. Pron. 20	99.9	
	N +ta3 Poss. Pron. 1	0.05	
	N + the other 0	0	
	Num.+ N 0	0	

### Adjectives

A.P uses more adjectives than C.S: 14/10. Use frequency of this morpheme in relation to total of morphemes is superior than in C.S : 5.9 as against 3.

In relation to verb use, A.P produces twice more verbs than adjectives, but twice less verbs than in C.S (see explanation of this fact in Chapter « Discussion»):

	Adjectives	%	Verbs	%
A.P	14	5.7	28	11.5
C.S	10	3	74	19.6

Out of 17 adjectives in obligatory context, A.P omits once the adjective and substitutes 3 adjectives.

In qualificative adjective, twice the feminine replaces the masculine, in the epithet, once the reverse error is observed.

One omission process is observed in the use of the attribute adjective after [ra:h] auxiliary.

The gender is a weak structure in A.P, with preferential use of error towards : masc. → fem. in qualificative adjective context. In epithet context, the error is the reverse : fem → masc.

The modality of agreement in number is maintaine. The use of gender is weak in epithet and in noun sentence pattern.

The gender and the number are resistant in the context :

Noun + Auxiliary + Qualificative Adjective.

Thus, the auxiliary serves as a stabilizing factor of adjectival modalities in A.P.

The preferential adjectival form is the attribute in A.P :

		Context		Correct		Incorrect			
			%		%	Om	%	Sub	%
<b>A.P</b>	Adj.	17	94	13	76	1	6	3	18
	-----	-----	-----	-----	-----	-----	-----	-----	-----
	Adj.	1	5,5	0	0	0	0	1	100
<b>C.S</b>	Adj.	0	0	10	100	0	0	0	0
	-----	-----	-----	-----	-----	-----	-----	-----	-----
	Adj.	0	0	0	0	0	0	0	0

### ADJECTIVE TABLE

A.P			
Epithet qadj	Attribute	Qadj	
felqoffa kbi:r (33b)	<b>kè:n - ra:h aux.+ Q adj</b>	<b>Attribute of Noun Sent.</b>	
	kè:nettbé:b mli:h (12b)	<b>Qadj gerund f.</b>	<b>Ordinary adj</b>
	kè:no wa:hed (41a)	µè:na xa:jef (7b)	lga:to 3a:lja (22b)
	wa:hed ra:hemli:h (34a)	lma ta:jha (21a)	lhadra wè:lu (6a)
	[ra:ho] qa:bed (38b)	tfal da:xal (24c)	ddwa bezzè:f (11a)
[ra:hom] xa:rdji:n (39a)	ra:djel da:xal (31a)	la:xor barra (38a)	
10%	34%	28%	28%

C.S			
	<b>V b or ra:h aux. +Qadj</b>	ttfa:jjel ta:la3 (23a) hè:da da:har (42a)	mardé twé:l (1a) twé:l... twé:l (1b) b3é:d 3li:k (5d) lkelb dji:3a:n (34a)
0%	25%	25%	50%

## Pronouns

### a) Affixed pronouns

It is, in Arabic, the subject pronoun which is affixed to the conjugated verb :  
i. e. : 1) the accomplished :

[dji:t]            [dja]            [dja:w]            [dji:na]  
I have come    he has come    they have come    we have come ;  
and 2) the unaccomplished :

[idji]            [djdji:w]            [idji:w]            [ndji:w]  
he comes            you come            they come            we come.

In 38 obligatory contexts, A.P emits 33 affixed pronouns (14) while C.S produces almost 3 times as much: 74 (19.6), see before.

The number of pronouns is in proportion to the number of conjugated verbs, which are less numerous in A.P (28 strong verbs and 9 auxiliaries).  
Out of 33 pronouns, it exists 5 incorrect uses through gender substitutions in A.P. We note substitution of number. Let us observe again the eg. :

[ta:hat]            instead of: [ta:h]  
she has fallen            he (it) has fallen  
[drab]            “            [darbet]  
he has hit            she has hit

[jeddi]            “            [teddi]  
he takes            she takes

[ra:h]            “            [ra:hat]  
he has gone            she has gone

[idi:r]            “            [ddi:r]





[chu:f hɛ:da (37b)]  
look this one.

In C.S, the interrogative occurs 5 times, and demonstrative occurs 6 times:

[wɛ:ch (2a; 14a; 25a; 31a)]  
what?

[wɛ smo (16b)]  
what's its name ?

[hɛ:dɛ:k (7b)]  
that one

[hɛ:da (23a; 42a; 38a; 39a)]  
this one

[we hna (41b)]  
and here.

### c) Clitics

In 17 obligatory contexts, there are 5 substitutions, i.e. 29%, in the use of clitics by A.P. They reflect 3 confusions in number gestion and 2 in gender gestion :

- number :

[xla:sha (23a)] instead of : [xla:shom]  
plus her plus them

[mennhom (24e)] instead of : [menno]  
of them of him

[m3ahom (27b)] “ [m3a:h]  
with them with him

- gender :

[fo:qha (22c)] instead of : [fo:qo]  
on her on him

[ro:ho (28b)] “ [ro:hha]  
his person her person.

Clitics are more numerous in C.S than in A.P : 27 (7%).

They are resistant in A.P, as they are disturbed in only 30% of cases : Table below :

	Affixed				Autonomous				Clitics			
	Context	Corr	Incorr	om sub	Context	Corr	Incorr	om sub	Context	Corr	Incorr	om sub
<b>A.P</b>	40	33	0	5	3	3	0	0	17	12	0	5
<b>C.S</b>	71	71	0	0	2	2	0	0	27	27	0	0

## Verbs

In obligatory context, A.P resorts to 27 verbs (11.4) ; whereas C.S resorts to 71 (19.2). Eventhough in absolute terms, A.P uses approximately 3 times less verbs than C.S, it is pretty obvious that the verb remains the mostly used lexical morpheme (in A.P). Eg. : the number of verbs equals half the number of adjectives. While substitution occurs only 6 times, omission is a frequent phenomenon. 26 verbs are missing in A.P corpus.

Substitutions :

once the verb is in masculine when the subject is in feminine; 3 times the verb is in masculine when subject is in feminine. Twice the number is → erroneous: sg. → pl. and once: pl. Sg.

Two of these eg. relate to auxiliaries and error involve number assesement. [ra:h] auxiliary is omitted twice in A.P.

C.S has only one error in the number :

[cheddu:h la polis (43c)]  
they caught him the policemen.

He uses the future twice: Prep + Vb :

[do:q tchu:fi (30a)]  
jou will see

[do:q jahhakmu3li:h (43d)]  
they will judge him.

## VERB TABLE

	Strong verbs				Auxiliaries							
	Context	Corr.	Incorr.		kè:n				ra:h			
			Om	Sub	cont	corr	incorr	om	sub	cont	corr	incorr
<b>A.P</b>	54	21	26	6	3	2	0	1	4	1	2	1
%		38	48	13		50	0	25		25	50	25
<b>C.S</b>	71	70	0	1	4	4	0	0	4	2	2	0
%		98	0	2		43	0	0		28	28	0

There is no restriction on the accomplished and unaccomplished tenses in verbal flexion :

[dji:t (2b)]  
I have come

[rohna (6a)]  
we have gone

[jaxxadmu (16b)]  
they work.

Auxiliaries are omitted and subject to substitutions both in relation to [ka:na] and [ra:h] indifferently.

### Adverbs and adverbial locutions

It exists 21 adverbs in A.P (8.9) and 31 in C.S (8.2). The percentage is approximately the same, which means that A.P suffers from overall reduction.

Adverb use is faultness in A.P. The variability and nature of adverb are such that time adverb, location adverb, quantity adverb are correctly used :

[ki (21b) ; kima (23b)]  
when

[barra (10a; 38a)]  
outside

[wè:lu (6a)]  
nothing

[bezzè:f (11a)]  
many.

The 6 adverbial locutions furnished by A.P are correct :

[hamdullah 12c]  
thank God!

[ça va (2b)]  
that's fine

[3la kullihè:l (22a)]  
at any rate.

C.S produces 8 adverbial locutions. Their variability rate in terms of sense is higher than A.P's. Yet, these morpheme production rates are equal in both A.P and C.S.

Adverb and adverbial locution notions are resistant in A.P.

### **Prepositions and conjunctions**

In 37 obligatory contexts, A.P produces 30 correct prepositions (12.7) against 47 (10.8) in C.S.

We note 5 substitutions in A.P :

- through omission of part of the morpheme in 2 cases :

[ba3d (10a; 12a)] instead of : [meba3d]  
after

- through phonemic error :

[jorabbé (12c)] instead of : [jarabbé]  
O! My God!

- through addition of a clitic at the end of a preposition :

[xla:sha (23a)] instead of : [xla:s]  
plus her plus

- through addition of a preposition :

[f wè:lu (35b)] instead of : [wè:lu]  
in nothing nothing.

There are 3 omissions of preposition in :

[sbé:ta:r (4b; 17c)] instead of : [fessbé:ta:r; lessbé:ta:r]  
at the hospitaf to the hospital



<b>Conj.</b>	3	0	0	4	0	0	0	0	0
<b>Prep.</b>	13	3	1	4	1	0	13	1	1
<b>Adv.</b>	7	0	0	8	0	0	6	0	0
<b>Neg.</b>	0	0	0	1	0	0	1	0	0
<b>T</b>	<b>101</b>	<b>5</b>	<b>10</b>	<b>48</b>	<b>8</b>	<b>6</b>	<b>98</b>	<b>19</b>	<b>18</b>

\* no ratio because no adjectives

# total of words

- substitution

[ ] omission.

