MONOGRAPHIE DE L'AGRAMMATISME EN LANGUE ARABE

PRÉFACE

Le présent travail de Nacira ZELLAL met l'accent sur deux faits d'importance :

1- une description rigoureuse des troubles du langage ne peut être menée que par des personnes en contact quotidien avec le patient qui produit un discours pathologique ;
2- une simple observation des corpus de sujets pathologiques ne peut inspirer aucune étude sérieuse si l'analyste ne participe pas directement à la rééducation.

Ainsi, ce travail ne confirme pas la plupart des hypothèses élaborée ici et là. Il apporte les preuves que l'agrammatisme n'est qu'un symptôme inscrit dans le syndrome global qu'est l'aphasie.
Elle ne croit pas non plus aux conclusions qu'on peut tirer en traçant des courbes aphasiographiques, car elle démontre l'existence d'une psychologie du phonème, de la structure phrastique et du texte. Elle relativise donc la pertinence des aphasiogrammes à partir du constat que, passé à des moments et dans des circonstances différents, un même bilan aboutit à des tracés de courbes différentes.
Après des années de travail de rééducation, Nacira ZELLAL souligne le fait que l'aphasie et ses déficits se retrouvent dans tous les troubles de la Communication, y compris fonctionnels et bénins et que la différence c'est le point et la profondeur de la rupture dans la chaîne des composants de la communication.

On sent, dans son point de vue, une mise en question du comportement des psychologues qui, tous, d'une manière ou d'une autre, se sont évertués à reprendre les concepts neurologiques, notamment ceux liés à la dissociation automatico-volontaire, au lieu de considérer le fait langagier comme impliquant le langage comme une rélité inscrite dans une structuration spatio-temporelle. Or, le langage, activité acquise, repose sur des automatismes verbaux. L'erreur dans la littérature, selon Nacira ZELLAL, paraît résider dans ce que les psychologues ont mal interprété les automatismes verbaux.

Pour conclure, je souligne la capacité de Nacira ZELLAL de se conformer, dans son approche de l'agrammatisme en langue arabe, aux principes théoriques et aux étapes de la méthodologie du Cross Linguistic Aphasia Study établis par les auteurs de la démarche respectée pour 14 langues (John Benjamins Publishing Company, Philadelphie, USA, 1990), tout en les remettant en cause lorsqu'ils interprètent d'un point de vue psycholinguistique les faits agrammatiques.

Des corpus en langue arabe ont été transcrits de façon très minutieuse pour la réalisation de cette étude.

Les travaux de Nacira ZELLAL consacrent l'idée que terrain clinique et recherche théorique sont deux réalités indissociables. Je rejoins ce point de vue et suis persuadé qu'une meilleure interprétation psycholinguistique de la notion d'automatisme permettra à nos différentes tentatives de rééducation d'aboutir plus rapidement et plus régulièrement à l'amélioration et à la récupération des fonctions intellectuelles.

Nacira ZELLAL vient donc de réaliser un travail qui se révèlera un outil indispensable et fondamental en neuropsycholinguistique.

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P L A N

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.

1-This research has been carried out in the frame of the CMEP Project (Algiers and Toulouse Le Mirail Universities, 91 MDU 177).

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 hipothesis of such a clinical picture. And all aphasics suffer from grammatical disorders! See Chapter « Discussion » , p. .

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 rehabilited 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 (1)
sixty five years

civil status: metzu:wwedj..ħdè: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 (2), 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.

Written comprehension
100%.

1- See trancription system adopted, p.

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

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 (1)

Reading:

words:

maison:+
moi:+
bol: bi
garpon: arthric impairments
obscurité: obtiri
parents:+
que:+
transport: trankfor
ésolé:+
verger:+
distraction: diskrano
cheval:+
hélice:+
catégorie: kalifun
école:+
se: +
croix: cro
chepal:+
fougère:+
sévère:+
congélateur: kalat
garçon:+
vous:+
chameau:+

1- 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.

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: mãchar
saw

- fire: chadjra
tree

- he sleeps: jertè:ħ
he rests

- he swims: gestual correct answer

- lamp: d□aww
light

- thermometer: gestual correct use.
50%.

Written questionary

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 synthetized 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 inA.P., which was not evidenced by copy task (see before p.).
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 questionary, lexical disponibility, apraxias tests.
1- Sentence or spatiotemporal morphosyntaxic complex structures are damaged in every task implying a **propositional programmation** in comprehension and expression;
2- in comprehension tasks, sentence programmation 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:

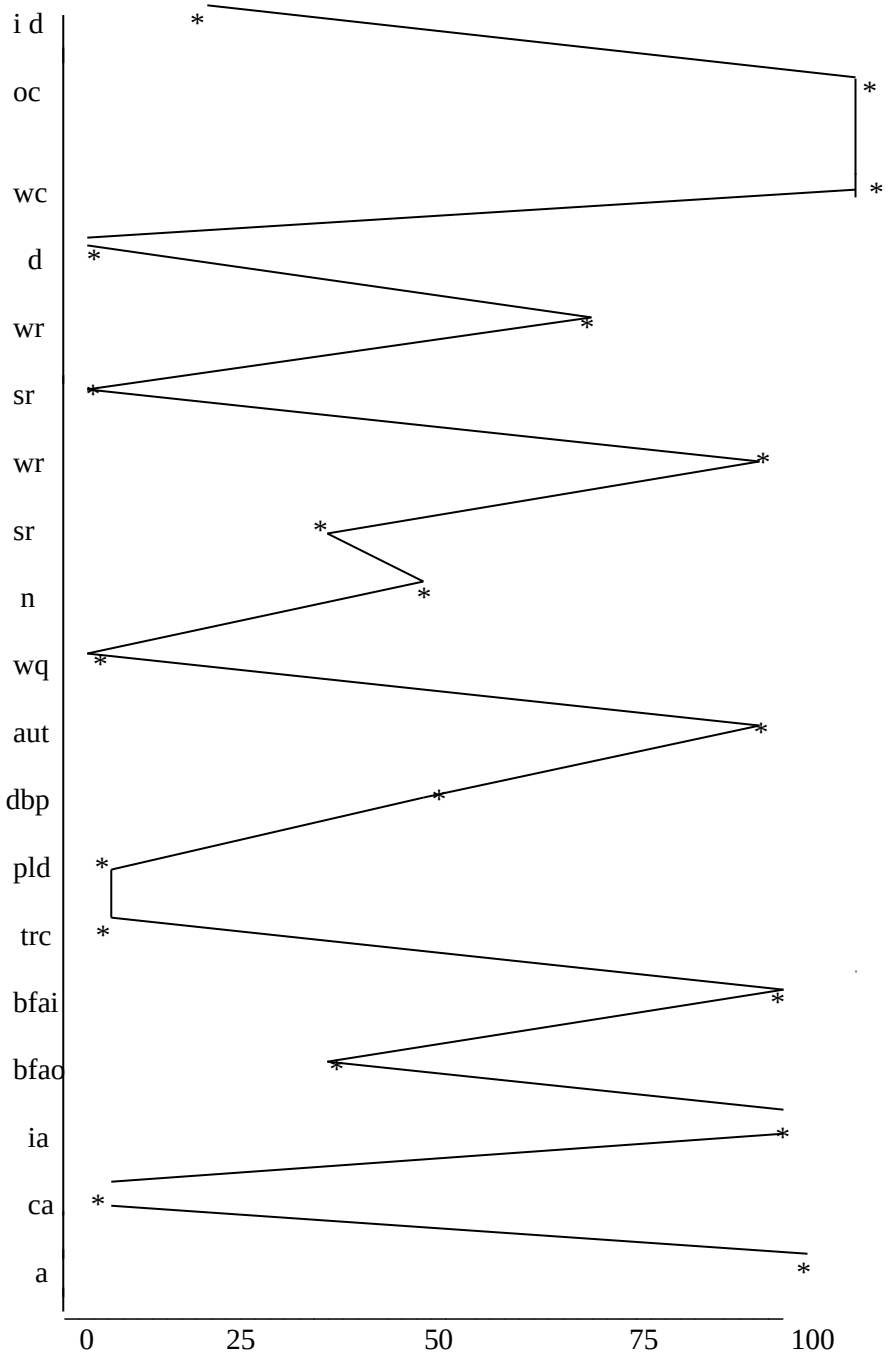
1- existence of an agrammatism, essentially expressive, thus of Broca type, associated with textual alexia-agraphia (agraphia due to a motor deficit).

