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THE ACCUMULATION OF FUNCTIONS IN THE
CATEGORIAL
MORPHEMES OF THE VERB IN MODERN SPOKEN ARABIC

1a. From the point of view of morphological typology, Arabic belongs to the flexional-alternating languages with the closest conjointment of categorial morphemes with the lexical ones and with the highest accumulation of functions by the first of them. Since in contemporary Arabic dialects we observe the diminution of the role of vocalic alternation in the verb, and the quantitative reduction both of categories and formal exponents used in the conjugation on one hand, while on the other, the extension of means and deglomeration of functions, according to the general linguistic assumptions, is to be counted among the expanding features in modern languages, we have thought it interesting to check the eventual changes affecting the accumulation and to get an idea as to what kind of evolution trend do they show and whether they fit into the general scheme of development of modern Arabic dialects. We intend to attain our aim by confronting the accumulation in the categorial morphemes in Classical Arabic with that of some of the modern dialects. We have chosen for that purpose four of them, viz.: Palestinian Arabic of the fellāḥīn¹ Egyptian Arabic of Cairo², the dialect of Tripolis³ and al-Ḥas-sāniyya⁴. The first two represent the Eastern group, Palestinian

¹ Leonhard Bauer, *Das Palästinische Arabisch. Die Dialekte des Städters und des Fellachen*, Leipzig 1926.

² T. F. Mitchell, *Colloquial Arabic. The Living Language of Egypt*, London 1962.

³ Hans Stumme, *Märchen und Gedichte aus der Stadt Tripolis in Nordafrika*, Leipzig 1898.

⁴ David Cohen, *Le dialecte arabe Ḥassāniyya de Mauritanie*, Paris 1963.

its center, Egyptian its Western border, whereas the remaining two belong to the Western group, the dialect of Tripolis forms its Eastern, and al-Hassāniyya its Western border. This way of sampling seems to secure a fairly representative picture of the situation, since Palestinian and Tripolitanian Arabic show, respectively, each within its group, relatively the smallest while Egyptian and al-Hassāniyya the greatest deviation from the Classical Arabic. Thus, all dialects which are in the „middle“ of their groups ought to fall within the scale.

1b. Before we come over to the subject certain reservations have to be made:

- α) By categorial morphemes we have understood the conjugation affixes and not the stem-forming ones which we consider as lexical.
- β) We have considered the forms for the sound verbs only, since the changes these forms were subjected to in the case of verbs of other types are of phonetical and not of morphological character.
- γ) To make our considerations clearer, we have dealt with Perfect and Imperfect separately, for they are like two conjugations being chronologically and formally different, using different formal exponents for one and the same category, and each of them disposing of different number of categories.
- δ) We have taken into account the following categories, and provided them, for practical reasons, with the following symbols:

NUMBER VOICE T.-ASP.	{	1. Perfect	— AO	PERSON	{	7. Masc.	— AIIIa
		2. Active	— AIa			8. Fem.	— AIIIb
		3. Passive	— AIb				
	{	4. Sg	— AIIa	{	9. 3-rd Pers.	— AIVa	
		5. Dual.	— AIIb		10. 2-nd Pers.	— AIVb	
		6. Pl.	— AIIc		11. 1-st Pers.	— AIVc	

VOICE T.-ASP.	{	1. Imperfect	— BO	PERSON	{	10. C-rd Pers.	— BIVa
		2. Future	— CO			11. 2-nd Pers.	— BIVb
						12. 1-st Pers.	— BIVc
VOICE	{	3. Active	— BIa	MOOD	{	13. Indic.	— BVa
		4. Passive	— BIb			14. Subj.	— BVb
NUMBER	{	5. Sg	— BIIa			15. Juss.	— BVc
		6. Dual.	— BIIb			16. Energ. I	— BVd
		7. Pl.	— BIIc			17. Energ. II	— BVe
GENDER	{	8. Masc.	— BIIIa			18. Imperat.	— BVf
		9. Fem.	— BIIIb			19. Continuat.	— BVg
						20. Habitat.	— BVh

- ε) We have served ourselves of the following abbreviations in this paper:

P	= Prefix
PV	= prefixal vowel
PC	= prefixal consonant
v	= stem-vowel
S	= Suffix
Cl. Ar.	= Classical Arabic
PF	= Palestinian Arabic of the fellāḥīn
E	= Egyptian Arabic of Cairo
T	= Arabic dialect of Tripolis
H	= al-Hassāniyya
M.	= Masculine
F.	= Feminine
F. e.	= Formal exponent

- 2. The distribution of categorial functions in Cl. Ar. presents itself as follows (see the tables p. 18—20).