#### IV - TABLE OF NARRATIVE TYPES IN C.S

		History of illness			Cooky theft			4 W-B		
		#	-	[ ]	#	-	[ ]	#	-	[ ]
<b>Art.</b>	<b>def.</b>	8	0	2	6	0	2	30	0	0
	<b>indef.</b>	1	0	0	0	0	0	1	0	0
<b>Other determ.</b>		16	0	0	3	0	0	2	0	0
<b>q adj.</b>		0	0	0	0	0	0	0	0	0
<b>Q adj.</b>		5	0	0	3	0	0	2	0	0
<b>Pro.</b>	<b>aff.</b>	31		0	10	0	0	32	0	0
	<b>auton.</b>	0	0	0	1	0	0	1	0	0
	<b>clit.</b>	13	0	0	3	0	0	11	0	0
<b>Aux.</b>		2	0	0	1	0	0	2	0	2
<b>Vbs.</b>		31	0		10	0	0	33	1	0
<b>Loc</b>	<b>adv.</b>	5*	0	0	1	0	0	2	0	0
	<b>prep.</b>	0	0	0	0	0	0	0	0	0
<b>Conj.</b>		7	0	0	4	0	0	13	0	0
<b>Prep.</b>		24	0		5	0	0	18	0	0
<b>Adv.</b>		17	0	0	5	0	0	9	0	0
<b>Neg.</b>		10	0	0	1	0	0	2	0	0
<b>T</b>		<b>170</b>	<b>0</b>	<b>2</b>	<b>53</b>	<b>0</b>	<b>0</b>	<b>158</b>	<b>0</b>	<b>2</b>

## V- MAJOR LEXICAL CLASSES IN A.P

	Noun token/ type		Verbs token/type		Adjectives token/type		N/V (on token)	N/Adj (on token)
<b>Hist.of illn.</b>	32/24	1.3	16/15	11	4/4	1	2	8
<b>Cooky theft</b>	13/11	1.2	6/6	1	2/2	1	2.1	6.5
<b>Picnic</b>	15/14	1	1/1	1	1/1	1	15	15
<b>Farmer</b>	15/14	1	3/3	1	0/0	0	*	0
<b>Thief</b>	5/4	1.2	1/1	1	1/1	1	5	5
<b>2-8</b>	10/9	1.1	7/7	1	6/6	1	1.4	1.6

## VI- MAJOR LEXICAL CLASSES IN C.S

	Noun token/type		Verbs token/type		Adjectives token/type		N/V (on token)	N/Adj. (on token)
<b>Hist. of illn.</b>	30/19	1.5	35/32	1	2/2	1	0.8	15
<b>Cooky theft</b>	12/12	1	11/11	1	5/4	1.2	1	2.4
<b>Picnic</b>	14/10	1.4	9/9	1	3/3	1	1.5	4.6
<b>Farmer</b>	10.9	1.1	9/9	1	0/0	0	1.1	*
<b>Thief</b>	7/7	1	6/6	1	0/0	0	1.1	*
<b>Getting up</b>	7/7	1	13/13	1	1/1	1	0.5	7

Noun/Verb and Noun/Adjective relationships are differently distributed according to the tasks and the two patients.

Noun/Verb relationships are more or less equal in C.S in cooky theft, picnic, farmer, thief; they are more significant than in the history of illness and getting up.

In A.P, the Noun/Verb relationships are equal in the history of illness and the cooky theft. They amount to 5 in thief and up to 15 in farmer, then decrease to the lowest rate in 2-8, which accounts for the tendency towards simplified sentence building up (15 nouns and one verb in the same task). This phenomenon occurs in all other tasks. In a steady manner, the noun rate is higher than the adjective rate.

### Remark

It can be noted that, even in the control subject, the noun rate is constantly and significantly higher than the adjective rate in each task.

Consequently, there remains the twofold problem :

1- this may be due to a weak functional yield (rendement) of the conjugated verb notion, as against the use frequency of noun sentence in Arabic (see below).

2- the qualitative reduction of verbs is not a pathological feature with a diagnostic value in agrammatism in Arabic.

The Noun/Adjective relationships is high in C.S in the history of illness : 15; getting up : 7 then picnic: 4.6. Lastly, ranks cooky theft with a rate of of 2.4. The rate is none in farmer and thief, because of adjective use absence in these tasks.

In A.P, farmer leads to the same result. This, therefore, is not an ideal task allowing the assessment of the noun rate as compared to the adjectives rate. The rate is maximum in picnic : 15; then it is 6.5 in cooky, then 5 in thief and lastly 1.6 in 2-8.

In C.S as in A.P, the noun rate is superior to verb rate which is, itself, superior to that of adjectives.

### **General observation**

On an overall basis, adjective notion is weakly used in both cases as compared to noun then verb notion, eventhough there are 4 adjective types in Arabic. Yet, it remains resistant in A.P.

Verb notion is impaired in A.P as compared to what we observe in C.S, and to noun use. The high frequency of noun sentence can account for that.

### ***II-5 Syntactic structures used***

A.P uses 19 noun sentences and 28 verb sentences. It is note worthy that in picnic and thief, there is no verb sentence. Here, the data contain 4 noun sentences in picnic and 3 in thief.

The same applies to 2-8 : 4 noun sentences; except that the 2 verbs emitted do not relate to the narrative task, but to the real set up of the exam :

[wè:chidi:r (37a)]  
what does he do?

[chu:f hè:da (37b)]



look at this one.

These are 2 speech occurrences addressed to the examiner.

Thus, picnic, thief and 2-8 are the 3 tasks suggesting the exclusive production of noun sentences in A.P.

Infinitive clauses are scarce in A.P (see explanation in Chapter « Discussion »).

They occur twice :

[ra:h            jaxxadmu (16b)]  
il est allé      ils travaillent  
il est allé      travailler  
he has gone    to work

[ma:jaqderch   iro:h (22d)]  
il ne peut pas   il part  
il ne peut pas partir  
he cannot go.

While in C.S, we have 7 infinitives :

[ra:jah        été:h (23c)]  
he is going to fall

[ra:jah        jè:xod (25a)]  
he is going to take

[ra:jha        ddi:r (26b and c)]  
she is going to do

[ra:jhi:n        jetReddè:w (32a-b)]  
they are going to eat

[ra:jah        jè:kul (35a)]  
he is going to eat

[i3a:wed            jerqod (46a)]  
he recommences to sleep

[izi:d            inu:m (49b)]  
he adds to sleep  
he sleeps again.

There are no relative clause, nor noun complement in A.P. C.S uses 9 noun sentences and 2 relatives :

[lli            felqoffa (34c)]  
who (is) in the bag

[lli:    ku:n    bi:jja (18b)]  
who is with me.

There is no noun complement in C.S also.

Conditional clause occurs 3 times in C.S (12 a-b; 17 a-b and 21 a-b).  
It is absent in A.P.

Predicate expansions, whether it is the noun or the verb sentence, are:

1- absent :

[ra:h            zewdjha (15a)]  
he has gone her husband  
her husband has gone

[ma:jaqderchiro:h (22d)]  
he cannot go;

2- refer to direct object complements :

[3ta:wli    ddwa (11b)]  
they gave the drugs

[nchu:ferra:ha (15b)]  
I see the rest

I rest.

[chammxo kullech (21c)]  
they have wet all

[drab ro:ho (28b)]  
he has hit himself

[jeddi fi:hom (29b)]  
he takes them;

3- to circumstantial location complement :

[rohna lessbé:ta:r (7a)]  
we have gone to the hospital

[rohna lhi:k (13a)]  
we have gone there

[ddè:wni lextu (14a)]  
they took me to his sister ;

[felRa:ba nchu:ferra:ha (15b)]  
in the forest I rest

4- to circumstantial time complement :

[nro:ho felli:l (30a)]  
we go in the night

[ra:hat elRadwa (23b)]  
she has gone to morrow ;

5- to circumstantial manner complement :

[dji:t ça va (2b)]  
I have come it is (I am)well

[xradjt hamdullah (12c)]

I went out thank God!

[rohna m3a wli:di (13a)]  
we have gone with my son ;

6- or to circumstantial quantity complement :

[rtè:hi:t chwi:jja (13b)]  
I have rested a little.

Only in 2 eg. do we find propositional expansions relatively elaborated :

[melli bdi:t wè:na naxdem (16a)]  
depuis que j'ai commencé et moi je travaille  
since I began and me I work  
since I began working

[kita:hat lemjà:h felɥard chammxo kullech  
(21b-c)]  
quand elle tomba les eaux par terre elles ont mouillé tout  
when it fell the waters dawn they damped everything  
when water fell dawn, it damped everything.

Agrammatic is reduced eventhough he maintains morpheme order and function. This reduction is materialized in comparison with the complexity of uttered sentences and their frequency as elaborated units in C.S. Some eg. :

[kut ma:3adi hatta chi uki toht toht (3a-  
b)]  
j'étais je n'avais rien et quand je suis tombé je suis  
tombé  
I was I had nothing and when I fell I fell  
I had nothing, and when I fell, I fell

[lu:kè:n mèch ulè:di lu:kè:n ra:ni roht fhè:li (4b-c)]  
si ce n'était pas mes enfants je serais allée dans ma  
personne

if without my sons if I should have died  
 without my sons, I should have died

[sstar kijebdè:ni maqollekchi jabeti (5b-c)]

la douleur quand elle me saisit je ne vous dis pas ma fille  
 the pain when it begins I don't tell you my daughter.

