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THE PHONOLOGY OF WEAK VERBS

A SIMPLE DIAGRAM OF RULES

by

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The conjugation of Arabic verbs whose second or third radical is weak differs from the conjugation of strong verbs according to a small number of precise phonological rules. This article presents those rules in the form of a diagram. The diagram is easily memorized, and enables the student to produce from a knowledge of the strong verb the correct form for any weak root. It may be used as an aid or even an alternative to the memorization of the dozen or more paradigms of hollow and defective verbs. It also explains the formation from weak roots of participles, maṣdars, and defective nouns.

The diagram adopts the terminology used in Elementary Modern Standard Arabic (Michigan, 1976) and parts of it simply reorganize some of the rules presented there. All Arabic letters are transliterated, because the presence of vowels (which determine the fate of the weak consonant) is clearer in transliteration.

The examples given below illustrate how the rules of the diagram apply, first for defective verbs, then for hollow verbs, and finally for nominal forms. Each of the five notes included with the examples covers a point or exception not mentioned explicitly in the diagram. The diagram is explained as follows.

When one of the two weak letters W (و) and Y (ي) occurs as the second or third radical of a verb, conjugating that verb according to the paradigms of the strong verb would place the weak radical amid various combinations of preceding and following vowels. Indicating the weak radical by the term "glide" (G) and the vowels by /v/ when short and /vv/ when long, these hypothetical combinations are:

vGv	(e.g.	بَقِيَ	BaQiYa;	يَنْدُوُ yaNDuWu;	قَوَلَ	QaWaLa)
Gv	(e.g.	أَجْوَزَ	'aJWaZa;	اِسْتَطْوَعَ	istaTWa'a)	
vGvv	(e.g.	يَجْرِيُونَ	yaJRiYuuna;	رَمَيَا	RaMaYaa)	
vvGv	(e.g.	مَنْدُوُو	maNDuuWun;	اِجْرَايَي	'iJRaaYun)	

These sequences are listed down the left-center of the diagram which
appears on the next page. There are two other possible sequences which,
for reasons explained below, do not appear on the diagram:

Gvv   (e.g. إِقْوِرَامٌ 'iQWaaMun; مَقْوُولٌ maQWuuLun)
vG   (e.g. رَمَيْتُ RaMaYtu; أُنْدُو 'uNDuW; يَبْقَيْنَ yaBQaYna)

The sequences of vowels and glide produced according to the strong verb
pattern are unstable in all except a few cases. The stable exceptions,
where the glide behaves as a strong consonant, are listed down the left-
hand side of the diagram. In all other cases, the hypothetical strong
form is altered according to the three steps indicated on the right-hand
side of the diagram to produce the correct form for the weak verb: first,
the glide drops out; second, the vowels which preceded and followed the
glide combine as shown to form one long vowel; and third, in closed
syllables (i.e., when followed by a vowelless consonant) this long vowel
becomes short.