It appears from the above-inserted tables that the Suffix conjugation in Cl. Ar. disposed of 11 categories realized by means of 19 F. e. The accumulation oscillates between 1—4 function per morpheme. They are distributed as follows:

- a) the stem-consonants are the bearers of the basic meaning
- b) the alternation of stem-vowels accumulates two functions, viz.: Tense-Aspect and Voice,

I. The Suffix Conjugation

No	Categorial Morphems	Functions	Stems	Total Number of Functions
1	P = O + the structure of stems	AO,	I—X, 4-Rad. I, II	1
2	$v_1 = a - v_2 = a \parallel i \parallel u$	AO, AIa,	I,	2
3	$v_1 = a - v_2 = a$	AO, AIa,	II—IV, VII, VIII, X, 4-Rad., I	2
4	$v_1 = a - v_2 = a - v_3 = a$	AO, AIa,	V, VI, 4-Rad. IIa,	2
5	$v_1 = u - v_2 = i$	AO, AIb,	I—IV, VII, VIII, X, 4-Rad. I,	2
6	$v_1 = u - v_2 = u - v_3 = i$	AO, AIb,	V, VI, 4-Rad. II,	2
7	S = -a	AO, AIIa, AIIIa, AIVa	all stems	4
8	S = -at	AO, AIIa, AIIIb, AIVa	"	4
9	S = -ta	AO, AIIa, AIIIa, AIVb,	"	4
10	S = -ti	AO, AIIa, AIIIb, AIVb,	"	4
11	S = -tu	AO, AIIa, AIVc,	"	3
12	S = -ā	AO, AIIa, AIIIa, AIVa,	"	4
13	S = -atā	AO, AIIb, AIIIb, AIVa,	"	4
14	S = -tumā	AO, AIIb, AIVb,	"	3
15	S = -ū	AO, AIIc, AIIIa, AIVa,	"	4
16	S = -na	AO, AIIc, AIIIb, AIVa,	"	4
17	S = -tum	AO, AIIc, AIIIa, AIVb,	"	4
18	S = -tunna	AO, AIIc, AIIIb, AIVb,	"	4
19	S = -nā	AO, AIIc, AIVc,	"	3

II. The Pre- and Suffix Conjugation

No	Categorial Morphems	Functions	Stems	Total Number of Functions
1	P = y- t- ' - n- + $v_1 = O$	BO,	I, IV,	1
2	P = y- t- ' - n- + the structure of stems	BO,	II, III, V—X, 4-Rad. I, II	1
3	P = sa- + Imperfect forms	CO,	all stems	1
4	PV = a — $v_2 = i \parallel a \parallel u$	BO, BIa,	I,	2
5	$v_2 = i$	BO, BIa,	II—IV, 4-Rad. I,	2
6	PV = a	BO, BIa,	V, VI, 4-Rad. IIa,	2
7	PV = a — $v_2 = i$	BO, BIa,	VII, VIII, X, 4-Rad. IIb,	2
8	PV = u — $v_2 = a$	BO, BIb,	I—IV, VII, VIII, X,	2
9	PV = u	BO, BIb,	V, VI, 4-Rad. II,	2
10	$v_2 = a$	BO, BIb,	4-Rad. I,	2
11	P = y-	BO, BIVa,	all stems	2
12	P = t-	BO, BIVa, BIVb,	"	3
13	P = ' -	BO, BIIa, BIVc,	"	3
14	P = n-	BO, BIIc, BIVc,	"	3
15	S = -u	BO, BVa,	"	2
16	S = -a	BO, BVb,	"	2
17	S = -īna	BO, BIIa, BIIIb, BIVb, BVa,	"	5
18	S = -ī	BO, BIIa, BIIIb, BIVb, BVb, BVc	"	6
19	S = -āni	BO, BIIb, BVa,	"	3
20	S = -ā	BO, BIIb, BVb, BVc,	"	4
21	S = -ūna	BO, BIIc, BIIIa, BVa,	"	4
22	P = y- t- — S = -ū	BO, BIIc, BIIIa, BVb, BVc,	"	5

Ciąg dalszy tabeli II.

No	Categorial Morphems	Functions	Stems	Total Number of Functions
23	P = y- t- — S = -na	BO, BIIc, BIIIb, BVa, BVb, BVc,	"	6
24	S = -O	BO, BVc,	"	2
25	S = -anna -nna -nni	BO, BVd,	"	2
26	S = -an -n	BO, BVe,	"	2
27	Structure of stems with the vocalism of the Active Voice + S = -O -i ā -ū -na	BVf, BIVb,	"	2

c) the suffixes show the highest accumulation, viz. 3—4 functions representing the categories of Tense-Aspect, Number, Gender, and Person.

It seems very important to draw the attention to the fact that all F. e. involved in the Suffix Conjugation are the bearers of the Tense-Aspect category, i.e. of the Perfect in this case. This fact is also to be observed in the Pre- and Suffix Conjugation both in Cl. Ar. and in modern dialects and seems to be the result of the fact, that Perfect: Imperfect is the chief and most ancient opposition in the Arabic conjugation. We feel however obliged to explain that by considering Perfect: Imperfect as chief opposition we understand, after Rundgren⁵, the Stative: non-Stative opposition and not the Perfective: Imperfective. Since it is not our aim to go into the details of this subject in this paper, we shall leave it aside for the present contenting ourselves with the statement that we regard this opposition rather from „purely“ aspectual than from the temporal or „aktionsart“ point of view.