This is evidenced throughout this speaker's overall corpus.

**II-7 Discourse choice**

**a) Direct and indirect style**

Neither direct nor indirect style are described in A.P, while in C.S, the direct style occurs only once :

[qalu:li ro:h l ettbé:b (7a)]  
 ils m'ont dit : « vas » chez le médecin! »  
 they told me : « go to the doctor! »

**b) Use of tenses**

Table below evidences both accomplished and unaccomplished tense management in A.P and C.S.

	Texts	Actual	Accomplished	Unaccomplished
<b>A.P</b>	Hist. of illness	15	11 73%	4 27%
	-----	-----	-----	-----
	Cooky theft	6	3 50%	3 50%
<b>C.S</b>	4WB	13	7 53%	6 47%
	-----	-----	-----	-----
	Hist. of illness	31	11 35%	20 64%
	Cooky theft	10	1 10%	9 90%
	4WB	34	9 26%	25 73%

The accomplished tense is more frequently used in both A.P and C.S in the history of illness ; 4W-B is ranked second, then comes cooky theft.

The unaccomplished is weakly used in the history of illness (27 and 64%), then we rank 4W-B (26 and 73%), then cooky (50% in the two subjects).

In both group of performances, the future tense doesn't appear, except in 3 cases in C.S who uses :

- Preposition expressing the future : [do:q] + Unaccomplished Verb :

[do:qetchu:fi (30a)]

vous allez voir

you will see

[do:q jahhakmu 3li:h (43b)]

ils vont le juger

they will djuge him;

- Verb [ra:h] signifying the future + Verb :

[ra:jha ddi:r (26b)]

elle vas faire

she will do.

Let us observe now this table showing accomplished-unaccomplished tense confusions in A.P, in comparison with C.S productions :

A.P				C.S			
Acc.	Unacc.	Unacc.	Acc.	Acc.	Unacc.	Unacc.	Acc.
ra:ni (10a)	<i>instead of:</i> kut	rahat tro:h	<i>instead of:</i>			mè:chè:fu mè:jchu:fu (43b)	<i>inst. of:</i>
		drab jadrob (28b)	<i>instead of:</i>			chrab jechrob (48b)	<i>instead of:</i>
		kè:no iku:nu (41a)	<i>instead of:</i>				
1		3		0		2	

Although it is fairly rare, error is directed from the unaccomplished to the accomplished in both cases. The accomplished seems to be a compensatory factor of reduction.

The unaccomplished is less resistant than the accomplished in A.P. The future tense is seldom used, probably because it doesn't exist as an autonomous morpheme (as in French for instance).

**c) Pronominal - nominal reference**

See Chapter about the pronoun as included in the verb flexion.

***II-8 Production parameters***

**a) Production rate**

C.S produces more text material than A.P, which was to be expected. However, the number of syntactically continuous sentences does not significantly differ when confronting the observation of A.P's corpus with C.S's: A.P: 41 phrases and C.S : 51 syntactically continuous phrases (p.s.c.).

But, what distinguishes the latter from the former is, in quantitative terms, the number of phrases contained in each « p.s.c. ») and which is relatively high only in the history of illness in A.P :

	<b>Hist.of illness</b>	<b>Cooky</b>	<b>Farmer</b>	<b>Thief</b>	<b>Picnic</b>	<b>2-8</b>
<b>A.P</b>	<b>S.C.P</b> 17	6	4	2	3	9
	<b>Words</b> 94	52	19	20	45	45
	<b>Synt.</b> 29	14	6	6	12	13
<b>S.C</b>	<b>S.C.P</b>	10	5	2	6	7
	<b>Words</b>	60	48	33	58	40 (Getting)-
	<b>Synt.</b>	17	9	8	14	11

Let's now consider differences in relation to the number of words through Table below which indicates A.P and C.S rate of production :

<b>A.P</b>	<b>C.S</b>
------------	------------

<b>Texts</b>	Total of morph.	Total of phr. (syntagmes)	Morphemes	Phrases (syntagmes)
<b>Hist. of illness</b>	94	21	183	46
<b>Cooky theft</b>	52	10	60	17
<b>Farmer</b>	19	6	41	9
<b>Thief</b>	20	6	33	8
<b>Picnic</b>	45	12	58	14
<b>2-8</b>	45	13		
<b>Getting up</b>			40	11

Basically, C.S supplies more words than A.P, except for 2-8 and getting up, where the rates are nearly the same: 45 and 40 respectively.

### b) Phrase length

If we compare phrase length on the basis of syntactic criterion, we notice that C.S presents diagrams sprawling to the right of the reperes, except for picnic, in which A.P produces a phrase of over 26 words where C.S produces one phrase with a maximum number of words equalling 25. This means that C.S's sentences are more elaborated than in A.P's, who puts out a higher rate of minimum statements: here, diagrams sprawl to the left. See Tables VII, VIII, IX 1, IX 2, X.

If phrase length was observed through morphological criterion, it could be noticed that phrase number is steadily higher when the number of words increases: see higher rise of curve at the level of phrases with 4 and 6 morphemes in C.S, in relation to A.P in the history of illness.

Once only in this same task, A.P produces one phrase of 8 words. This phrase length is absent in C.S.

In cooky, the high number of 3 and 4 word phrases, compensates significantly for the absence of phrases of 5 words in C.S, while in A.P, there are 3.

There is one phrase of 6 words in C.S and A.P.

For farmer and picnic, diagrams are more sprawled out rightwards in C.S than in A.P.

A.P produces shorter utterances than C.S.



In thief, the maximum utterance produced by both patients, consist of 5 morphemes and the number of phrases of 5 words is higher in C.S.

In the last series, A.P performs slightly better.

Basically, C.S possesses more morphemes than A.P.

## ***II-9 Comprehension***

A.P and C.S present the following results: no symptom of impressive agrammatism in A.P except one error when asked question: « point to the comb with the fork ». Patient takes the two objects.

In C.S, all the tasks are correctly carried out, while with A.P, we often had to repeat twice or to enonciate slowly the same question.

## ***Summary***

There is an evident dissociation comprehension / expression of grammar in A.P. Chapter « Discussion » hereafter degages and explains this dissociation through weak versus strong structures observation. It remains useful, nevertheless, to compare this central conclusion with the results of neuropsycholinguistic complete exam and aphasiologic profile of A.P (results of « MT » above), before general discussion presentation.

We've noticed disorders at the level of grammatical comprehension in A.P (results of MT passation).

That can be in contradiction with CLAS conclusions. Really, this contradiction is only **formal**. Effectively, if scrutinize our data more closely, deficits in oral comprehension of grammar in A.P, appear clearly in subtests involving sentence programming in both oral and written tasks. Even sentence repetition is difficult in A.P.

First articulation units designation gives 100% of success, because it doesn't imply sentence programming.

That means that A.P presents, in fact, **a mixte agrammatism**: expressive and impressive. This important diagnostic feature is hidden by conservation of morpheme order and function, in CLAS tasks. See Chapter « Discussion » hereafter.

### III- DISCUSSION

#### *Psycholinguistic interpretation of these results*

Before our own psycholinguistic explanation of aphasic impairments presentation, we must summarize data bearing on other approaches: this methodologic necessity shows potential analogies or differences between diverse theories.

*JAKOBSON and LURIA (1971) think that agrammatic aphasics present troubles in conceptualization predication relations notion; agrammatic can only name events.*

Yet, the relation verb/argument is available to the patient. This is what is underlined by L. MENN and L. K. OBLER (1990) they give the example of Serbo-Croate where dative and genitive are present in agrammatic performances even if verb is omitted.

In Arabic, A.P. uses verbal (short but correct) sentences in a system where noun sentence structure (which involves simpler morphosyntactic specifications than verbal ones) exists:

[μè:na dji:t (2b)]  
me I came

[3ta:wli ddwa (11b)]  
they gave me the drugs

[wa:hed mennhom ra:h mli:h (34a)]  
one of them is good.

*ZURIF and all (1976) approach agrammatism in terms of difficulties in processing closed-class vocabulary.*

We do not agree with this hypothesis because open-class vocabulary is not preserved in this type of syndrome. A.P. has difficulties with verbs, adjectives, redundancy, syntactic expansional and complex structures.

*KEAN (1982) deals with agrammatism in terms of phonological trouble consisting in omission of « clitic elements » which are parts of other words. This thesis is not exact since substitutions are also diagnostic features*

in this form of aphasia (L. MENN and L. K. OBLER, 1990). Moreover, troubles do not concern words only, but also the text as a whole. See A.P difficulties in redundancy and complex structures gestion.

*GARRETT (1980, 1983) develops a psycholinguistic theory based on different levels: a message level, a functional level, and a positional level. He explains that agrammatism consists in a trouble in placing lexical items in the positional frame.*

*There is a separation of lexical items from the creation of syntactic structure. There is a loss of morphosyntactic markers needed to specify inflected forms and functional words.*

According to us, this explanation, based upon disruption between representation of words and their materialization under the form of a structured lexico-syntactic frame, could account for classical « conduction aphasia » which consists in disruption between motor and sensory processes of language, but not for agrammatism at all.