2- disorders are more important in tasks involving a high degree of CONDUCTIBILITY, i.-e. involving an EFFORT production in oral and written programmation, 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 interwiew: 20%
- oral comprehension: 100%
- written comprehension: 100%
- dictation: 0%
- word reading: 69%
- sentence reading: 0%
- word repetition: 93%
- sentence repetition: 30%
- naming: 50%
- written questionary: 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



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	***Definite***	36	83	0	0	7	15	43
	Indefinite	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	***Affixed***	32	80	05	17	02	05	40
	Autonomous	03	100	0	0	0	0	03
	Clitics	12	66	05	30	0	0	17
Auxiliaries	***kè:n***	02	80	01	20	0	0	03
	ra:h	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 artcles out of 43 produced in all.

Remark

In arabic, it is difficult to assert wether 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 preceds:

[bẽt]
une fille - fille
a girl girl

[l bẽt]
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 [el]
the :

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

[t□t□fal (1) m3a□ t□a□fla (33a)]
le garçon avec fille
the boy with girl

[lqoffa kbi:r (33b)] instead of: [lqoffa lkbi:r (2)]
le couffin grand le couffin le grand
le grand couffin, the big bag.
the big bag

[3øchré:n ju:m sbé:t□a□:r□ (17c)]
vingt jours hôpital
twenty days, hospital

[xmast□a□:chẽju:m (17b)]
quinze les jours
quinze jours
fifteen days.

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

[nwa:der tè:3o (18a)] instead of: [nnwa:deretè:3o]
lunettes à lui les lunettes

1- See consonantic assimilation when it comes to an article that determines a noun beginning with a « solar » consonant, Chapter , p.
2- See § « Adjectives », Chapter p.

ses lunettes the glasses.
his glasses,
See again Chapter «Possessive pronouns », hereafter p. .

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 »:

[wa□ħd er□r□a□b3é: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

[r□a□bbé (12c)]
my God

[zewdjha (15a]
her husband

[ro:ħo (28b)]
his person

[bi:tu (36a)]
his house.

Note that the form: [ddè:wni lextu (14a)]
ils m'ont emmené chez sa soeur
they took me at his sister,
doesnot consist in a substitution process of possessive pronoun: [u] in [xtu] « his sister », to that of: [i] in [xti] « my sister ». In Arabic, this substitution has a semantic value and not formal, it has an affective meaning.

b) The form: Noun + Preposition [ta□3]
of:
[nwa:d□a□r□ tè:3o (18a)]
his glasses.

c) 7 determinants expressing quantity:

[wa□ħd er□r□a□b3é:n ju:m (1b)]
quelques les 40 jours
some 40 days

[3øchr□é:n ju:m (18a)]
20 jours

[xa□msechho:r□ (17a)]
5 mois
5 months

[xmast□a□:ch ju:m (17b)]
15 jours
15 days

[wa: ħed mennhom (24e)]
un de eux
l'un d'entre eux
one of them

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

[waħda 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:t□o la:xor□ (19c)]
le gateau l'autre
l'autre gateau

[waħda: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:t□o 3a□:lja (22b)] instead of : [3a□:li]
le gateau (est) haute haut
the cake (is) high high (given in feminine).

[lma t□a□:jħa□ (21a)] instead of: [ta:jaħ]
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: ħed (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:

[t□t□fa□l wet□t□a□fla r□a□:ho...(19a)] instead of: [... r□a□: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):

[lha□dr□a□ 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□ bar□r□a□ (38a)]
l'autre (est) dehors
the other (is) outside.

Concerning qualitative approach of adjective notion, see Chapter IV, p.74).

Pronouns

a) Affixed subject pronoun

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

[r□oħna (7a)]
nous sommes allés
we have gone

[r□a□:ħ (15a)]
il est allé
he has gone.

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

[lma t□a□:ħat (21 a-b)] instead of: [lma t□a□:ħ]
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:t□a□ dr□a□b (28b)] instead of: [d□arbet]
charrette a frappé elle a frappé
has hit has hit

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

[wa□ħda r□a□:ħ (34a)] instead of: [ra:ħat]
une est allé une est allée
one has gone one has gone

[mr□a□ 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:

[r□a□:ħ jaxxa□dmu:h (16b)] instead of: [ja□xdem]
il est allé ils le travaillent il travaille
il est allé le travailler he works.
he has gone to work it

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

In this case, singular is replaced by plural.

[t□t□fa□l wat□t□a□fla r□a□ho] instead of: [r□a□: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:
[r□a□:ho] qa□:bed (38b)
[il est] tenant
[he is] catching

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

b) Strong or autonomous pronoun

It preceds 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 preferentialy 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 na□xdem (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:ré:t□a□ d□r□a□b r□o:ħo (28b)] instead of: [ro:ħħa□]
charrette a frappé lui-même elle-même
a waggon has hit itself itsef.

« Charrette » is in feminine in Arabic.

[lga:t□o 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

[r□a□: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				
	N	%	Sub	%	Om	%	Obligatory cont.
Total pronoun	03	100	0	0	0	0	03
Affixed pronoun	32	80	6	17	02	6	04
Clitic	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: ħed (41a)] instead of: [kè:n...]
they were one he was.

We observe once the reverse case:

[t□t□fa□l wat□t□a□fla r□a□:ho (19a)] instead of: [...r□a□: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 af agrammatism clinical picture:
[s□s□ba□ħ... ħha:mi:d... mẽba□3dassbé:t□a□:r□... (4a - b)]
le matin Hamid plus tard l'hôpital
the morning... Hamid...after... the hospital

[... mr□a□□... 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 t□a: ħa□t (21b)]

[cha:ré:t□a□ d□r□a□b (28b)]

[cha:r□é:t□a□ jeddi (29a)]

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

[wa□ħda r□a□: ħ (34a)]
une il est allé
one has gone. (One is used here in Arabic in feminine).

These confusions concern gender: feminine = masculine.