The Pre- and Suffix Conjugation in Cl. Ar. disposed of 18 cate-

Stems			Total Number of Functions			
E	T	H	PF	E	T	H
stems	all stems	all stems	2	2	2	2
—	—	—	2	2	2	2
—	—	—	—	2	2	2
—	—	—	—	—	—	2
—	—	—	—	—	—	2
stems	all stems	all stems	4	4	4	4
"	"	"	4	4	4	4
"	"	"	5	4	5	5
—	"	"	4	—	4	4
stems	"	"	4	3	3	3
—	—	—	4	—	—	—
stems	all stems	all stems	4	3	3	3
—	—	—	4	—	—	—
stems	all stems	all stems	3	3	3	3

⁵ Frithiof Rundgren, *Intensiv und Aspektkorrelation*, Uppsala 1959.

I. The Suffix Conjugation

No	Categorial Morphems				Functions				Stems				Total Number of Functions			
	PF	E	T	H	PF	E	T	H	PF	E	T	H	PF	E	T	H
1	P = O + the structure of the stems	dtto	dtto	dtto	Ao, AIa,	AO, AIa,	AO, AIa,	AO, AIa,	all stems	all stems	all stems	all stems	2	2	2	2
2	P = O — nC ₁ v ₁ C ₃ v ₃ C ₃	P = O — tC ₁ aC ₂ aC ₃	P = O — nC ₁ v ₁ C ₂ v ₂ C ₃	P = O — nC ₁ C ₂ vC ₃	AO, AIb,	AO, AIb,	AO, AIb,	AO, AIb,	—	—	—	—	2	2	2	2
3	—	P = O — nC ₁ aC ₂ aC ₃	P = O — C ₁ tC ₂ vC ₃	P = O — v ₂ = a	—	AO, AIb	AO, AIb	AO, AIb,	—	—	—	—	—	2	2	2
4	—	—	—	P = u-	—	—	—	AO, AIb,	—	—	—	—	—	—	—	2
5	—	—	—	P = O — tC ₁ v ₁ C ₂ C ₃ v ₂ C ₄	—	—	—	AO, AIb,	—	—	—	—	—	—	—	2
6	P = O — S = -O	dtto	dtto	dtto	AO, AIIa, AIIa, AIVa,	AO, AIIa, AIIa, AIVa,	AO, AIIa, AIIa, AIVa,	AO, AIIa, AIIa, AIVa	all stems	all stems	all stems	all stems	4	4	4	4
7	S = -at -it	S = -it	S = -et	S = -et	AO, AIIa, AIIb, AIVa,	AO, AIIa, AIIb, AIVa,	AO, AIIa, AIIb, AIVa,	AO, AIIa, AIIb, AIVa	„	„	„	„	4	4	4	4
8	S = -it -t	S = -t	dtto	dtto	AO, AIIa, AIIa, AIVb, AIVc,	AO, AIIa, AIVb, AIVc,	AO, AIIa, AIIa, AIVb, AIVc	AO, AIIa, AIIa, AIVb, AIVc	„	„	„	„	5	4	5	5
9	S = -ti	—	S = -ti	dtto	AO, AIIa, AIIb, AIVb,	—	AO, AIIa, AIIb, AIVb,	AO, AIIa, AIIb, AIVb	„	—	„	„	4	—	4	4
10	S = -ū	P = O — S = -u	S = -u	dtto	AO, AIIc, AIIa, AIVa	AO, AIIc, AIVa,	AO, AIIc, AIVa,	AO, AIIc, AIVa,	„	all stems	„	„	4	3	3	3
11	P = O — S = in	—	—	—	AO, AIIc, AIIb, AIVa	—	—	—	„	—	—	—	4	—	—	—
12	S = -tu	dtto	dtto	dtto	AO, AIIc, AIIa, AIVb,	AO, AIIc, AIVb,	AO, AIIc, AIVb,	AO, AIIc, AIVb,	„	all stems	all stems	all stems	4	3	3	3
13	S = -tin	—	—	—	AO, AIIc, AIIb, AIVb,	—	—	—	„	—	—	—	4	—	—	—
14	S = -na	dtto	S = -nā	S = -na	AO, AIIc, AIVc,	AO, AIIc, AIVc,	AO, AIIc, AIVc,	AO, AIIc, AIVc,	„	all stems	all stems	all stems	3	3	3	3