L. MENN and K. L. OBLER add to GARRETT approach certain supplementary remarks :

- additional computation cost. Morphological specifications are degraded rather than erroneously specified;
- the simpler the paradigm, the fewer the errors;
- output syntactic processing difficulties rather than loss of syntactic morphological knowledge, there is a separable competence.

*L. BARGER, SCHWARTZ and SAFFRAN (1983) analyze agrammatism in terms of*

*preservation of a high degree of accuracy in grammaticality judgements, since*

*agrammatic deals with a computation of simple utterances;*

*KOLK (1985) deals with agrammatism in terms of strategy of avoiding the necessity of computing verb agreement;*

*J.L. NESPOULOUS (1985) develops « adaptative strategies » notion.*

These three point of views are convergent and we agree with them, since we admit that strategies used by patient are conscious and voluntary. However, these three others do not evoke the consequence of such an explanation : **absence of anosognosia** which is yet tied with their idea. See proposition of our own concepts, below.

*SCHWARTZ and SAFFRAN (1983) interpret agrammatism as being deficit in word order rather than in case markers.*

A.P case study shows problems with auxiliaries (agreement difficulties), Unaccomplished tense, indefinite article, agreement adjective/noun. This is why this explanation is not convincing.

A conclusion proposed by L.MENN and K. L. OBLER in their synthesis of different psycholinguists theories (Chapter 20 of C.L.A.S. case studies p. 1385) suggests a necessary revision of neuropsychological literature concerning aphasic facts interpretation. Here are their terms :

« since we have no information as to how much of the foregoing also applies to Wernicke's and other fluent aphasics, we cannot yet know if it is best regarded as an account of agrammatism or as an account of a general grammatical deficit in aphasia ».

These others recognize **the existence of grammatical troubles in other forms of aphasia** (we have underlined that in the introduction of A.P neuropsychological data) and, at the same time, and more important, **the absence, in neuropsychological field researches, of a general theory of aphasia phenomenon interpretation.**

This lack of a general aphasiologic theory is more accurate when the clinician wants to go beyond the simple observation of case, i.-e- to **reeducate** him.

A 20 years clinical - therapeutic and scientific experience allows us to propose a psycholinguistic general model of aphasia explanation based upon 4 principles :

- 1- exhaustive case studies (passation of complete neuropsychological exam, and case submission to tasks allowing differential diagnostic),
- 2- conceptualization of aphasia accross cognitive psychology and structural linguistic concepts,
- 3- case rehabilitation in relation to this conceptual frame,
- 4- experimental approach of this conceptual model efficacy, through the passation of the same initial battery at the end of therapeutic enterprise : comparative approach of the scores and the quality of performances before and after reeducation, N. Z., Paris V, 1986 ; FNO,1991; SDORMP, 1992; IALP,1995.

As far as agrammatic interpretation is concerned, we try, in present reflexion, to give a synthesis of our experience as applied to this specific form of aphasia.

**Resistant** structures are retained, in C.L.A.S methodology, as being **unmarked**, see

GARRETT, above mentioned.

In psycholinguistic field, « mark » concept can be assimilated to that of « contrast » employed by JAKOBSON (1970).

In neuropsychological field, contrast notion can be interpreted as synonymous to « dissociation » concept.

Effectively, the three dichotomies :

- marked/unmarked structures,
- clear/confused contrasts,
- dissociated/ associated performances,

refer to one central idea: « possessed/not possessed ability » in observed case.

In present research this trinity refers to « resistant/not resistant » notion, in relation to dissociations found in A.P. Here are the dissociations degaged in A.P case study :

## **LOST CONTRASTS OR DISSOCIATIONS IN A.P**

**RESISTANT - UNMARKED STRUCTURES      WEAK- MARKED STRUCTURES**

### **I- SYNTACTIC LEVEL**

1- VERBO-NOMINAL OPPOSITION IN  
CONSTRUCTIONS  
MONORHEMATIC UTTERANCES

1'- EXPANTIONAL  
AND COMPLEX SENTENCES

2- ORDER AND FUNCTION OF MORPHEMES  
SYNTACTIC

2'- REDUNDANCE AND  
MOVEMENT

### **II- MORPHOLOGICAL LEVEL**

1- STRONG VERB

1'- AUXILIARY

2- ACCOMPLISHED TENSE

2'- UNACCOMPLISHED TENSE

3- DEFINITE ARTICLE

3'- INDEFINITE ARTICLE

4- AGREEMENT IN NUMBER ADJ / N  
ADJ / N

4'- AGREEMENT IN GENDER

+

ADJ; ADV; LOCA; PREP; COOR « AND ».

**First observation** : in a re-definition of communication act, which is fundamentally compromised in aphasia, « CONTROL UPON LANGUAGE » concept is emphasized (N.ZELLAL, 1994).

Effectively, in order to communicate efficiently a message to the other, **SPEAKER**

## MUST CONTROLE HIS LANGUAGE.

To controle one's language is to distanciate oneself from it, or to be **CORRECTLY STRUCTURED IN SPACE AND TIME**.

We have underlined above that in C.L.A.S. principles, resistant structures are unmarked. This mark notion is at the basis of communication act.

Child language, i.-e.- communication act acquisition is based upon contrast acquisition (JAKOBSON,1971), and aphasic impairments follow the reverse course of language acquisition in child (JAKOBSON, 1971; DUCARNE, 1979).

**Second observation:** aphasia is analyzed in terms of « loss of gestalt » (N. ZELLAL, 1986; 1995) in respect with GOLDSTEIN (1948) theory. To construct one's **gestalt**

or contrast, is to isolate form from a general fund of stimuli (here, verbal one), in order to give **meaning** to words, to **create** word, during language assesment.

To create word is tied with one's **subjectivity** and **affectivity** (BENVENISTE, 1950; D. COHEN,1965).

Creation of word, or construction of word gestalt is to construct precise, clear meaning of word for other : it is a **voluntary, controled** - thus submitted to spatiotemporal structuration - act.

**Third observation:** word gestalt construction is to **synthetize rapidly and simultaneously word different components** (« semantic associations » of LURIA,1971), which are first recognized, then **analyzed**, in order to give precise meaning to communication act and deal with it efficiently. The double cognitive operation of stimuli analysis and synthesis is carried out in space and time (rapidity in reaching and gathering the **maximum of informations** in the **shortest time**).

Let us interprete A.P performances through this psycholinguistic model :

Voluntary (creative function of) language is impaired while automatismes are preserved : see A.P neuropsychological scores : automatismes: 100%; paradigmatic lexical disponibility 0%; text reading and comprehension: 0%; dictation : 0%; sentence reading : 0%.

Marked structures are thus the voluntary part of language assesment. They are impaired in proportion with weakness of improvisation force for the other protagonist of communication act, in proportion with **weakness of control upon language**, in proportion with **weakness of temporo spatial structuration**: A.P. presents difficulties with complex sentences: 30%, which are by definition temporospatial constuctions; in the same order, he has problems with complex orders comprehension, with narrative programmation in writing, with complex praxic tasks.

One of the best example showing difficulties in verbal control is traduced by the weak scores in repetition of non words : icher - kanvag while meaningful and familiar words are easily restituted: non words require more important effort of recognition (and strongest control) than familiar items.

Patient becomes unable to reach synthesis (gestalt) of word because of an abnormal lengthening analysis operation time: APHASIA IS A **TEMPORAL TROUBLE**. For instance, A.P. can analyze one of the word component, but cannot seize rapidly all the components at the same time to give the precise expected form: tools: saw ; to swim: gestual correct answer; lamp: light; bol: bi; obscurity: obtiri. A.P. gives an erroneous adjective for an adjective, an erroneous noun for a noun; he never confuses a preposition with a noun : he analyses syntactic class; he confuses eyebrow with eye but with leg: he analyses organ near topography.

This **same psycholinguistic** impairment of language synthesis is exteriorized under different forms of symptoms explained by :

**a-** variability of performances from one case to another, eventhough their etiologies are the same = « **intervariabilities** » ;

**b-** variability of performances in a same task (eg. Naming) = « **intravariabilities** »;

**c-** variability of performances at different moments and circumstanes of tests passation ( see neuropsychological profile of A.P. « cliché » notion above = « **circumstantial variabilities** » ;

**d-** variability of performances in the passage from a homogeneous group of tasks (eg. oral comprehension) to another (eg. oral expression); (eg. copy vs dictation in A.P). These variabilities seem in appearence only, to be clear and constant = « **functional variabilities** ».

If it seems pretty obvious that a-b-c contexts, indicating these different forms of variabilities, can be explained through gestalt construction weakness, and that context can be explained by injury topography, (and neurologists have isolated the different functional cerebral areas) , we think that **in these four situations, aphasic patient suffer from a unic psycholinguistic deep impairment at the level of language control and temporospatial structuration :**

- **strong force of inhibitor control = reductions** ; eg. language fluency problem in A.P.is evidenced by paradigmatic lexical disponibility where A.P cannot reach more than one item of a serie in 90 sec.
- weak control upon language = fluency ; eg. paraphasia in Wernicke's aphasia.

Thus, this model accounts for ALL aphasic deficits whatever cerebral injury is (N.ZELLAL, SDORMP, 1992; GRAAL, 1993). This is the way by which we approach L. MENN and L.K. OBLER concluding remark (above).