[r□a□: ħ jaxxa□dmu (16b)] instead of: [ja□xdem]
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 ba□r□k (3a)]
par là c'est tout
here only

[3la kulli ħè: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 componants of noun sentence, see further § dealing with adjective treatement.
Eg.:

[lha□dra 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
thre are many drugs

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

Prepositions

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

[ba□3d (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 r□a□bbé (12c)] instead of: [ja r□a□bbé]
ô mon Dieu
o my God!

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

[3 chr□é:n ju:m sbé:t□a□:r□ (17c)] instead of: [3 chr□é:n ju:m fessbé:t□a□:r□]
20 jours hôpital 20 jours à l'hôpital
20 days hospital 20 days at the hospital
[da:xa□l edda:r (24c)] instead of: [da:xa□l 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 independantly:

[jeddihom]
il les emporte
he takes them.

Conjunctions

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

Eg. in A.P:

[lkursi]

[lga:t□o] = « lunar » consonants

[leħdè:ch]

[ssbé:t□a□:r□]

[ddwa] = « solar » consonants.

[chchor□t□é: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

[t□a□fla (33a)] instead of: [t□t□a□fla]
fillette la fillette
girl the girl

[sbé:t□a□:r□ (17c)] instead of: [ssbé:t□a□: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 maïs le camion
lorry the truck the lorry.

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

[3øchré:n ju:m sbé:t□a□:r□] instead of: [f essbé:t□a□: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	tè:3o (18a)]	instead of:	[nnwa:der	ẽtè: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:deretè: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:t□a□: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					**Indefenite**				
	Total	**Om**	**%**	**Sub**	**%**	**Total**	**Om**	**%**	**Sub**	**%**
A.P	36	7	19.4	0	0	21	0	0	0	0
C.S	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 p. , 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 + ta□3 « of » + Possessive Pronoun mark, occurs:

[r□r□a□:s ẽtè: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
A.P	Noun+Poss. Pron.	10	50	
	N +ta3 + Poss. Pron.	1	5	
	N + the other	1	5	
	Numer.+N	8	40	
S.C	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 (see Table p.).
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	%
A.P	Adj.	17	94	13	76	1	6	3	18
	---------	----------	--------	----------	-------	--------	--------	--------	--------
	Adj.	1	5,5	0	0	0	0	1	100
C.S	Adj.	0	0	10	100	0	0	0	0
	--------	----------	--------	----------	-------	--------	--------	--------	-------
	Adj.	0	0	0	0	0	0	0	0

ADJECTIVE TABLE

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

C.S			
	V b or ra:h aux. +Qadj	ttfa:jjel ta:la3 (23a)	mardé twé:l (1a)
	jeddi:wni mi:jjet (17c)	hè:da da:har (42a)	twé:l... twé:l (1b)
	ra:ho qa:bed (38b)		b3é:d 3li:k (5d)
			lkelb dji:3a:n (34a)
0%	25%	25%	50%

Pronouns

a) Affixed pronouns

It is, in A rabic, 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 p. .

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.(see p.):

[t□a□: ħa□t] instead of: [t□a□: ħ]
she has fallen he (it) has fallen

[d□r□a□b] '' [d□a□rbet]
he has hit she has hit

[jeddi] '' [teddi]
he takes she takes

[r□a□: ħ] '' [r□a□: ħat]
he has gone she has gone

[idi:r] '' [ddi:r]
he does she does

[kè:nu] '' [kè:n]
they were he was.

Gender is therefore less resistant than number in subject-verb agreement, when the verb is used (in which is included the pronoun), 5 times out of 33 productions, i.e. in 15% of cases.

The affixed pronoun is resistant in A.P.

b) Autonomous pronoun

Autonomous pronoun is seldom used: out of 58 pronouns in all, there are 3, i.e., in 6% of cases. They are correctly expressed in the agreement with the conjugated verb. The patient prefers the fist singular person. He marks the emphasis on his own person:

[µè:na dji:t (2b)]
me I have come

[wè:na na□xdem (16a)]
and me I work

[wè:na xa□:jef (7b)]
and me (I am) being afraid.

C.S employs once [hu:wwa] (35a) and once [hi:jja (26b)]
he she.

Autonomous pronoun is resistant in A.P, however seldom it may be used.
There is no relative pronoun in A.P and we notice 2 ones in C.S:

[lli: ku:n (18b)]
who is

[lli f el qoffa (42c)]
which (is) in the bag.

One interrogative pronoun only is used by A.P:

[wè:ch (37a)]
what?

And one demonstrative:

[chu:f hè:da (37b)]
look this one.

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

[wè:ch (2a; 14a; 25a; 31a)]
what?

[wè smo (16b)]
what's its name?

[hè:dè:k (7b)]
that one

[hè: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□:s□hom]
plus her plus them

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

[m3a□hom (27b)] '' [m3a□:h]
with them with him

- gender:

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

[r o: ħo (28b)] ‘’ [r o: ħħa]
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**		**Context**	**Corr**	**Incorr**		**Context**	**Corr**	**Incorr**	
			om	**sub**			**om**	**sub**			**om**	**sub**
A.P	40	33	0	5	3	3	0	0	17	12	0	5
C.S	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 assessement.
[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 jaħħa kmu3li:h (43d)]
they will judge him.

VERB TABLE

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

[r□oɦna (6a)]
we have gone

[jaxxa□dmu (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

[ba□r□r□a□ (10a; 38a)]
outside

[wè:lu (6a)]
nothing

[bezzè:f (11a)]
many.

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

[ɦa□mdulla□h 12c)]
thank God!

[ça va (2b)]
that's fine

[3la kulliħè: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 equall 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:

[ba□3d (10a; 12a)] instead of: [mẽba□3d]
after
- through phonemic error:

[jor□a□bbé (12c)] instead of: [jar□a□bbé]
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:t□a□:r□ (4b; 17c)] instead of: [fessbé:t□a□:r□ ; lessbé:t□a□:r□]
at the hospitaf to the hospital

[da□:xa□l dda:r (24c)] instead of: [da□:xa□l ledda:r]
going (in) the home going (in) at the home.

The conjunction is resistant in A.P.
There are 7 coordinating conjunctions correctly emitted. They relate once only to « or » [wella], employed twice.

C.S uses twice the preposition [do:q] which forms the future tense.

II-3 Distribution of Grammatical Categories in the texts: Narrative types

Tables III and IV show distribution of grammatical in the different narrative tasks in both agrammatic and control subjects:

In A.P, the illness history makes it possible to collect the highest morpheme rate (101). Substitutions are the least frequent: 98 in 4WB, then 48 in cooky theft.

Substitutions are the less frequent: 5.18 in 4WB, and 8 in cooky theft.