II. The Pre- and Suffix Conjugation

No	Categorial Morphemes				Functions				Stems				Total Number of Functions			
	PF	E	T	H	PF	E	T	H	PF	E	T	H	PF	E	T	H
1	P = yv- tv- 'v- nv- + v ₁ = O	dtto	—	—	BO, BIa,	BO, BIa,	—	—	I,	I,	—	—	2	2	—	—
2	P = yv- tv- 'v- nv- + verbal stems	dtto	P = yv- tv- /t- nv- /n- + erbal stems	dtto	BO, BIa,	BO, BIa,	BO, BIa,	BO, BIa,	II—X, 4-Rad. I, II,	II, III, V—X, 4-Rad. I, II,	all verbal stems	all verbal stems	2	2	2	2
3	P = yv- tv- 'v- nv- — nC ₁ C ₂ vC ₃	P = yv- tv- 'v- nv- nC ₂ v ₁ C ₂ v ₂ C ₃	P = yv- tv- nv- — nC ₁ Cv ₂ C ₃	dtto	BO, BIb,	BO, BIb,	BO, BIb,	BO, BIb,	—	—	—	—	2	2	2	2
4	—	P = yv- tv- 'v nv- — tC ₁ v ₁ C ₂ v ₂ C ₃	P = yv- tv- nv- — C ₁ tC ₂ vC ₃	PV = u	—	BO, BIb,	BO, BIb,	BO, BIb,	—	—	—	—	—	2	2	2
5	—	P = ha- + Imperfect Forms	—	—	—	CO,	—	—	—	all verbal stems	—	—	—	1	—	—
6	P = yv-	dtto	P = yv- v-	dtto	BO, BIVa,	BO, BIVa,	BO, BIVa,	BO, BIVa,	all verbal stems	„	all verbal stems	all verbal stems	2	2	2	2
7	P = tv-	dtto	P = tv- t-	dtto	BO, BIVa, BIVb,	BO, BIVa, BIVb,	BO, BIVa, BIVb,	BO, BIVa, BIVb,	„	„	„	„	3	3	3	3
8	P = 'v-	dtto	P = nv- n-	dtto	BO, BIIa, BIVc,	BO, BIIa, BIVc,	BO, BIVc,	BO, BIVc,	„	„	„	„	3	3	2	2
9	P = nv-	dtto	—	—	BO, BIIc, BIVc,	BO, BIIc, BIVc,	—	—	„	„	—	—	3	3	—	—
10	S = -i	dtto	dtto	dtto	BO, BIIa, BIIIb, BIVb,	BO, BIIa, BIIIb, BIVb,	BO, BIIa, BIIIb, BIVb,	BO, BIIa, BIIIb, BIVb,	„	„	all verbal stems	all verbal stems	4	4	4	4
11	P = yv- tv- — S = -u	P = yv- tv- nv- — S = -u	P = yv-/v- tv-/t- nv- /n- — S = -u	dtto	BO, BIIc,	BO, BIIc,	BO, BIIc,	BO, BIIc,	„	„	„	„	2	2	2	2
12	P = yv- tv- — S = -in	—	—	—	BO, BIIc, BIIIb,	—	—	—	—	—	—	—	3	—	—	—
13	—	—	P = yv-/v- tv-/t- nv- /n- — S = -O	dtto	—	—	BO, BIIa,	BO, BIIa,	—	—	all verbal stems	all verbal stems	—	—	2	2
14	Verbal stems with the vocalism of Imperfect + S = -O -i -u -in	Verbal stems with the vocalism of Imperfect + S = -O -i -u	dtto	dtto	BIVb, BVf,	BIVb, BVf,	BIVb, BVf,	BIVb, BVf,	all verbal stems	all verbal stems	„	„	2	2	2	2
15	P = bv- b- + Imperfect Forms	dtto	—	—	BO, BVg, BVh,	BO, BVg, BVh,	—	—	„	„	—	—	2	2	—	—

Stems			Total Number of Functions			
E	T	H	PF	E	T	H
I,	—	—	2	2	—	—
II, III, V—X, 4-Rad. I, II,	all verbal stems	all verbal stems	2	2	2	2
—	—	—	2	2	2	2
—	—	—	—	2	2	2
all verbal stems	—	—	—	1	—	—
„	all verbal stems	all verbal stems	2	2	2	2
„	„	„	3	3	3	3
„	„	„	3	3	2	2
„	—	—	3	3	—	—
„	all verbal stems	all verbal stems	4	4	4	4
„	„	„	2	2	2	2
—	—	—	3	—	—	—
—	all verbal stems	all verbal stems	—	—	2	2
all verbal stems	„	„	2	2	2	2
„	—	—	2	2	—	—

gories marked by 1—26 F. e. The accumulation oscillates between 1—6 functions per morpheme. Like in the Suffix Conjugation, the stem-consonants are the bearers of the basic meaning, and the vocalic alternation serves to express the categories of Tense-Aspect and Voice. The prefixes accumulate the functions of expressing the categories of Tense-Aspect and Person. Also here, like in the Suffix Conjugation, the suffixes perform a kind of a „summing-up“ role and show the highest accumulation of functions expressing all possible categories with the exception for Voice. We have already pointed to the fact that all F. e. both in Suffix and Pre-and Suffix Conjugations are the bearers of the Tense-Aspect category. In the light of what we have said at that occasion, we consider Pre- and Suffix Conjugation the non-Statative member of the mentioned above basic opposition.

Let us consider now the situation in the chosen contemporary Arabic dialects (see the tables).

The Suffix Conjugation in the studied dialects disposes of 10 categories, i. e. of 1 less than that in Cl. Ar., realized by means of 1—12 F. e. altogether, i. e. of 7 less than in Cl. Ar. The lacking category is the category of Dualis which in the process of evolution has been eliminated from the conjugation. The numbers of F. e. used by each particular dialect present themselves as follows:

PF — 1—11

E — 1— 9

T — 2—10

H — 2—12

The accumulation oscillates between 2—5 functions per morpheme. Their distribution is very much like that in the Suffix Conjugation in Cl. Ar. with the exceptions for:

- the vocalic alternation ceased almost totally to play the role of a categorial morpheme,
- the lowest and highest rates of accumulation per morpheme are higher than those in Cl. Ar.