## ***Conclusion***

This central idea opens new perspectives in aphasia field research :

A.P presents a group of dissociations which differ from groups of dissociations found in other cases. « **Intervariabilities** » depend on patient affectivity and **each** subject has his own specific affectivity, his own manner to perceive external world through his words, his own manner to construct gestalts, to create his language to establish relations with others. « **Intravariabilities** » and « **circumstantial variabilities** » are function of patient variation temper, motivation and subjectivity. But **all** aphasics suffer from one common psycholinguistic trouble: **weakness of verbal control**. This same conclusion accounts for « **functional variabilities** » notion. Effectively, if cerebral lesion topography separates motor aphasia from sensorial one through **neurologic** point of view, it remains clear, through

**psycholinguistic** point of view, that in both types of syndromes, each test performances is analyzable in terms of loss of capacity to construct word synthesis. We can conclude here that neurology and psycholinguistics have to progress **independently** so that aphasiologic researchs can progress. The error in literature seems to reside in the fact that psychologists have assimilated J.H. JACKSON classical dichotomy: automatic versus voluntary cerebral activity to automatic versus voluntary language. **Linguistic automatism are prealably voluntary activities, submitted therefore to verbal control acquisition: they must not be confused with neurologic reflex notion, eg. child suction reflex.**

The concept of **anosognosia** has to be revised through these remarks: patient residual possibilities of communication (see below) are voluntary and **conscious strategies**: since the disruption between tasks proposed and the answers is never total, it is **specific**; patient can regularly analyze items but cannot syntethize them. Even in total jargonaphasia we find phonemes, gestures, reactions showing that the patient has not totally lost the items proposed. It is what differentiates aphasia from demencia.

Other perspective of researches: from a linguistic point of view and since it is quite impossible to interpret aphasic phenomenon without a rigourous prealable structural analysis of verbal impairments, it is interesting to envisage reflexions in the field of **classification** of agrammatic disorders.



Observing the differences between the different languages practiced, in the field of **compared aphasiology**, one could establish a universal typology of the troubles. See also J. L. NESPOULOUS and all., who present a study of agrammatism in different languages.

One could also establish an **internal** typology of agrammatic impairments, observing several cases practicing a same language through their scores importance, progression and variations: pronoun agrammatism, functional morpheme agrammatism, etc... N. ZELLAL and J.L. NESPOULOUS codirect actually a Doctorate prepared by N. BOURIDAH at Algiers University, in this approach.

In the same order of reflexion, objective and detailed study of tests performances must consider that a test is only a **mean** allowing psychological parameters to be exteriorized and not a definitive method of drawing diagrams or patient « cliché » .

« Functional » and « circumstantial » variabilities concepts offer new orientation of researches . Clinician can search for thresholds (seuils) of variabilities processes in a same case observed at different moments, through the same test passation, until «stabilization » of scores. So, simple curve diagram is then replaced by clinical data **dispersion field , a space of performances variations :**

profile of performances

space of performances

---

The **space** delimits residual possibilities of performances field.

**Now, what about aphasic language re-education ?**

The unifying theory of aphasia we've proposed above, convinces us actually, because protocols constructed on these basis give encouraging results in our therapeutic enterprises in neurologic Algiers clinical field ( N.ZELLAL, IALP, 1995). Based upon **reduction of dissociations notion**, and **construction of contrasts notion**, accross **temporospatial structuration** and **language synthesis rehabilitation**, protocols can be applied to ALL aphasics whatever their language is (or are). Algerian people are plurilingual , this is what reinforce our theoretical approach.

This idea seems to be peculiarly important, since: 1- it could continue and develop C.L.A.S reflexion in a **therapeutic** point of view; 2- it is situated in a **universal** perspective.

**Last observation:** the degagement of a complete neuropsychological clinical picture of A.P was effectively necessary. Eventhough the study of the interplay between association/dissociation processes in a same case is a very difficult operation, it remains the only objective way to access to a real

explanation of loss of marks in agrammatism. So, C.L.A.S methodology would considerably gain in **introducing each case study with an exhaustive neuropsychological exam**. « Tell me about... (a picture) » test, based upon a univoque stimuli, cannot allow to carry out the great ambition consisting in agrammatic facts psycholinguistic interpretation.

## IV- ARABIC GRAMMATICAL SKETCH

### *Syntax and word order*

Arabic language has verbonominal opposition.

**Verbal sentence :**

[ttfal jè:kul]  
 a boy eats  
 S V

Verbal sentence begins with a verb followed by a subject and an object :

[ttfal jè:kul teffa:ha]  
 a boy eats an apple  
 S V O

In isolated verbal form, subject is implied in the verb :

[tè:kli]  
 you eat  
 V

The verb can precede the subject :

[jel3ab ettfal]  
 he plays the boy  
 the boy plays  
 V N

**Noun sentence**

Noun sentence begins by a noun followed by another noun, a group of words or an adjective whose function is to determine or to inform about it :

[uled elmra]  
 the boy the woman

the boy (of) the woman  
 (it is) the boy of the woman  
           N          N

[ko:ra felqoffa]  
 balun in the bag  
 (it is) a balun in the bag  
       N      N

[fo:qo chchems]  
 upon it the sun  
 (there is) sun upon it  
 Prep      N

[luled      elli      hna          sRé:r]  
 the boy who (is) here (is) small  
       N      Rel pro Adv          Adj

[luled      esRé:r]  
 the boy (is) small  
       N          Attribute Adjective

[luled      xa:redj]  
 the boy going out  
 the boy (is) going out  
       N          Attribute Adjective

Adjective attribute [xa:redj] is here a gerund corresponding to the « ing » progressive in english.

The relation Subject - Predicate is equivalent to that which exists in the structure : Nominal Subject - Verb.

Word order and function determine their hierarchy in utterance.

Utterance is constituted by a predicate to which are added expansions :

[jè:kul      elxobz]  
 he eats the bread  
 S V      Primary Expansion

[jè:kul      bezzè:f]  
 he eats much  
       V          Autonomized Expansion

[jè:kul      Radwa] = [Radwa      jè:kul]

he will eat    to-morrow  
V                    Autonomous Expansion

to-morrow    he will eat  
Auton. Exp.    V

## Subordination

Relative clause in Arabic is constructed as follows :

N + [lli] (Pronon) + V :  
who

[luled            elli    jè:kul]  
the boy        who    eats

Subordinate clause introduced by a conjunction is constructed as follows :

Conjunction + V :

[ki] + V  
when

[ki        dja]  
when    he came

[melli] + V  
since

[melli    bdi:t]  
since    I began

[hatta] + V  
until

[hatta dja]  
until he came.

Interrogative clause is constructed as follows :

[wè:ch] +V  
what?

[wè:chidi:r]  
what does he do?

Conditional clause is constructed as follows :

[lukè:n] +V... [lukè:n + V]  
if ... if

[lukè:n darbo]... [lukè:n bka]  
if he stroke him if he wept  
if he stroke him, he would have weep.

## Coordination

The more frequent conjunction used to coordinate sentences are :  
[w] : and; [wella] : or; [bassah] : mais.

Copula [w] is pronounced [u] before a consonant :  
/w cha:f/ = [uchè:f]  
and he saw.

## *Morphemes*

### Articles

Definite article is : [l], whatever the gender or the number of determined unit is :

[l] + N

[lbet]  
the girl

[lweld]  
the boy

[lké:ra:n]  
the buses.

Definite article is of that form: [l], when it preceds a word begining with a « lunar » consonant [lqamari:jja]; when it determines a word begining with a « solar » consonant [chchemsi:jja], it is totally assimilated to that first consonant :

/lqamar/  
[qamar]  
the moon

/l chems/

[chchems]

the sun.

Here is the « lunar » and « solar » consonants lists :

**lunar consonants [l] (le, les) + C :**  
**CC :**

**solar consonants [l] + C =**

[w [lwerd : the flower  
o'clock

m lma : the water

b lbè:b : the door

dj ldj:b : the pocket

j lju:m : the day

k lkursi : the chair

g lga:to : the cake

x lxobz : the bread

R lRa:ba : the forest

newspaper

h lehdè:ch<sup>150</sup> : (the) 11 o'clock

3 l3é:n : the eye

q lqoffa : the bag

h lhadra : the speech

μ] lμard] : the earth.

[t [ttmenja : the 8

t ttbé:b : the doctor

d ddwa : the drug

d ddarb : the stroke

s ssebt : the saturday

s ssbah : the morning

z zzi:n : the beauty

ch chchems : the sun

z zzornè:n : the

r rri:h : the wind

r rra:s : the head

l lli:l : the night

n nnu:m : the sleeping

c] cci:na] : the orange.

Definite article is repeated before epithet adjective :

[tfal lkbi:r ra:h]

the boy the old has gone away

the old boy has gone away.

Indefinite article is not expressed :

[bet]

girl (without article)

a girl

[bnè:t]

girls.

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<sup>150</sup> In Arabic, numeral adjective is preceded by definite article.

## Nouns

It is an individual concrete or abstract entity. It is what about the discourse is in relation to the process (the verb).

Singular : [lβet]  
the girl

Plural : [leβnè:t]  
the girls.

Plural is comprised in the internal morphology of the noun :

[ta:bla] ; [twa:βel]  
table tables

or it is marked by the form [è:t] :

[sti:lu] ; [stiluwwè:t]  
pencil pencils.

Feminine is marked by vowel [a] :

[tfal] ; [tafla]  
boy girl.

Genitive form is construed as follows :

N + Article + N.