II-4 Distribution of the Items of Major Lexical Class

Tables V and VI show how the items of major lexical are distributed in the different tasks in both A.P and C.S:

III - TABLE OF NARRATIVE TYPES IN A.P

	Hystory of illness			**Cooky theft**			**4 W-B**		
	#	**-**	**[ ]**	**#**	**-**	**[ ]**	**#**	**-**	**[ ]**
déf.	16	0	1	12	1	0	16	6	0
Art.									
indéf.	3	0	0	1	0	0	17	0	0
Other determ.	12	0	0	2	0	0	6	0	0
q adj.	0	0	0	0	0	0	1	0	0
Q adj.	4	0	0	2	12*	1	8	1	0
aff.	14		0	6	1	0	12	4	2
Pro. auton.	3	0	0	0	0	0	0	0	0
clit.	4	0	0	2	2	0	6	3	0
Aux.	4	0	0	0	1	0	2	1	2
Vbs.	13	2	8	5	1	5	10	3	13
adv.	5	0	0	0	0	0	0	0	0
Loc.									
prep.	0	0	0	1	0	0	0	0	0
Conj.	3	0	0	4	0	0	0	0	0
Prep.	13	3	1	4	1	0	13	1	1
Adv.	7	0	0	8	0	0	6	0	0
Neg.	0	0	0	1	0	0	1	0	0
T	**101**	**5**	**10**	**48**	**8**	**6**	**98**	**19**	**18**

* 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		
	#	-	[ ]	#	-	[ ]	#	-	[ ]
Def.	8	0	2	6	0	2	30	0	0
Art. Indef.	1	0	0	0	0	0	1	0	0
Other det.	16	0	0	3	0	0	2	0	0
q adj.	0	0	0	0	0	0	0	0	0
Qadj.	5	0	0	3	0	0	2	0	0
aff.	31		0	10	0	0	32	0	0
Pro. aut.	0	0	0	1	0	0	1	0	0
clit.	13	0	0	3	0	0	11	0	0
Aux.	2	0	0	1	0	0	2	0	2
Vb.	31	0		10	0	0	33	1	0
adv.	5*	0	0	1	0	0	2	0	0
Loc. prep.	0	0	0	0	0	0	0	0	0
Conj.	7	0	0	4	0	0	13	0	0
Prep.	24	0		5	0	0	18	0	0
Adv.	17	0	0	5	0	0	9	0	0
Neg.	10	0	0	1	0	0	2	0	0
T	**170**	**0**	**2**	**53**	**0**	**0**	**158**	**0**	**2**

V- MAJOR LEXICAL CLASSES IN A.P

	Noun token/ type	Verbs token/type	Adjectives token/type	N/V (on token)	N/Adj (on token)
Hist.of illn.	32/24 1.3	16/15 11	4/4 1	2	8
Cooky theft	13/11 1.2	6/6 1	2/2 1	2.1	6.5
Picnic	15/14 1	1/1 1	1/1 1	15	15
Farmer	15/14 1	3/3 1	0/0 0	*	0
Thief	5/4 1.2	1/1 1	1/1 1	5	5
2-8	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)
Hist. of illn.	30/19 1.5	35/32 1	2/2 1	0.8	15
Cooky theft	12/12 1	11/11 1	5/4 1.2	1	2.4
Picnic	14/10 1.4	9/9 1	3/3 1	1.5	4.6
Farmer	10.9 1.1	9/9 1	0/0 0	1.1	*
Thief	7/7 1	6/6 1	0/0 0	1.1	*
Getting up	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 tendancy 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 p.).

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 adressed 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 » p.).

They occur twice:

[r□a□: ħ ja□xxa□dmu (16b)]
il est allé ils travaillent
il est allé travailler
he has gone to work

[ma:jaqderch ir□o: ħ (22d)]
il ne peut pas il part
il ne peut pas partir
he cannot go.

While in C.S, we have 7 infinitives:

[r□a□:ja□ħ ét□é: ħ (23c)]
he is going to fall

[r□a□:ja□ħ jè:xod (25a)]
he is going to take

[r□a□:jħa ddi:r (26b and c)]
she is going to do

[r□a□:jħé:n jetReddè:w (32a-b)]
they are going to eat

[r□a□:ja□ħ 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, wether it is the noun or the verb sentence, are:

1- absent:

[r□a□: ħ zewdjha (15a)]
he has gone her husband
her husband has gone

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

2- refer to direct object complements:

[3t□a□:wli ddwa (11b)]
they gave the drugs

[nchu:fer□r□a□: ħa□ (15b)]
I see the rest
I rest.

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

[d□r□a□b r□o: ħo (28b)]
he has hit himself

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

3- to cicumstancial location complement:

[r□oħna lessbé:t□a□:r□ (7a)]
we have gone to the hospital

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

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

[felRa□:ba nchu:fer□r□a□:ħa□ (15b)]
in the forest I rest

4- to circumstancial time complement :

[nr□o: ħo felli:l (30a)]
we go in the night

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

5- to circumstancial manner complement:

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

[xr□a□žt ħa□□mdulla□h (12c)]
I went out thank God!

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

6- or to circumstancial quantity complement:

[rtè: ħi: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 na□xdem (16a)]
depuis que j'ai commencé et moi je travaille
since I began and me I work
since I began working

[kit□a□: ħa□t lemjè:h felµa□r□d□ cha□mmxo 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.:

[kũt ma:3ã□di ħa□tta chi uki t□oħt t□oħt (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 r□a□:ni r□oħt fħè: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

[s□s□t□a□r□ kijebdè:ni maqollekchi jabẽti (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 r□o: ħ l et□t□bé: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	
A.P	Hist. of illness	15	11	73%	4	27%
	Cooky theft	6	3	50%	3	50%
	4WB	13	7	53%	6	47%
C.S	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 (see Chapter p.), 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 jaħħa□kmu 3li:h (43b)]
ils vont le juger
they will djuge him;

- Verb [r□a□: ħ] signifying the future + Verb:

[r□a□jħa□ 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.**
r□a□:ni *instead of*: kũt (10a)	r□a□ħat *instead of*: t□□r□□o:ħ d□r□a□b *instead of*: jad□r□ob (28b) kè:no *instead of*: iku:nu (41a)		mè:chè:fu *inst.of*: mè:jchu:fu (43b) chr□a□b *instead of*: jechrob (48b)
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 p. 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 :

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

	A.P		**C.S**	
Texts	Total of morph.	Total of phr. (syntagmes)	Morphemes	Phrases (syntagmes)
Hist. of illness	94	21	183	46
Cooky theft	52	10	60	17
Farmer	19	6	41	9
Thief	20	6	33	8
Picnic	45	12	58	14
2-8	45	13		
Getting up			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 programmation in both oral and written tasks. Even sentence repeatition is difficult in A.P.

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

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 spcifications than verbal ones) exists:

[µè:na dji:t (2b)]
me I came

[3t□a□:wli ddwa (11b)]
they gave me the drugs

[wa: ħed mennhom r□a□:h mli: ħ (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, redundance, syntactic expantional 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-syntaxicframe, 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 othors 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, p.

SCHWARTZ and SAFFRAN (1983) interprete 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 othors 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 p. .
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 MONORHEMATIC UTTERANCES	1'- EXPANTIONAL CONSTRUCTIONS AND COMPLEX SENTENCES
2- ORDER AND FUNCTION OF MORPHEMES	2'- REDUNDANCE AND SYNTACTIC 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	4'- AGREEMENT IN GENDER ADJ / N

+

ADJ; ADV; LOCA; PREP; COOR « AND ».