The Pre- and Suffix Conjugation disposes of 11—14 categories, i. e. of 4—7 less than its counterpart in Cl. Ar. They are realized by 1—13 F. e., i. e. by 12—15 less than in Cl. Ar. The distribution

of the numbers of categories and of F. e. among the studied dialects presents itself as follows:

Dialect	No of categories	No of F. e.
PF	13	1—12
E	14	1—13
T	11	1—10
H	11	1—10

The accumulation oscillates, generally speaking, between 2—4 functions per morpheme. An exception from this is the E dialect, where the accumulation is comprised within the limits of 1—4 functions per morpheme. This results from the fact that E as the only dialect from among the discussed here dialects disposes of the prefix 'ha-' whose unique function is to form the Future Tense. The distribution of functions is very much like that in Cl. Ar.

3a. The „summing-up“ tables inserted below serve to give an idea of the tendencies manifesting themselves in the sphere of accumulation in modern Arabic dialects in comparison with the situation in Cl. Ar. (see the tables p. 23—24).

It appears from the above-given „summing-up“ tables that the dialects show in comparison to Cl. Ar. the reduction of number of categories and of formal exponents, both in the Suffix and Pre- and Suffix Conjugations, and that they also differ among themselves in this regard. These divergencies have arisen for the following reasons:

a) The lack of Dualis both in Perfect and Imperfect Conjugations of the dialects which in Cl. Ar. involved 3 in Perfect and 1 in Imperfect F. e.

b) The vocalic alternation, productive in Cl. Ar. plays in our dialects, with the small exception for H, practically no phonological role, the functions of vowels having been degraded almost only to that of „matres lectionis“.

c) For the expression of Passivum, Cl. Ar. served itself of 2 F. e. in Perfect and of 3 in Imperfect while e.g. PF serves itself of only 1 both in Perfect and Imperfect, and the remaining dialects use in Imperfect only 2 F. e. for this purpose. The Cl. Ar. vocalic alternation has been here replaced by changing or extending the

I. The Suffix Conjugation

No	Category	Number of formal exponents					Accumulation of functions				
		Cl. Ar.	PE	E	T	H	Cl. Ar.	PF	E	T	H
1	T.ASP { Perfect	19	11	9	10	12	1—4	2—5	2—4	2—5	2—5
2	VOICE { Active	3	10	7	8	8	2	2—5	2—4	2—5	2—5
3		Passive	2	1	2	2	4	2	2	2	2
4	NUMBER { Sg	5	4	3	4	4		3—4	4—5	4	4—5
5		Dual.	3	—	—	—	—	3—4	—	—	—
6		Pl.	5	5	3	3	3	3—4	3—4	3	3
7	GENDER { M.	5	4	1	2	2	4	4—5	4	4—5	4—5
8		F.	5	4	1	2	2	4	4	4	4
9	PERSON { 3-rd Pers.	6	4	3	3	3	4	4	3—4	3—4	3—4
10		2-d Pers.	5	4	2	3	3	3—4	4—5	3—4	3—5
11		1-st Pers.	2	2	2	2	2	3	3—5	3—4	3—5
Total Number of Cat.											
Cl. Ar. — 11											
PF — 10											
E — 10											
T — 10											
H — 10											
Total Number of F. e.		19	11	9	10	12					
Accumulation							1—4	2—5	2—4	2—5	2—5

functions of 2 verbal stems from the purely semantic to the grammatical one.

d) The expression of Sg involved in Cl. Ar. 5 F. e. for Perfect and 3 F. e. for Imperfect while PF, T, H involve 4 and E even 3. F. e. for Perfect, and in Imperfect all four dialects use only 2 F. e. for this purpose. In this case, the first divergency results from the fact that PF, E, T, and H do not distinguish between the 2-nd

II. The Pre- and Suffix Conjugation

No	Category	Number of formal exponents					Accumulation of functions					
		Cl.Ar.	PF	E	T	H	Cl.Ar.	PF	E	T	H	
1	T.ASP	Imperfect	25	11	11	9	9	1—6	2—4	2—4	2—4	2—4
2		Fut.	1	—	1	—	—	1	—	1	—	—
3	VOICE	Active	4	11	11	8	8	2	2—4	2—4	2—4	2—4
4		Passive	3	1	2	2	2	2	2	2	2	2
5	NUMBER	Sg.	3	2	2	2	2	2—4	3—4	3—4	2—4	2—4
6		Dual.	2	—	—	—	—	3—4	—	—	—	—
7		Pl.	3	3	2	1	1	4—6	2—3	3	2	2
8	GENDER	M.	2	—	—	—	—	4—5	—	—	—	—
9		F.	3	2	1	1	1	4—6	3—4	4	4	4
10	PERSON	3-rd Pers.	2	2	2	2	2	2—3	2—3	2—3	2—3	2—3
11		2-nd Pers.	4	3	3	3	3	2—6	2—4	2—4	2—4	2—4
12		1-st Pers.	2	2	2	1	1	3	3	3	2	2
13	MOOD	Indic.	5	—	—	—	—	2—6	—	—	—	—
14		Subj.	5	—	—	—	—	2—6	—	—	—	—
15		Juss.	5	—	—	—	—	2—6	—	—	—	—
16		Energ. I	1	—	—	—	—	1	—	—	—	—
17		Energ. II	1	—	—	—	—	1	—	—	—	—
18		Imperat.	1	1	1	1	1	2	2	2	2	2
19		Continuat.	—	1	1	—	—	—	2	2	—	—
20		Habitat.	—	1	1	—	—	—	2	2	—	—
Total Number of cat.												
Cl. Ar. — 18												
PF — 13												
E — 14												
T — 11												
H — 11												
Total number of F. e.			25	12	13	10	10					
Accumulation								1—6	2—4	1—4	2—4	2—4