When a noun is determined by another noun, it loses the article :

[ktè:β elweld] or : [lktè:β ta3elweld]  
(the) book the boy (the) book of the boy  
(the) book of the boy.

## Pronouns

*Personal pronoun* isolated from nominative form is strong pronoun - subject:

[μè:na : me  
nta: you (masculine)  
nti : you (feminine)  
hu:wwa : he  
hi:jja : she  
hna : we

ntuma : you (plural)  
ho:ma] : they.

They are used to signify emphasis :

[μè:na ndji]  
me I come

[ndji]  
I come.

*Affixed pronoun :*

It is contained inside the conjugated verb morphology :

### **INDICATIVE**

#### ***Unaccomplished tense***

[nè:kul : I eat  
tè:kul : you eat  
tè:kli : you eat (feminine)  
(feminine)  
jè:kul : he eats  
tè:kul : she eats  
nè:klu : we eat  
tè:klu : you eat  
jè:klu] : they eat

#### ***Accomplished tense***

[kli:t : I have eaten = I ate  
kli:t : you have eaten  
kli:ti : you have eaten  
  
kla : he has eaten  
klè:t : she has eaten  
kli:na: we have eaten  
kli:tu : you have eaten  
klè:w] : they have eaten.

### **IMPERATIVE**

[ku:l : eat  
ku:li : eat (second person, feminine, singular)  
ku:lu]: eat (second person, feminine and masculine, plural).

*Possessive Adjective Pronoun :*

[ktè:bi : my book  
ktè:bek : your book  
ktè:bu : his book  
ktè:bha : her book  
ktè:bna : our book  
ktèbkum: your book  
ktè:bhom]: their book.

Possessive can also be formed as follows :



N + Preposition [ta3] (de) + Personal Pronoun :

[lkelb tɛ:3ɛ]  
the dog of me  
my dog.

Or : N + djè:l (de) + Personal Pronoun :

[lkelb edjè:li]  
the dog of me.

*Clitics :*

V + Object Pronoun :

[jadrabni : he strikes me  
jaddarbak : he strikes you  
jadrabha : he strikes her  
jaddarbo: he strikes him  
jadrabna : he strikes us  
jadrabkum : he strikes you (plural)  
jadrabhom]: he strikes them.

V + Indirect Object Pronoun :

[ja3tè:ni : he gives me  
ja3té:lek : he gives you  
ja3té:lha : he gives her  
ja3té:lo: he gives him  
ja3té:nna: he gives us  
ja3té:lkum : he gives you  
ja3té:lhom] : he gives them.

*Relative Pronoun:*

Relative Pronoun Subject is: [lli] : who, which :

[ttfal lli jè:kul]  
the boy who eats

[lktè:b lli hna]  
the book which (is) here

Relative Pronoun Object is: [lli] : what, whose :

[hè:da lli cheft]  
this (is) what I have seen

[lweld lli ktè:bu hna]  
the boy whose book (is) here

*Interrogative Pronoun :*

Subject : [chku:n] : who?

[chku:n dja]  
who came?

Object : [wè:ch], [wè:chnu] : what ?

[wè:ch hè:da]  
what is it ?

[3lè:ch]  
why ?

[wi:n]  
where ?

[kifè:ch]  
how ?

[waqtè:ch]  
when ?

*Demonstrative Pronoun :*

It occurs after or before noun :

[hè:dattfal] = [ttfal hè:da]  
this boy

[hè:di ttafla]  
this girl

[hè:du nnè:s] = [nnè:s hè:du]  
these people

[hè:duma]  
these ones.

### *Comparative Pronoun :*

It is expressed by different forms :

[kter men]  
more than

[qall men]  
less than

[qadd, ki:f, ki, ki:ma]  
as.

Comparative can be included in adjective morphology :

[twè:l] ; [twal mennu]  
tall taller than him

[qsé:r] ; [qsar menni]  
short shorter than me.

The form « more than » is : [kter men].

The form « better than » is: [xé:r men].

Superlative form is seldom used in oral arabic: [lekbar]: the oldest.

### **Adjectives**

Adjective follows the noun and agrees with it in gender and number :

[uled sRé:r]  
a boy small  
(it is) a small boy

[tafla sRé:ra]  
a girl small  
(it is) a small girl

[tfo:la sRa:r]  
boys small  
(these are) small boys

[taflè:t sRa:r]  
girls small  
(these are) small girls.

These forms are attribute ajectives of noun sentence.

In epithet form, article is repeated :

[ttfal assRé:r]  
the boy the small  
the small boy

[lkelb elkbi:r]  
the dog the big  
the big dog.

Attribute of gerund form in noun sentence :

[uled da:xal]  
a boy going in  
a boy (is) going in.

Gerund form of the verb agrees with the noun in gender and number :

[dxal] ; [da:xal]  
he went in (he is) going in

[daxlet] ; [da:xla]  
she went (she is) going in.

[daxlu] ; [daxli:n]  
they went in (they are) going in.

Attribute adjective preceded by the auxiliaries: [iku:n] and [ra:h] :

[iku:n kbi:r]  
he is old

[tku:ni kbi:ra]  
you are old

[kè:n mli:h]  
he was good

[rah mli:h]  
he is good

[ra:hé mli:ha]  
she is good

[ra:hom xa:rdji:n]  
they are going out.

Noun sentence can imply adverbial form in adjective form :

[ddwa bezzè:f]  
drugs many  
drugs (are) numerous

[la:xor barra]  
the other outside  
the other (is) outside.

## **Prepositions and conjunctions**

They constitute closed-class item and introduce phrases or precedes noun or verb :

[b :with  
f : in  
l : to, at  
ta3, djè:l : of  
fo:q: upon, on  
m3a: with  
bè:ch: for  
3la]: on

The frequent conjunction is [w]: and. See before.

## **Verbs**

Arabic grammarians give the following definition of the verb: « it is a root to which is added a scheme ».

The verb indicates a process (verb root) and implies a tense : past, present and future <sup>151</sup>.

KTB = to write (root) :

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<sup>151</sup> IBN YACIS, T7, p. 4.

[kteb] = accomplished tense = past and preterit  
he has written

[jekteb] = unaccomplished tense = present and future  
he writes

Verbal system is essentially based upon the aspectual opposition :  
accomplished / unaccomplished, and the indicative and imperative form.

« accomplished aspect correspond to an act finished at the moment of its  
emission, and unaccomplished tense correspond to an act non finished at the  
moment of its emission »<sup>152</sup>.

The majority of verbs are compound of roots of three letters: LBS = to wear =  
accomplished = lbest = I wore ; unaccomplished = nelbes = I wear.

*Accomplished tense* is formed by addition of a vowel in the root and the  
suffixe :

[lbest : I wore  
lbest : you wore  
lbesti: you wore (feminine)  
lbes : he wore  
lebset : she wore  
lbesna : we wore  
lbestu : you wore  
lebsu] : they wore.

*Unaccomplished tense* is formed by addition of 2 phonemes (prefixe) to the  
root :

[nelbes : I wear  
telbes : you wear  
telbsi : you wear (feminine)  
jelbes : he wears  
telbes : she wears  
nelbsu : we wear  
telbsu : you wear  
jelbsu] : they wear.

*Future* is formed as the present unaccomplished tense or through :  
preposition do:q] + unaccomplished V :

[do:q nel3ab]

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<sup>152</sup> J.P. BONCKART, « Les modes d'expression de l'aspect dans le langage de l'enfant », Bruxelles, Dessart, Mardaga, 1976, p. 20.

I shall play.

*Imperative :*

[lbes : wear

lbsi : wear (feminine)

lbsu] : wear.

Plural first person of imperative is formed apart from :  
preposition [µejja] + unaccomplished V :

[µejja nella3bu]

let us play.

*Infinitive form does not exist in Arabic.*

It is formed through 3rd singular person conjugated in accomplished and unaccomplished tense :

[ka:na - jaku:nu]

he was he is = to be

When a verb is placed after another one, it is conjugated in unaccomplished tense :

[ra:h jezra3]

he has gone he sews

he has gone to sew

[ra:jah ité:h]

he is going to he falls

he is going to fall.

*Negative form* is constituted by the negation [ma]: + V + [ch] :

[ma: nèkulch]

I don't eat

[mè: klè:ch]

he has not eaten.

*Transitive verb* needs an object :

[jè:kul teffa:ha]

he eats an apple.

There are two *auxiliaries*:

[ra:h] : he is = Present tense only

[iku:n] : he is; [kè:n]: he was.

## **V- ARABIC - LANGUAGE MATERIALS : APHASIC AND CONTROL SUBJECT**

### ***V-1 Arabic Transcription Phonetic System***

#### **I - CONSONANTS**

[b : bilabial, plosive, voiced  
m : bilabial, nasal  
w : bilabial, constrictive  
f : labiodental, fricative  
t : dentoalveolar, plosive, non emphatic, unvoiced  
t : dentoalveolar, plosive, emphatic, unvoiced  
d : dentoalveolar, plosive, non emphatic, voiced  
d : dentoalveolar, plosive, emphatic, voiced  
r : vibrant, non emphatic  
r : vibrant, emphatic  
s : dental, constrictive, non emphatic, unvoiced  
s : dental, constrictive, emphatic, unvoiced  
z : dental, constrictive, voiced  
l : lateral  
n : dental, nasal  
ch : prepalatal, constrictive, unvoiced  
c : prepalatal, plosive, unvoiced  
dj : prepalatal, plosive, voiced  
z : prepalatal, constrictive, voiced  
j : mediodorsomedioalatal, constrictive  
k : postpalatal, unvoiced  
g : postpalatal, voiced  
x : postdorsopostvelar, unvoiced  
R : postdorsopostvelar, voiced  
h : pharyngeal, constrictive, unvoiced  
3 : pharyngeal, constrictive, voiced



h : laryngal, constrictive  
μ : laryngal, plosive  
q] : uvular.