First observation : in a re-definition of communication act, which is fundamentally compromized 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 assessement.
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 automatisms are preserved: see A.P neuropsychological scores: automatisms: 100%; paradigmatic lexical disponibility 0%; text reading and comprehension: 0%; dictation:0%; sentence reading: 0%.
Marked structures are thus the voluntary part of language assessment. 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 seaze 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 psycholinguitic** 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 p.) = **« 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, p.).

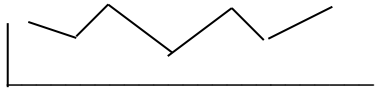
Conclusion

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 percieve external world through his words, his own manner to construct gestalts, to create his language to establish relations with others. « **Intravariabilities** » and « **circumstancial 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 automatisms are prealably voluntary activities, submitted therefore to verbal control acquisition: they must not be confused with neurologic reflex notion, eg. child suction reflex**.

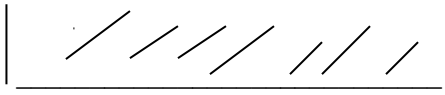
The concept of **anosognosia** has to be revised through these remarks: patient residual possibilities of communication (see bolow) are voluntary and **conscious strategies:** since the disruption between tasks proposed and the answers is never total, it is **specific**; patient can regularly analyze 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 differenciates aphasia from demencia.

Other perpective of researches: from a linguistic point of view and since it is quite impossible to interprete 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 differents 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 « circumstancial » 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 reeducation?

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 psycholinguitic interpretation.

IV- ARABIC GRAMMATICAL SKETCH

Syntax and word order

Arabic language has verbonominal opposition.

Verbal sentence:

[t□t□fa□l jè:kul]
a boy eats
S V

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

[t□t□fal 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 preced the subject:

[jel3a□b et□t□fa□l]
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 elmr□a□]
the boy the woman
the boy (of) the woman
(it is) the boy of the woman
N N

[ko:r□a□ 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 s□Ré:r]
the boy who (is) here (is) small
N Rel pro Adv Adj

[luled es□Ré: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 Ra□dwa] = [Ra□dwa jè:kul]
he will eat to-morrow to-morrow he will eat
V Autonomous Expansion 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

[ħa□tta] + V
until

[ħa□tta 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 d□a□r□bo]... [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; [ba□s□s□a□ħ] : 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

[lbẽt]
the girl

[lweld]
the boy

[lké:r□a□: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:

/lqa□ma□r□/
[qa□ma□r□]
the moon

/l chems/
[chchems]
the sun.
Here is the « lunar » and « solar » consonants lists:

Lunar consonants [l] (le, les) + C:

[w [lwerd : the flower
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:t□o : the cake
x lxobz : the bread
R lRa□:ba : the forest
h leħhdè:ch (1) : (the) 11 o'clock
3 l3é:n : the eye
q lqoffa : the bag
h lha□dr□a□ : the speech
µ] lµar□d□] : the earth.

Solar consonants [l] + C = CC:

[t [ttmenja : the 8 o'clock
t t□t□bé:b : the doctor
d ddwa : the drug
d□ d□d□a□r□b : the stroke
s ssebt : the saturday
s□ s□s□ba□ħ : the morning
z zzi:n : the beauty
ch chchems : the sun
z žžornè:n : the newspaper
r rri:h : the wind
r□□ r□r□a□:s□ : the head
l lli:l : the night
n nnu:m : the sleeping
c] čči:na] : the orange.

Definite article is repeated before epithet adjective:

[t□t□fa□l lkbi:r r□a□:ħ]
the boy the old has gone away
the old boy has gone away.

Indefinite article is not expressed:

[bẽt]
girl (without article)
a girl

[bnè:t]
girls.

Nouns

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

Singular: [lbẽt]
the girl

Plural: [lebnè:t]
the girls.

1- In Arabic, numeral adjective is preceded by definite article.

Plural is comprised in the internal morphology of the noun:

[t□a□:bla] ; [twa:bel]
table tables

or it is marked by the form [è:t]:

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

Feminine is marked by vowel [a]:

[t□fa□l] ; [t□a□fla]
boy girl.

Genitive form is construted as follows:

N + Article + N.

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

[ktè:b elweld] or: [lktè:b ta□3elweld]
(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:	***Accomplished tense:***
[nè:kul : I eat	[kli:t : I have eaten = I ate
tè:kul : you eat	kli:t : you have eaten
tè:kli : you eat (feminine)	kli:ti : you have eaten (feminine)
jè:kul : he eats	kla : he has eaten
tè:kul : she eats	klè:t : she has eaten
nè:klu : we eat	kli:na: we have eaten
tè:klu : you eat	kli:tu : you have eaten
jè:klu] : they eat	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 tè:3é]
the dog of me
my dog.

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

[lkelb edjè:li]
the dog of me.

Clitics:

V + Object Pronoun:

[ja□d□r□a□bni : he strikes me
ja□d□r□a□bak : he strikes you
ja□d□r□a□bha : he strikes her
ja□d□r□a□bo: he strikes him
ja□d□r□a□bna : he strikes us
ja□d□r□a□bkum : he srikes you (plural)

ja□d□r□a□bhom]: he strikes them.

V + Indirect Object Pronoun:

[ja□3t□è:ni : he gives me
ja□3t□è:lek : he gives you
ja□3t□è:lha : he gives her
ja□3t□è:lo: he gives him
ja□3t□è:nna: he gives us
ja□3t□è:lkum : he gives you
ja3té:lhom] : he gives them.

Relative Pronoun:

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

[t□t□fa□l 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?

[wa□qtè:ch]
when?

Demonstrative Pronoun:

It occurs after or before noun:

[hè:da□t□t□fa□l] = [t□t□fa□l hè:da]
this boy

[hè:di t□t□a□fla]
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

[qa□ll men]
less than

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

Comparative can be included in adjective morphology:

[t□wè:l] ; [t□wa□l mennu]
tall taller than him

[qs□é:r□] ; [qs□a□r□ 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 s□Ré:r□]
a boy small
(it is) a small boy

[t□a□fla s□Ré:r□a□]
a girl small
(it is) a small girl

[t□fo:la s□Ra□:r□]
boys small
(these are) small boys

[t□a□flè:t s□Ra□:r□]
girls small
(these are) small girls.

These forms are attribute ajectives of noun sentence.

In epithet form, article is repeated:

[t□t□fa□l a□s□s□Ré: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:xa□l]
a boy going in
a boy (is) going in.

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

[dxa□l] ; [da:xa□l]
he went in (he is) going in

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

[da□xlu] ; [da□xli: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: ħ]
he was good

[r□a□:h mli: ħ]
he is good

[r□a□:hé mli: ħa□
she is good

[r□a□:hom xa□:r□dji:n]
they are going out.

Noun sentence can imply adverbial form in adjective form:

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

[la:xor□ ba□r□r□a□]
the other outside
the other (is) outside.

Prepositions and conjunctions

They constitute closed-class item and introduce phrases or preceds 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 p.

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 (1).

1- IBN YACIS, T7, p. 4.
2- J.P. BONCKART, « Les modes d'expression de l'aspect dans le langage de l'enfant », Bruxelles, Dessart, Mardaga, 1976, p. 20.