Person M. Sg and the 1-st Person c.g.Sg, and E, in addition to that, also between the 2-nd Person F. Sg and the 2-nd Person M. Sg. As for the second case, the dialects are lacking the Subjunctive and Jussive Moods, and hence for the expression of Sg they serve themselves of 1 F. e. less than the Cl. Ar.

e) The transformation of the functions and structure of the moods in modern Arabic dialects has lead in them to the considerable quantitative reduction of categories and formal exponents which belong to the inventory of forms of the Pre- and Suffix Conjugation.

f) The 3 F. e. used in E, T, and H for the expression of Pluralis in the Suffix Conjugation against the 5 F. e. used for this purpose in Cl. Ar. let themselves explain through the fact that these dialects do not distinguish between 3-rd Person M. Pl. and the 3-rd Person F. Pl., as well as between 2-nd Person M. Pl. and 2-nd Person F. Pl., In Imperfect, the category of Pluralis was being expressed in Cl. Ar. by means of 3 F. e. whereas E uses 2 and T, and H only 1. All three dialects do not distinguish between the 3-rd Person M. Pl. and the 3-rd Person F. Pl., and between 2-nd Person M. Pl. and 2-nd Person F. Pl., and in addition to this, T and H have only 1 prefix for the 1-st Person c.g. both Sg and Pl.

g) Cl. Ar. had 5 F. e. in Perfect and 2 F. e. in Imperfect for marking the category of M. In the discussed dialects, they are matched in Perfectum by 4 F. e. in PF, 1 F. e. in E, and 2 F. e. in T and H. In Imperfectum, all four dialects have no F. e. for the category of M. The explanation of these differencies occurring between the dialects and the Cl. Ar on one hand, and among the dialects themselves on the other, lies in:

α) for the Suffix Conjugation:

the lack of Dualis in PF, E, T, , H
the lack of distinction between the 2-nd Person M. Sg and the 1-st Person c.g. Sg in PF, E, T, and H,
the lack of distinction between the 3-rd Person M. Pl. and 3-rd Person F. Pl. in E, T, and H,
the lack of distinction between 2-nd Person M. Pl. and 2-nd Person F. Pl. in E, T, and H,
the lack of distinction between 2-nd Person M. Sg and 2-nd Person F. Sg, in E.

β) for the Pre- and 'Suffix Conjugation:

the lack of distinction between M. and F. in the Plural forms of E, T, and H.

h) The figures for the category of F. in Perfect are the same as for M. and explain themselves in the same way, s. under g) and g) α). As for the Imperfect, the category of F. was being marked by 3 F. e. in Cl. Ar. and is being marked by 2 in PF, and 1 in the remaining three dialects. The difference of 1 F. e. in case of PF and of 2 F. e. in the case of PF, T, and H find their explanation under g) and g) β). The remaining F. e. have their counterparts in Cl. Ar.

i) The 6 F. e. in Perfectum and 2 F. e. in Imperfectum used in Cl. Ar. for marking the category of the 3-rd Person are being matched respectively by 4 and 2 F. e. in PF, 3 and 2 F. e. in E, T, and H. The divergencies in Perfectum occurring between Cl. Ar. and the dialects and among the dialects results from:

α) the lack of Dualis in all dialects,

β) the lack of distinction between the 3-rd Person M. Pl and 3-rd Person F. Pl. in E, T, and H.

j) For the expression of the category of 2-nd Person, Cl. Ar. made use of 5 F. e. in Perfect and of 4 in Imperfect. For this very purpose PF uses respectively 4 and 3 F. e., T and H-3 and 3 F. e., and E-2 and 3 F. e. The reasons of divergencies in Perfect are the same as the exposed above under i) α) and β) whereas in the Imperfect, the reason is the lack of the Subjunctive and Jussive moods in the dialects.

k) The lack of distinction between the prefixes of the 1-st Person c.g. Sg and Pl. in the Imperfect has reduced the number of formal means used in T and H for the expression of this category to only 1 F. e.