## II- VOWELS

### phonology

### phonetics<sup>153</sup>

#### long vowels: V:

/a :/ = long, anterior, aperture maxima  
/i:/ = long, anterior, aperture minima  
/u:/ = long, posterior, rounded

[a:, è:, a:]  
[é:, i:]  
[o:,u:]

#### short vowels: V

/u/ = short, posterior, rounded  
/e/ = short, central

[o,oe, u] <sup>154</sup>  
[a, e]

**emphatic consonant: C ; emphasized vowel: V**

**nasalized vowel: V.**

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<sup>153</sup> In contact with posterior or emphatic consonant

<sup>154</sup> [oe] exists as a variant of u in contact with a pharyngal: hoess: feel; 3oess: controle.



- (6a) lhadra wè:lu NS\* art N adv  
the speech (is) nothing  
I couldn't speak.
- \* NS = noun sentence.
- (7a) rohna lessbé:tar vb prep art N  
we went PAST to the hospital  
We went to hospital,
- (7b) wè:na xa:jef NS coor PRO adjQ  
and me (I am) being afraid  
and me, (I was) afraid.
- (8a) 3ochré:n ju:m det N  
twenty days  
Twenty days,
- (9a) 3adek assah NS prep cli art N  
you have\* (is) the truth  
you are right.
- \* 3ad + cli pro = subject pro + to have.
- (10a) ba3d ra:ni barra prep aux adv  
after I am PREST outside  
After , I go out.
- (11a) ddwa bezzè:f NS art N adv  
the drugs (are) many  
(There were) many drugs.
- (11b) 3ta:wli ddwa vb cli art N  
they gave PAST me the drugs  
They gave me drugs,
- (12a) ba3dessebt ttni:n u lè:rb3a prep art N adjQ  
after the saturday the monday and the wednesday  
after saturday, monday and wednesday,
- (12b) kè:n ettbé:b mli:h aux art N adjQ  
he was PAST the doctor good  
The doctor was good.
- (12c) jo rabbé xrezt hamdullah prep N vb locA  
o my God I went PAST out thank God  
O my God! Thank God!

- (13a) kirohna lhi:k m3a wli:di adv vb adv prep N det  
 when we went PAST there with my son  
 When we went there with my son,
- (13b) rtè:hi:t chwiji:ja vb adv  
 I rested PAST a little  
 I rested a little,
- (14a) ddè:wni lextu vb cli prep N det  
 they took PAST me at his sister  
 they took me at his sister;
- (15a) ra:h zewdjha vb N det  
 he went PAST her husband  
 her husband went.
- (15b) felRa:ba nchu:f erra:ha prep art N art N  
 In the forest I see PREST the rest  
 In the forest, I rest.
- (16a) melli bdi:t wè:na naxdem prep vb coor PRO vb  
 since I began PAST and me I work PREST  
 Since I began PAST working,
- (16b) ra:h jaxxadmu: h vb vb cli  
 he went PAST they work PREST him  
 he went, they work.
- (17a) xamsechho:r felli:l marra det N prep art N N  
 five months at the night once  
 Five months, [it was] at night, once,
- (17b) wè:lu u meba3d xmasta:ch ju:m adv coor prep det N  
 nothing and after fifteen days  
 [there were] nothing, and fifteen days later,
- (17c) 3ochré:n ju:m sbé:ta:r det N N  
 twenty days hospital  
 [I spent] twenty days [in] hospital.

### *COOKY THEFT*

- (18a) nwa:der tè:3o NS N prep + poss pro  
 (these are) glasses of him  
 (It is) his glasses,

- (19a) *ttfal wattafla ra:ho* art N coor vb  
the boy and the girl went PAST  
the boy and the girl went,
- (19b) *welkursi 3la djè:l bè:nè:n* coor art N locP N  
and the chair because of bana:na  
and the chair, because of bana:na,
- (19c) *wella lga:to la:xor mé:h* conj art N det adv  
or the cake the other yes  
or cake, the other, yes,
- (20a) *bè:lè:k \* lkursi* NS adv art N  
be careful (there is) the chair  
be careful! (There is) chair!
- \* In Arabic, this adverb is translated into English as a verb.
- (21a) *lma ta:jha* NS art N adjq  
the water (is) falling  
The water (is) falling;
- (21b) *ukita:hat felward* conj coor adv vb  
and it fell PAST in the earth  
and when it fell dawn,
- (21c) *lemjè:h chammxo kullech* art N vb adv  
the waters damped PAST all  
waters damped everything.
- (22a) *3la kullihè:l* locA  
anyhow  
Anyhow,
- (22b) *lga:to 3a:lja\** art N adjq  
the cake (is) high  
cake is high,
- \* This adjective is given here in feminine while  
« lga:to » is a masculin morpheme.
- (22c) *fo:qha lpla:ka:R* NS prep cli art N  
upon her (is) the cupboard  
The cupboard (is) upon her.
- (22d) *wella ma:jaqderch iro:h* conj neg vb vb  
or it cannot PREST it goes PREST  
Or it cannot go.

- (23a) tba:s xla:sha N adv cli  
 dishes no more her  
 There are no more (cakes) in the dishes;
- (23b) kima ra:hat IRadwa adv vb art adv  
 when she left PAST to-morrow  
 when she left to-morrow...
- PICNIC (2-3)*
- (24a) tfal m3a tafla NS N prep N  
 (there is) boy with girl  
 (There is) a boy with a girl,
- (24b) ttmenja allo... allo... det adv adv  
 eight o' clock allo... allo...  
 it is eight o' clock, allo... allo...
- (24c) tfal da:xal ledda:r NS N adjQ art N  
 boy (is) going at the home  
 A boy (is) going home,
- (24d) qat m3a la:xor iqo:m N prep N vb  
 cat with the other it gets PREST up  
 a cat with the other getting up;
- (24e) wa:hed mennhom ba3d ra:djel det prep cli prep N  
 one of them then man  
 one of them, then a man,
- (24f) mra bè:nè:n qoffa N N N  
 woman bananas bag  
 a woman, bananas, a bag;
- (24g) doxxa:n felbi:t NS N prep art N  
 smoke (is) in the home  
 there (is) smoke at home;
- (25a) lè:la ta3arri:h adv prep art N  
 no for the air  
 no, it is that of the air;
- (26a) lahli:b welzornè:n art N conj coor art N  
 the milk and the newspaper  
 the milk and the newspaper.



(38a)	la:xor	barra	m3achchta	NS	N adv prep art N
	the other (is)	outside	with the rain		
	The other (is)	outside	with rain.		
(38b)	[ra:ho]	qa:bed	lpa:ra:ple		adjQ art N
	[he is]	catching	the umbrella.		
(39a)	[ra:hom]	xa:rzi:n			adjQ
	[they are]	going out.			
(40a)	kè:jen		erri:h		aux art N
	there is	PREST IMPERS	the wind		
	The wind is	blowing,			aux det
(41a)	kè:nu		wa:hed		
	they are	PREST IMPERS	one		
	there was	one man.			



### V-3 Control Subject Interlinear Transcription

#### HISTORY OF ILLNESS

- (1a) mardé twé:l jabeti NS N det adjQ prep N det  
 my illness (is) long my daughter  
 My illness (is) long, my daughter,
- (1b) wa:h twé:l twé:l NS adv adjQ adjQ  
 yes (it is) long long  
 yes, long, long
- (2a) wè:ch nahki lek interrog pro vb cli  
 what I tell PREST you  
 what can I tell you?
- (3a) kut ma3adi hattachi aux neg prep cli locA  
 I was PAST no I have PREST nothing  
 I had nothing,
- (3b) u kitoht toht coor adv vb vb  
 and when I fell PAST I fell PAST  
 and when I fell, I fell,
- (3c) welhamdullah coor loc A  
 and thank God  
 and thank God!
- (4a) wulè:di refdu:ni coor N det vb cli  
 and my sons took me in charge  
 And my sons took me in charge,
- (4b) lu:kè:n mèt:chulè:di condit prep adv N det  
 if no my sons  
 without my sons,
- (4c) lu:kè:n ra:ni roht fhè:li condit prep aux prep N cli  
 If I am PREST I went PAST at my way  
 I should have died.
- (5a) fi:jja Iqalb jabeti NS prep cli art N prep N det  
 In myself (is) the heart my daughter  
 I have a heart illness, my daughter.
- (5b) sstar ki jebdè:ni art N prep N cli  
 the pain when it begins PREST me  
 When the pain begins,
- (5c) maqollekchi jabeti neg vb prep N det  
 I don't tell PREST you my daughter  
 I can't tell you, my daughter,



- (13b) werra:setè:3é jetnimmel coor art N prep det vb  
 and my head gets PREST stiff  
 and my head gets stiff,
- (13c) hatta ndo:x adv vb  
 I feel PREST giddy  
 until until I feel giddy.
- (14a) wè:chedi:r interrog pro vb  
 what I do PREST  
 What (can) I do?
- (15a) nerqod u ki nno:d xla:s vb coor prep vb adv  
 I sleep PREST and when I get PREST up that's all  
 I sleep, and when I get up, that's all.
- (15b) chwi:jjá ndji:b ro:hé adv vb N det  
 a little I bring PREST myself  
 I feel a little better,
- (15c) weddwa ma:jaxté:né:ch coor art N neg vb  
 and the drugs don't leave PREST me  
 and the drugs don't leave me.
- (16a) 3adi nnqot NS prep cli art N  
 (there is) at me the drops  
 I have drops,
- (16b) wè:smo nsi:t interrog pro N cli vb  
 what's its name I have forgotten  
 what's its name? I have forgotten.
- (16c) hé xla:s adv adv  
 yes that's all  
 Yes! That's all.
- (17a) lu:kè:n ma:tebba3chi condit prep neg vb  
 if I don't follow PREST  
 If I didn't follow
- (17b) ro:hé xla:s N det adv  
 myself that's all  
 myself, that's all,
- (17c) jeddi:wni mi:jjet vb cli adjQ  
 they bring PREST me dead  
 they would bring me dead.