KTB = to write (root):

[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 » (2).
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 two 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 nel3a□b]
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 nella□3bu]
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:

[r□a□: ħ jezr□a□3]
he has gone he sews
he has gone to sew

[r□a□:ja□ħ it□é: ħ]
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: ħa□]
he eats an apple.

There are two *auxiliaries:*

[r□a□: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
ž :prepalatal, constrictive, voiced
j : mediodorsomediopalatal, constrictive
k : postpalatal, unvoiced
g : postpalatal, voiced
x : postdorsopostvelar, unvoiced
R : postdorsopostvelar, voiced
ħ : pharyngal, constrictive, unvoiced
3 : pharyngal, constrictive, voiced
h : laryngal, constrictive
µ : laryngal, plosive
q] : uvular.

II- VOWELS

phonology **phonetics** (1)

long vowels: V:

/a :/ = long, anterior, aperture maxima [a:, è:, a:]
/i:/ = long, anterior, aperture minima [é:, i:]
/u:/ = long, posterior, rounded [o:,u:]

short vowels: V

/u/ = short, posterior, rounded [o,oe, u] (2)
/e/ = short, central [a, e]

emphatic consonant : Ç ; emphasized vowel: V□□

nasalized vowel : V□.

1- In contact with posterior or emphatic consonant.
2- [oe] exists as a variant of [u] in contact with a pharyngal: [ħoess] : feel; [3oess] : controle.

V-2 Aphasic Subject Interlinear Transcription

HISTORY OF ILLNESS

(1a) wa□ħder□r□a□b3é:n jè:m
some forty days
Forty days ago,

det art det N

(1b) menna ba□r□k
here only
here only, [my face] *,

locA

* omissions are put between brackets.

(2a) mẽba□3d na□s□sja□3ni
ma□r□r□a□
after half that means PREST IMPERS once
After, half, that means , [was paralysed] once

prep N vb

(2b) µè:na * dji:t ça va
me I came PAST ** it's PREST IMPERS all right,
me, I came; It's all right

PRO vb locA N

* Emphatic form of the pronoun.
** In arabic, past and preterit forms are not distinguished and are called « accomplished tense » as opposed to unaccomplished ».

(3a) fummi wedjdji menna ba□r□k
my mouth my face here only
my mouth, my face, here only, (showing her face and face).

N det N det locA

(4a) s□s□ba□ħ ħa□mi:duli:di
the morning Hamid my son
the morning, Hamid, my son,

art N N N det

(4b) meba□3daessbé:t□a□:r□ jalla jalla
after the hospital quickly quickly
after [we went to], the hospital, very quickly,

prep art N loc A

(5a) kunna leħdè:ch
we were PAST 11 o'clock
it was 11.

vb art N

(6a) lha□dr□a□ wè:lu
the speech (is) nothing
I couldn't speak.

NS*
Noun sentence.

art N adv

NS*

* **NS** = noun sentence.

(7a) r□oħna lessbé:t□a□r□
we went PAST to the hospital
We went to hospital,

vb prep art N

NS

(7b) wè:na xa□:jef
and me (I am) being afraid
and me, (I was) afraid.

coor PRO adjQ

(8a) 3ochr□é:n ju:m
twenty days
Twenty days,

det N

NS

(9a) 3ã□dek a□s□s□a□ħ
you have* (is) the truth
you are right.

prep cli art N

* 3ã□d + cli pro = subject pro + to have.

(*10a)* ba□3d r□a□:ni ba□r□ra□
after I am PREST outside
After , I go out.

prep aux adv

(11a) ddwa bezzè:f
the drugs (are) many
(There were) many drugs.

art N adv

NS

(*11b*) 3t□a□:wli ddwa
they gave PAST me the drugs
They gave me drugs,

vb cli art N

(12a) ba□3dessebt ttni:n u lè:rb3a□
after the saturday the monday and the wednesday
after saturday, monday and wednesday,

prep art N adjQ

(*12b*) kè:n et□t□bé:b mli:ħ
he was PAST the doctor good
The doctor was good.

aux art N adjQ

(12c) jo r□a□bbé xrežt ħa□mdulla□h
o my God I went PAST out thank God
O my God! Thank God!

prep N vb locA

(13a) kir□oħna 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: ħi:t chwi:jja — vb adv
I rested PAST a little
Irested 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) r□a□: ħ zewdjha□ — vb N det
he went PAST her husband
her husband went.

(*15b*) felRa□:ba nchu:f er□r□a□: ħa□ — prep art N art N
In the forest I see PREST the rest
In the forest, I rest.

(16a) melli bdi:t wè:na na□xdem — prep vb coor PRO vb
since I began PAST and me I work PREST
Since I began PAST working,

(*16b*) r□a□: ħ ja□xxa□dmu: h — vb vb cli
he went PAST they work PREST him
he went, they work.

(17a) xa□msechho:r□ felli:l ma□r□r□a□ — det N prep art N N
five months at the night once
Five months, [it was] at night, once,

(17b) wè:lu u mẽba□3d xma□st□a□:ch ju:m — adv coor prep det N
nothing and after fifteen days
[there were] nothing, and fifteen days later,

(17c) 3ochr□□é:n ju:m sbé:t□a□:r□ — det N N
twenty days hospital
[I spent] twenty days [in] hospital.

COOKY THEFT

(18a) nwa□:d□a□r□ tè:3o — **NS** — N prep + poss pro
(these are) glasses of him
(It is) his glasses,

(19a) t□t□fa□l wa□t□t□a□fla r□a□: ħo — 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□ µé:h — **NS** — conj art N det adv
or the cake the other yes
or cake, the other, yes,

(20a) bè:lè:k * lkursi — 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 t□a□:jħa□ — **NS** — art N adjq
the water (is) falling
The water (is) falling;

(*21b*) ukit□a□:ħa□t felµa□r□d□ — conj coor adv vb
and it fell PAST in the earth
and when it fell dawn,

(21c) lemjè:h chemmxo kullech — art N vb adv
the waters damped PAST all
waters damped everything.

(22a) 3la kulliħè: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 « lgato » 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 ir□o: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 r□a□: ħa□t lRa□dwa adv vb art adv
when she left PAST to-morrow
when she left to-morrow...

PICNIC (2-3)

(*24a*) t□fa□l m3a□ t□a□fla **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) t□fa□l da:xa□l ledda:r **NS** N adjQ art N
boy (is) going at the home
A boy (is) going home,

(*24d*) qa□t□t□ 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□:ħed mennhom ba□3d r□a□:djel det prep cli prep N
one of them then man
one of them, then a man,

(24f) mr□a□ 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 ta□3a□rri: ħ adv prep art N
no for the air
no, it is that of the air;

(26a) la□ħli:b weżżor□nè:n art N conj coor art N
the milk and the newspaper
the milk and the newspaper.

the
other
FARMER (2-4) (is)
with
(27a) r□a□djel qma□ħ police
(there is) man grain man
There is a man, grain

The
other is
(27b) m3a□hom la:xor□ with
with them (is) the other police
the other is with them. man

(28a) kèmju:n eddr□a□
(there is) [the] lorry the maize **NS** N N
There is the lorry, the maize,

(28b) char□ét□a□ d□r□a□b r□oħo
waggon has hit PAST itself **NS** Prep cli N
a waggon which has hit itself,

(29a) jeddi fihom
it takes PREST in them **NS** N art N
it takes them;

(30a) nr□o:ħo fellil
we go PREST in the night
we go at night. Nvb N det

THIEF (2-7)

(31a) r□a□:djel da□:xel
(there is) a man going in vb prep cli
There is a man going in,

(31b) felbè:b mẽba□3d wa□ħda:xor□
in the door after another vb prep art N
at the door after another,

(32a) mèzè:l* bèlèku poli:s
not yet PREST be careful policeman
has not come yet; be carefu! Policeman!
NS N adjQ

* Adverbial form “not yet” is a verbal morpheme
in Arabic

(32b) laxor□ m3a□ poli:s

prep art N prep det N

impers vb adv N

N prep N

(32c) lda:xa□l tlè:ta mennhom
inside three of them
inside, there are three of them,

(32d) jalla□h achchor□t□é:jja
go PREST IMPERAT policemen
go! Policemen!