3b. Coming now to the accumulation, the main problem of this paper we can conclude on the basis of the effective figures occurring in the „summing-up“ tables that the accumulation shows an increase trend and is in comparison to Cl. Ar. everywhere higher in the studied dialects, both in Perfect and Imperfect. No much wonder about the fact itself, since the accumulation is the natural resultant from two values, viz. the number of categories and the number of formal exponents. Hence, the changes in them

must consequently evoke the changes in accumulation. We have already seen that they both have been reduced in modern Arabic dialects, and thus, after they have changed, the accumulation must have consequently changed too. However, if we find the testimony of effective figures occurring in the „summing-up“ tables not everywhere quite convincing and clear as to whether the changes affecting the accumulation really follow the increase trend, we can get an idea in this regard in a different way. Borrowing the patterns from mathematics, we may imagine the relations connecting the three values: category, formal exponent, and accumulation as a compound function. Accumulation and formal exponents would form its inner, reversedly proportional, (the reversed proportion between these two seems obvious enough), member, whereas formal exponents and categories its outer one. Let us mark each of the three values with symbols:

$$y = \text{accumulation}; \quad u = \text{F. e.}, \quad x = \text{category}$$

and thus bring them together into the pattern:

$$y = fu(x)$$

Since the accumulation, as it has been already said, is the resultant of the ratio between the number of categories and the number of F. e., i.e. between x and u , the proportional coefficient k for $x : u$ will in our case be at the same time the coefficient of accumulation. It is logical that the number of F. e. should grow or diminish according to the growth or decrease of the number of categories, hence these two values remain in direct proportion to each other. Thus their $k = \frac{x}{u}$.

By calculating the coefficient k for each discussed dialect and comparing it with its counterpart in Cl. Ar., we shall attain the idea whether the changes in accumulation really show the increase trend or not. The results inserted below ought to bring an answer to this question.

The k in our case will be the quotient of the ratio occurring between the number of categories and the number of F. e.

Cl. Ar.	$\left\{ \begin{array}{l} \text{Perf. } k = \frac{11}{19} \approx 0,6 \\ \text{Imperf. } k = \frac{18}{25} \approx 0,7 \end{array} \right.$
PF	$\left\{ \begin{array}{l} \text{Perf. } k = \frac{10}{11} \approx 0,9 \\ \text{Imperf. } k = \frac{13}{12} \approx 1,1 \end{array} \right.$
E	$\left\{ \begin{array}{l} \text{Perf. } k = \frac{10}{9} \approx 1,1 \\ \text{Imperf. } k = \frac{14}{13} \approx 1,1 \end{array} \right.$
T	$\left\{ \begin{array}{l} \text{Perf. } k = \frac{10}{10} = 1,0 \\ \text{Imperf. } k = \frac{11}{10} \approx 1,1 \end{array} \right.$
H	$\left\{ \begin{array}{l} \text{Perf. } k = \frac{10}{12} \approx 0,9 \\ \text{Imperf. } k = \frac{11}{10} \approx 1,1 \end{array} \right.$

When we compare now the values obtained for k:

	Cl. Ar.	PF	H	T	E
Perf.	0,6	0,9	0,9	1,0	1,1
	Cl. Ar.	PF	E	T	H
Imperf.	0,7	1,1	1,1	1,1	1,1

the fact that the accumulation in modern Arabic dialects shows an increase trend seems to leave no doubt. In the light of what has been said above, we may assume consequently that the increase of accumulation is a component in the evolution of modern Arabic dialects and being the natural result of the reducing tendencies which affect the number of F. e. and of categories, it

fits into the general scheme of phenomena which we observe in connection with the development of Arabic dialects. However, these phenomena seem to stay in certain contradiction to the main aim, of evolution of the language, as well as to certain general linguistic assumptions exposed above. Before we come to final conclusions in this matter, we have to present briefly our own point of view which has lead us to them.

It is commonly accepted that language as a mean of communication of men evolutes towards an ideal system, where the possibly highest potential of information would be transmitted with the help of possibly smallest number of possibly most functional means in possibly shortest time, i. e. towards an inobstacled flow of information. This evolution process is being constantly conditioned by four main factors, viz.: potential of information (most important), economy, time and „selfdefense“ of the language against the incomprehensibility of transmission. All these factors differ among themselves both in character and their reciprocal relations. The most important of them, viz. the potential of information is a *in continuum* growing value, while time constantly decreases in reversed proportion to the growth of information. Economy affects chiefly time and energy, and tries to spare them by inducing the quantitative reduction and abbreviation of means of transmission and thus endangering on one hand, the potential of information through the unavoidably resulting increase of accumulation of functions in the actually existing means of transmission as well as the comprehensibility of transmission on the other, through the extension of the sphere of information resulting from the enhanced accumulation, and, often, through the reduction of distinctive features distinguishing the means of transmission from each other. These processes are being countered by the action of „selfdefense“ whose task is to secure the possibly highest comprehensibility of transmission at the simultaneous growth of information. This it does on the way of proper distribution of information and deglomeration of functions accumulated in the „overloaded“ means of transmission, chiefly through:

- a) introducing, where it is necessary, new means in place of the old extinct ones

- b) renovation of the old means, most often in a shape more functional and more adequate to the demands of the laws of economy.

These new means serve either as independent autonomic bearers of information or as „demarcators“ of the extent of information of other means, thus deglomerating the functions accumulated in them and enhancing their informative potential, or often, they serve both.

Looking for the simplest solutions, language usually makes a recourse to the limitation of the extent of informations of this of its means whose potential of information is to be enhanced. It does it with the help of these or those „demarcators“. These phenomena may be considered as an illustration for the above-mentioned general linguistic assumption concerning the expanding features to which deglomeration of functions and extension of means also belong.