- (18a) lhamdullah  
thank God  
thank God! loc A
- (18b) 3adi lli:ku:n bi:jjja  
I have who is PREST with me  
I have who takes care of me. prep cli rel pro vb prep cli
- (18c) rabbé jxalli:hom  
God saves PREST them  
God saves them! N det vb cli
- (19a) jarabbé lhamdullah  
God thank God  
God, thank God! prep N det loc A
- (20a) lè:la lhaqq  
no the truth  
No, really! adv art N
- (20b) rabbé ja3té:hom wejmenni:hom  
God gives PREST them and saves PREST them  
God saves them! N det vb cli coor vb cli
- (21a) lu:kè:n mè:wlè:di  
if no my sons  
If (it was)n't my sons, condit prep neg N det
- (21b) lu:kè:n ma:ra:ni:ch  
if I am PREST not  
I shouldn't be condit prep neg aux
- (21c) ga:3ahna jabeti  
all here my daughter  
here at all, my daughter. adv prep N det
- COOKY THEFT*
- (22a) bel 3arbi:jjja  
in arabic  
In arabic? prep art N
- (22b) sa:hha jabeti  
yes, my daughter  
Yes, my daughter. adv prep N det
- (23a) hè:da tfajjal ta:la3  
this (is) a boy getting up  
This (is) a boy getting up NS dem pro N adjQ

(23b) 3la lkursi on the chair on the chair.	prep art N
(23c) ura:jah                    ité:h and is PREST going he falls PREST And (he) is going to fall,	coor vb vb
(24a) mèt:chèfu:hchi                    ga:3été:k they didn't see PAST him at all they didn't see him at all.	neg vb cli loc A
(25a) chu:f:wè:ch                    ra:jah jè:xod see IMPERAT what he is PREST going he takes PREST See what he is going to take;	vb interr pro adjQ
(25b) Imè:kla    ndonn the food I think PREST The food I think,	art N vb
(26a) wettafla    xtu            wa:qé:l and the girl his sister perhaps and the girl, his sister perhaps,	coor art N det adv
(26b) hatta hi:jja    ra:jha            ddi:r even she is PREST going she does PREST she also is going to do,	adv pro adjQ vb
(26c) ddi:r            kima    xu:ha she does PREST as her brother she does as her brother.	vb adv n cli
(27a) ujemmè:hum    teRsel and their mother washes PREST And their mother washes	coor N det vb
(27b) fel    mèt:3an in the ustensils the ustensils,	prep art N
(28a) welma            fa:jed and the water (is) overflowing and the water (is) overflowing.	NS    coor art N adjQ
(29a) tku:n            linodasjo she is PREST the inundation There is an inundation,	aux art N

- (30a) do:qetchu:fi xla:s prep vb adv  
 you will see FUT it's all  
 you will see, it's all.
- (31a) wè:chezi:d lek interr pro vb cli  
 what do I add PREST to you  
 What can I tell you more?
- PICNIC*
- (32a) ra:hom ra:jhé:n lelRa:ba aux adjQ prep art N  
 they are PREST going to the forest  
 They are going to the forest
- (32b) jetReddè:w vb  
 they lunch PREST  
 to lunch.
- (33a) lhè:l ra:h errbé:3 art N aux art N  
 the weather is PREST the spring  
 The weather ,it is spring.
- (33b) wessxa:na coor art N  
 and the heat  
 And heat;
- (33c) 3la bi:h jaxxardju locA vb  
 it is why they go PREST out  
 it is why they go out.
- (34a) lkelb dji3a:n NS art N adjQ  
 the dog (is) hungry  
 The dog (is) hungry,
- (34b) uhabb jaxodelhom ellham coor vb vb cli art N  
 and it wanted PAST it takes PAST them the meat  
 and it wanted to take them the meat
- (34c) lli felqoffa rel pro prep art N  
 which in the bag  
 which (is) in the bag.
- (35a) lkelb ra:jah jèkulelhom art N adjQ vb prep cli  
 the dog is PREST going to it eats PREST them  
 The dog is going to eat them
- (35b) kullelRda det art N  
 all the lunch  
 all the lunch.

- (35c) uki jawwaslo lelRa:ba coor adv vb prep art N  
 and when they arrive PREST at the forest  
 and when they arrive at the forest,
- (35d) isé:bo lehwa werri:h vb art N coor art N  
 they find PREST the air and the wind  
 they find nothing
- (35e) felqoffa prep art N  
 in the bag  
 in the bag.
- (36a) lkelb kla ga:3 art N vb adv  
 the dog has eaten PAST all  
 The dog has eaten all.
- FARMER*
- (37a) ra:ho jezra3 felgemh aux vb prep art N  
 he is PREST he sows PREST in the grain  
 He is sowing grain.
- (38a) hè:delfellè:h dem pro art N  
 this the farmer  
 This farmer,
- (38b) waqé:la xaddè:m felhawch NS adv N prep art N  
 perhaps (it is) worker in the field  
 (it is) perhaps a worker in the field
- (39a) hè:da bè:ch leklè:b wezzwa:wech dem pro prep art N coor art N  
 this in order to the dogs and the birds  
 this (is) in order to the dogs and birds
- (39b) mè:jèklu:ch Igemh µe...lè:la neg vb art N adv  
 they don't eat PREST the grain µe...no  
 don't eat grain,euh...no,
- (40a) dra hu:wwa jezzar3o N pro vb cli  
 maîze he sows it  
 maîze he sows it.
- (41b) wehna ra:hom ilaqqto coor adv aux vb  
 and here they are PREST they gather PRESTup  
 and here they are gathering up,

- (41c) jeddi:wha                    lelmarchi:jjè:t                    vb cli prep art N  
they bring PREST it to the markets  
they bring it to markets,
- (41d) we jwezz3o:                    ha                    coor vb cli  
and they distribute PREST it  
and distribute it.
- THIEF*
- (42a) hè:da da:har                    sarra:q                    dem pro adjQ N  
this appearing thief  
This is appearing a thief,
- (42b) jasraq                    fedda:r                    vb prep art N  
he steals PREST in the house  
he steals in the house
- (42c) kè:                    chi dhèb wella dra:ham                    **NS**                    aux prep N prep N  
(it is) there is PRESST some gold or money  
any gold or money,
- (43a) wejqo:l                    hatta wè:hed                    coor vb locA  
and he says PREST nobody  
and he thinks that nobody
- (43b) mè:chè:fu                    neg vb cli  
he didn't seePAST him  
has seen him;
- (43c) sè:3a cheddu:h                    lapoli:s                    prep vb cli art N  
but they caught PAST him the policemen  
but policemen caught him
- (43d) udo:q jahhakmu                    3li:h                    coor prep vb prep cli  
and they will juge FUT him  
and will decide for him
- (43e) lhabs                    3la ssré:qa                    art N prep art N  
the jail for the theft  
jail because of the thief.



GETTING UP

- (44a) [ra:ho] na:jed menn3a:s [aux] adjQ prep art N  
 [he is] getting up from the sleeping  
 [He is] getting up.
- (45a) ssè:3a sonè:t art N vb  
 the watch has rung PAST  
 The watch has rung,
- (45b) ufi:jjqa:tu coor vb cli  
 and it has awoken PAST him  
 and has awoken him;
- (46a) wej3a:wed jarqod coor vb vb  
 and he recommences PREST he sleeps PREST  
 and he sleeps again,
- (46b) 3la djè:lèlli shar èlli:la adv vb art N  
 because he set PAST up the night  
 because he set up late the night.
- (47a) jemmè:h nowwdè: tu 3a:wed N det vb cli adv  
 his mother has awoken PAST him again.  
 His mother has awoken him again.
- (48a) jerqod ... µe ... ino:d vb vb  
 he sleeps PREST ... µe ... he gets PREST up  
 He sleeps ... µe ... he gets up;
- (48b) wechrab bi:h fi:h coor vb adv  
 and he drunk PAST rapidly  
 and drunk rapidly
- (48c) qahhawtu N det  
 his coffee  
 his coffee.
- (49a) uki:ro:h lelxadma coor vb prep art N  
 and when he goes PREST to the work  
 And when he goes to work,
- (49b) izi:d inu:m vb vb  
 he addsPREST he sleeps PREST  
 he sleeps again,
- (50a) mè:chba3chi nnu:m neg vb art N  
 he didn't sate PAST the sleeping  
 he didn't sate sleeping.

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