RAINING (2-8)

(33a) t□t□fa□l m3a□ t□a□fla
(there is) the boy with girl
There is a boy with a girl,

(33b) klè:b fe l qoffa kbi:r
(there are) dogs in the bag big *
(there are) dogs in the bag.

* « big » is given in masculin, [qoffa] is a feminine noun.

(34a) wa□ħda mennhom r□a□: h emli: ħ
one of them is PREST good
One of them is good.

(35b) lemr□a□ ja□3ni fwè:lu
(this is) the woman that's tosay PRST IMPERS in nothing
(This is) the woman, that's to say nothing,

(35 c) la:xor□ pa:r□a:plé
the other (is) umbrella
the other (is) an umbrella,

*(36*a) mè:zè:l ma:djè:ch lbi:tu
not yet PREST IMPERS hasn't come back PAST at his

home

he
hasn't
yet
come **NS**
back
home.

(37a) **NS**
wè:ch
idi:r

what
he
does
PRES
T
INTER
ROG **NS**

what
does
he do? **NS**

(37b)
chu:f
hè:da

look
PRES
T
IMPE
RAT
this

look at
this
man.

adv det prep cli

vb art N

	one man.	
art N prep N	[he is] catching the umbrella.	
N prep art N adjq	(39a) [r□a□: hom] xa□:r □zi:n	
det prep cli aux adjQ	[they are] going out.	
art N vb prep adv	*(40a)*kè:jen erri: ħ	
det N	there is PRES T IMPERS the wind	
vb neg vb prep N det	The wind is blowing,	
pro vb	*(41a)* kè:nu wa□: ħed	**NS**
	they are PRES T IMPERS one	
(38a) la:xor□ ba□r□r□a□ m3a□chchta the other (is) outside with the rain The other (is) outside with rain.	there was	
(38b) [r□a:ho] qa□:bed lpa:ra:ple		

daughter
My illness (is) long, my daughter,

(1b) wa□:h t□wé:l t□wé:l
yes (it is) long long
yes, long, long

(2a) wè:ch na□ħki lek
what I tell PREST you
what can I tell you?

(3a) kũt ma3ã□di ħa□ttachi
I was PAST no I have PREST nothing
I had nothing,

(3b) u kit□oħt t□oħt
and when I fell PAST I fell PAST
and when I fell, I fell,

(3c) welħa□mdulla□h
and thank God
and thank God!

V-3 Control Subject Interlinear Ti

HISTORY OF ILLNESS

(1a) ma□r □d□é t□wé:l jabẽti
my illness (is) long my

(4a) wulè:di refdu:ni
and my sons took me in charge
And my sons took me in charge,

(4b) lu:kè:n mè:chulè:di
if no my sons
without my sons,

(4c) lu:kè:n r□a□:ni r□oħt fħè:li
If I am PREST Iwent PAST at my way
I should have died.

N adv prep art N

adjQ art N

adjQ

aux art N

aux det

(5a) fi:jja lqa□lb jabẽti **NS**
In myself (is) the heart my daughter
Ihave a heart illness, my daughter. coor N det vb cli

(5b) s□s□t□a□r□ ki jebdè:ni
the pain when it begins PREST me
When the pain begins, condit prep adv N det

(5c) maqollekchi jabẽti
I don't tell PREST you my daughter
I can't tell you, my daughter, condprepaux prepNcli

NS N det prep cli art N prepNdet
adjQ
prep N
det

NS art N prep N cli

adv
adjQ neg vb prep N det
adjQ

(5d) b3é:da□3li:k
far from you
interro God save you!
g pro
vb cli *(6a)* qa□lbi
ja□d□r□ob
ja□d□r□ob
my heart hits PREST
aux hits PREST
neg My heart hits, hits;
prep
cli *(7a)* qalu:li
locA r□o: ħ
la□t□t□bé:b
they told PAST me
go IMPERAT PREST to
coor the doctor
adv vb they told me: « go to
vb the doctor !»

(7b) hè:dè:k mè:sme3t
that no I heard
coor PAST
loc A It was all what I
heard.

(8a) r□oħt lelmustechfa
I went PAST to the hospital — demonstr pro neg vb
I went to the hospital;

(8b) ma:xa□lla:wchi ħa□tta dwa... dwa ... dwa ...
They didn't leave PAST any drugs drugs drugs — vb prep art N
They used all the drugs, drugs,drugs.

(9a) hé:dè:k mè:ddi:t
that I didn't take — neg vb adv N
That (was) all what I took.

(10a) radiowwè:t ħa□tta ta□3a□r□r□a□:s□ **NS**
(there are) radios even of the head — demonstr pro neg vb
There are radios, even those of head;

(11a) tebba□3t kullech
I followed PAST all — indef art Nadvprepart N
I followed all (the indications).

(12a) lu:kè:n ma:na□xotch eddwa
if I don't take PREST the drugs — vb adv
If Ididn't take drugs,

(12b) nmu:t xla□:s□
I die PAST that's all — cond prep neg vb art N
I should die, that's all.

(13a) drè:3é jmu:t ba□3dchixa□t□r□a□:t
my arm dies PREST sometimes — vb adv
My arm dies sometimes,

adjq N det vb loc A
prep
cli

N det *(13b)* wer□r□a□:sẽtè:3é
vb vb jetnemmel
and my head gets
PREST stiff
and my head gets
vb cli stiff,
vb
prep *(13c)* ħa□tta ndo:x
art N I feel PREST giddy

until until I feel giddy.

adv vb

(14a) wè:chẽdi:r
what I do PREST
What (can) I do?

interrog pro vb

(15a) nerqod u ki nno:d□ xla□:s□
I sleep PREST and when I get PREST up that's all
I sleep, and when I get up, that's all.

vb coor prep vb adv

(15b) chwi:jja ndji:b r□o: ħé
a little I bring PREST myself
I feel a little better,

adv vb N det

(15c) weddwa ma:ja□xt□é:né:ch
and the drugs don't leave PREST me
and the drugs don't leave me.

coor art N neg vb

(16a) 3ã□di nnqot□t□ **NS**
(there is) at me the drops
I have drops,

prep cli art N

(16b) wè:smo nsi:t
what's its name I have forgotten
what's its name? I have forgotten.

interrog pro N cli vb

(16c) hé xla□:s□
yes that's all
Yes! That's all.

adv adv

(17a) lu:kè:n ma:tebba□3chi
if I don't follow PREST
If I didn't follow

condit prep neg vb

(17b) r□o: ħé xla□:s□
myself that's all
myself, that's all,

N det adv

(17c) jeddi:wni mi:jjet
they bring PREST me dead
they would bring me dead.

vb cli adjQ

coor
art N
prep
det vb

(*18a*) lha□mdulla□h
thank God
thank God!