Now, if we confront our considerations with most of the phenomena presented above which are the manifestation of the evolution process observed in modern Arabic dialects they might appear contradictory to each other, if it were not for certain symptoms signalling the action of „selfdefense“. Let us discuss certain examples.

We observe e.g. that the laws of economy have caused the loss of *i'rāb* in the dialects and in consequence liquidated the opposition between the 2-nd Person M. Sg Perf. and 1-st Person e.g. Sg Perf.: -ta : -tu $\Rightarrow$ t. Thus the F. e. -t now accumulates both categories and its potential of information has been lowered. But here comes the „selfdefense“ in rescue and before the verbal form with the suffix -t begin to appear the respective personal pronouns which serve as „demarcators“ of the extent of information of the verbal form enhancing at the same time its potential Comp. e.g.:

Cl. Ar.	katab-ta	:	katab-tu
	You (M.) have written	:	I have written
E	katab-t	:	inte katab-t — You have written
	I have written	:	ana katab-t — I have written
	You have written	:	

An example of renovation in a more up to the economy demands shape, we observe in the case of the continuative and habitative moods in which old Cl. Ar. periphrastic form has been replaced in PF and E by a synthetic one, viz.: P = b- || bv- + Imperfect forms. Admitting the liquidation of other Cl. Ar. moods, the „selfdefense“ considered these two worth preserving since they are the moods of „Aktionsart“ and not of purely syntactic character and as such, important from the point of view of their potential of information. But at the same time, it has preserved them in a modified, more for the demands of economy satisfactory form.

At the present stage of development of modern Arabic dialects, we observe that the phenomena caused by the exigencies of economy, the increasing accumulation among them, prevail. But symptoms of the counteraction of „selfdefense“ are also to be seen, the counteraction which will certainly grow in strength according to the general linguistic assumption on the features expanding in modern languages, the extension of syntactic means and the deglomeration of functions among them. This assumption results from the natural tendencies of the development of language towards a system securing quickest and inobstacled flow of evergrowing information. But, since at the same time, the economy factor never ceases its action, the whole evolution process in the Arabic dialects appears to us as a constant „fight“ between economy and „selfdefense“. This leads us to the conclusion that the evolution process of the dialects has a „pulsatory“ character, the „pulsation“ being caused by the counteraction of the two opposed factors, viz.: economy and „selfdefense“. Thus, after a stage of accumulation, a stage of deglomeration is to be expected, and then accumulation again. Parallely, the process of reduction is followed by extension, and it is going on, and on for ever, but always resulting in a stage of better adaptation of the language to its main aim, viz. to become an optimal mean of communication. The evolution of Arabic corroborates our point of view in many regards. Since however the accumulation is our main task at present, we shall concentrate on it. The presented above material demonstrates the Cl. Ar. as an older stage with lower accumulation, then come modern Arabic dialects with increased accumula-

tion, but also with symptoms which foretell the beginning of a new stage, a stage of deglomeration.

Hence, in consequence to what has been just said, we are to regard the actual increase trend of accumulation occurring in modern Arabic dialects as transient, though, due to their structure the accumulation betokens to remain always relatively high.

ERNST DAMMANN

VOM SATZ ZUM WORT IN BANTUSPRACHEN

1. Bildungen mit B. *yi*¹

Viele Wörter und Formantien der Bantusprachen sind aus ursprünglichen Sätzen entstanden. Diese Entwicklung soll im folgenden an einigen wenigen Beispielen gezeigt werden.

Vereinzelt sind *yi* bzw. seine Derivate noch als Kopula in Gebrauch, z. B. im Kikongo *Nzambi i mpeeve* „Gott ist Geist“, oder im Zulu *yimina* bzw. *imina*, auch *yimi* bzw. *imi* „ich bin es“, wörtlich: es ist ich.

Wortbildungen verschiedener Art enthalten ursprüngliches *yi*. Hierher gehören Infinitive.

Diese werden im Dschagga mit dem Präfix *i-* gebildet, z. B. *ikaba* „schlagen“². Dies gilt nicht nur für den Madschame-Dialekt, sondern auch für die anderen Mundarten dieser Sprache. Vgl. im Moschi-Dialekt *irunda* „arbeiten“, z. B. *yahya mba n̄irunda lja mka* „das Fegen des Hauses ist die Arbeit der Frau“³. Wie das Konnektiv *lja* zeigt, erfolgt die Konstruktion dieser Infinitive

¹ Vgl. zum Ganzen und zu Einzelhinweisen E. Dammann, *Verwendung und Bedeutung von B. yi*, AuÜ XXXIX, 1954/55, S. 31—39. Literaturhinweise, die dort und in meinen unten zitierten Arbeiten aufgeführt sind, werden hier nicht wiederholt.

² E. Müller, *Wörterbuch der Djaga-Sprache (Madjame-Mundart)*, Hamburg 1947, S. 47*, 49*.

³ J. Raum, *Versuch einer Grammatik der Dschaggasprache (Moschi-Dialekt)*, Berlin 1909, S. 273.