(18b) 3ã□di lli:ku:n bi:jja — prep cli relprovbprep cli
I have who is PREST with me
I have who takes care of me.

(*18c*) r□a□bbé jxa□lli:hom — N det vb cli
God saves PREST them
God saves them!

(19a) jar□a□bbé lħa□mdulla□h — prep N det loc A
God thank God
God, thank God!

(20a) lè:la lħa□qq — adv art N
no the truth
No, really!

(*20b*) r□a□bbé ja□3t□é:hom wejmenni:hom — N det vb cli coor vb cli
God gives PREST them and saves PREST them
God saves them!

(*21a*) lu:kè:n mè:wlè:di — condit prep neg N det
if no my sons
If (it was)n't my sons,

(*21b*) lu:kè:n ma:r□a□:ni:ch — condit prep neg aux
if I am PREST not
I shouldn't be

(21c) ga□:3ahna jabẽti — adv prep N det
all here my daughter
here at all, my daughter.

COOKY THEFT

(*22a*) bel 3a□r□bi:jja
in arabic — prep art N
In arabic?

(*22b*) s□a□: ħħa□ jabẽti
yes, my daughter — adv prep N det
Yes, my daughter.

(23a) hè:da t□fa□jjal t□a□:la□3 — **NS** — dem pro N adjQ
this (is) a boy getting up
This (is) a boy getting up

loc A (*23b*) 3la lkursi
on the chair
on the chair.

(23c) ur□a□:ja□ħ it□é: ħ — coor vb vb
and is PREST going he falls PREST
And (he) is going to fall,

(24a) mè:chèfu:hchi ga□:3été:k — neg vb cli loc A
they didn't see PAST him at all
they didn't see him at all.

(25a) chu:f:wè:ch r□a□:ja□ħ jè:xod — vb interr pro adjQ
see IMPERAT what he is PREST going he takes PREST
See what he is going to take;

(25b) lmè:kla nd□onn — art N vb
the food I think PREST
The food I think,

(26a) wet□t□a□fla xtu wa□:qé:l — coor art N det adv
and the girl his sister perhaps
and the girl, his sister perhaps,

(26b) ħa□tta hi:jja r□a□:jħa□ ddi:r — adv pro adjQ vb
even she is PREST going she does PREST
she also is going to do,

(26c) ddi:r kima xu:ha□ — vb adv n cli
she does PREST as her brother
she does as her brother.

(27a) ujemmè:hum teRsel — coor N det vb
and their mother washes PREST
And their mother washes

(27b) fel mè:3a□n — prep art N
in the ustensils
the ustensils,

(28a) welma fa:ja□d□ — **NS** — coor art N adjQ
and the water (is) overflowing
and the water (is) overflowing.

(29a) tku:n linõdasjõ — aux art N
she is PREST the inundation
There is an inundation,

prep
art N *(30a)* do:qetchu:fi
xla□:s□

you will see FUT it's all — prep vb adv
you will see, it's all.

(31a) wè:chezi:d lek
what do I add PREST to you — interr pro vb cli
What can I tell you more?

PICNIC

(*32a)* r□a□:hom r□a□:jħé:n lelRa□:ba
they are PREST going to the forest — aux adjQ prep art N
They are going to the forest

(32b) jetRa□ddè:w
they lunch PREST — vb
to lunch.

(*33a*) lħhè:l ra:□h errbé:3
the weather is PREST the spring — art N aux art N
The weather ,it is spring.

(*33b*) wessxa□:na
and the heat — coor art N
And heat;

(*33c*) 3la bi:h ja□xxa□r□dju
it is why they go PREST out — locA vb
it is why they go out.

(*34a*) lkelb dji3a□:n **NS**
the dog (is) hungry — art N adjQ
The dog (is) hungry,

(34b) uħa□bb ja□xodelhom ellħa□m
and it wanted PAST it takes PAST them the meat — coor vb vb cli art N
and it wanted to take them the meat

(*34c*) lli felqoffa
which in the bag — rel pro prep art N
which (is) in the bag.

(*35a*) lkelb r□a□:ja□ħ jèkulelhom
the dog is PREST going to it eats PREST them — art N adjQ vb prep cli
The dog is going to eat them

(35b) kullelRda
all the lunch — det art N
all the lunch.

(35c) uki jawwa□s□lo lelRa□:ba coor adv vb prep art N
and when they arrive PREST at the forest
and when they arrive at the forest,

(35d) is□é:bo lehwa werri:ħ 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 gè:3 art N vb adv
the dog has eaten PAST all
The dog has eaten all.

FARMER

(37a) r□a□:ho jezr□a□3 felgemħ aux vb prep art N
he is PREST he sows PREST in the grain
He is sowing grain.

(38a) hè:delfellè: ħ dem pro art N
this the farmer
This farmer,

(38b) waqé:la xa□ddè:m felħa□wch **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 demprprepartNcoorart N
this in order to the dogs and the birds
this (is) in order to the dogs and birds

(39b) mè:jèklu:ch Igemħ µe...lè:la neg vb art N adv
they don’t eat PREST the grain µe...no
don’t eat grain,euh...no,

(40a) dr□a□ hu:wwa jezza□r□3o N pro vb cli
maîze he sows it
maîze he sows it.

(41b) wehna r□a□:hom ila□qqto 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 d□a□:ha□r□ serrè:q dem pro adjQ N
this appearing thief
This is appearing a thief,

(42b) jasr□a□q fedda:r vb prep art N
he steals PREST in the house
he steals in the house

(42c) kè: chi dhèb wella dr□a□:ha□m **NS** aux prep N prep N
(it is) there is PRESST some gold or money
any gold or money,

(43a) wejqo:l ħa□tta wè:ħed 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 jeħħa□kmu 3li:h coor prep vb prep cli
and they will juge FUT him
and will decide for him

(43e) lħa□bs 3la ssri:qa□ art N prep art N
the jail for the theft
jail because of the thief.

GETTING UP

(44a) [r□a□: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 awaken PAST him
and has awaken him;

(46a) wej3a□:wed jerqod — coor vb vb
and he recommences PREST he sleeps PREST
and he sleeps again,

(46b) 3la djè:lelli sha□r□ elli: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 awaken PAST him again.
His mother has awaken him again.

(48a) jerqod ... µe ... ino:d□ — vb vb
he sleeps PREST ... µe ... he gets PREST up
He sleeps ... µe ... he gets up;

(48b) wechr□a□b bi:h fi:h — coor vb adv
and he drunk PAST rapidly
and drunk rapidly

(48c) qa□hha□wtu — N det
his coffee
his coffee.

(49a) uki:r□o: ħ lelxa□dma — 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:chba□3chi nnu:m — neg vb art N
he didn’t sate PAST the sleeping
he didn’t sate sleeping.

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