Illustration for Defective Verbs

1. vGv
(a) Stable exceptions: The diagram shows that a glide preceded and follow-
ed by a short vowel is stable only when followed by /a/ and preceded by
the vowel to which it is homogeneous: /iYa/ (ـِيَ) and /uWa/ (ـُوَ).
However, when followed by /a/ and preceded by the vowel to which it is
heterogeneous--/uYa/ (ـُيَ) or /iWa/ (ـِوَ) --the weak radical survives,
but only by the transformation of the /u/ or /W/ into /i/ or /Y/ respec-
tively, to produce the homogeneous sequence /iYa/ (ـِيَ). That is,
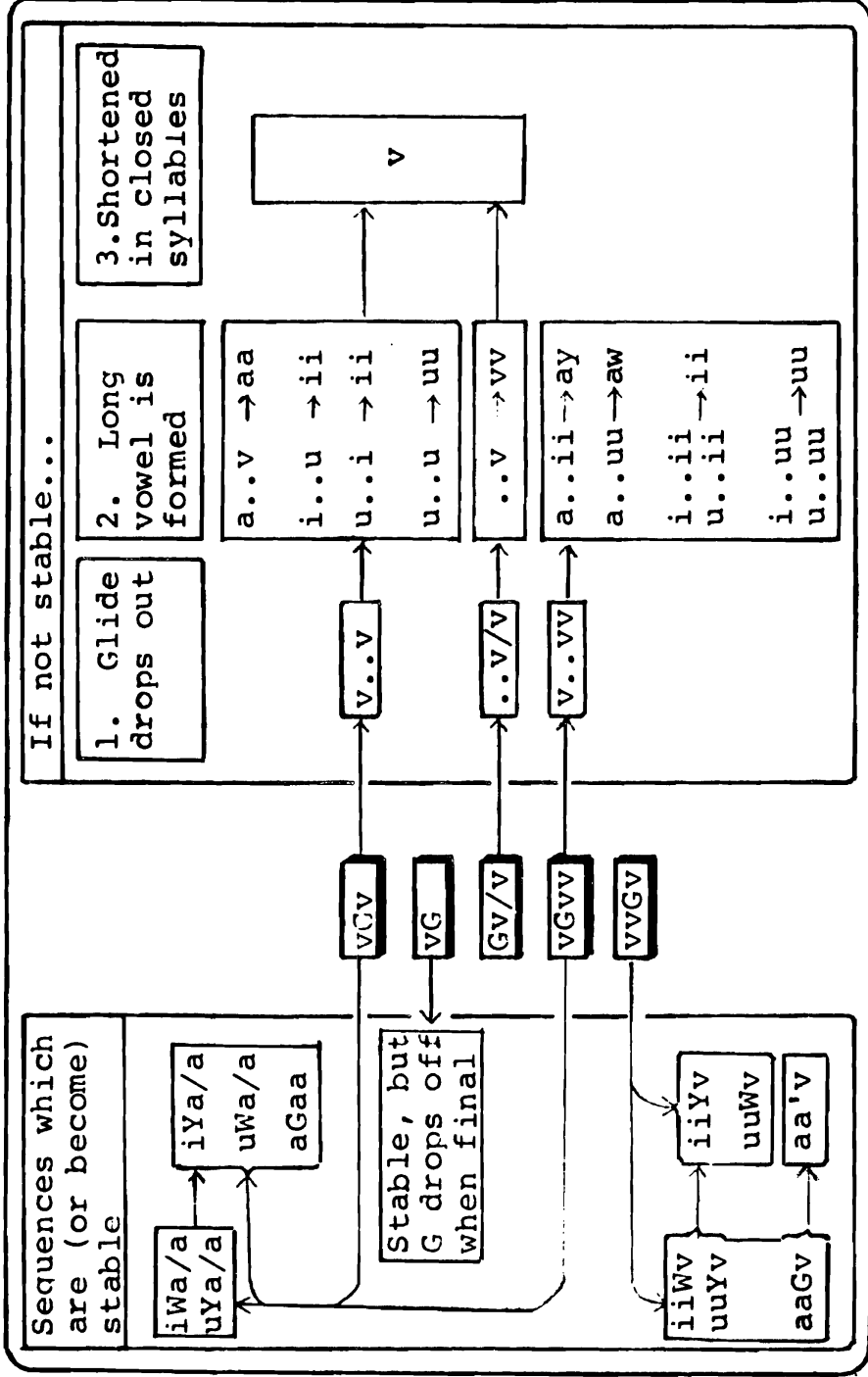when 'u-sound' and 'i-sound' are mixed, the 'i-sound' prevails. Examples.

Strong pattern	'i-sound' prevails	Becomes	
BaQiYa بَقِيَ	--	-stable	(3ms Perf Act I)
yaNDuWa يَنْدُوَ	--	-stable	(3ms Subj Act I)
RaDiWa رَضِوَ	iYa	RaDiYa رَضِيَ	(3ms Perf Act I)

Note. Once /Y/ has been substituted for /W/ in this manner as the third
radical in the third person masculine singular of the perfect, the radical
remains /Y/ throughout the inflection (though it may, of course, be elided,
as illustrated below). Similarly, final radical /W/ becomes /Y/ through-
out all the derived forms of the defective verb.

(b) In all other cases /vGv/ is unstable, and the form for the weak verb
is produced according to the three steps shown on the right of the diagram.

        (i) The glide drops out, leaving /v..v/ (the vowels which preceded
and followed it).

Phonological rules for weak verbs

Sequences which are (or become) stable

iWa/a uYa/a → iYa/a uWa/a aGaa

Stable, but G drops off when final

iiWv uuYv → iiYv uuWv
aaGv → aa'v

VGv	
VG	
Gv/v	..v/v
vGvv	v..vv
vvGv	v..v

If not stable...

1. Glide drops out

2. Long vowel is formed

v..v:
- a..v →aa
- i..u →ii
- u..i →ii
- u..u →uu

..v/v:
- ..v →vv

v..vv:
- a..ii→ay
- a..uu→aw
- i..ii→ii
- u..ii→ii
- i..uu→uu
- u..uu→uu

3. Shortened in closed syllables

v

G = Glide (W or Y)   vv = any long vowel   aw/ay = diphthongs
v = any short vowel   v/v = any long or short vowel

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(ii) These two vowels combine to form one long vowel, /vv/. If they are different, they form /aa/ if the vowel that preceded the glide was /a/, and otherwise /ii/. (As usual, /i/ prevails over /u/.)

(iii) If the long vowel thus produced is within a closed syllable, it becomes short. Examples:

Strong pattern	(i) Glide drops out	(ii) /vv/ is formed	(iii) In closed syllables	Becomes	
NaDaWa ‏تَـــــدَوَ‎	a..a	aa		NaDaa ‏نَـــــدَ ا‎	(3ms Perf Act I)
yaRMiYu ‏يَرْمِــــيُ‎	i..u	ii		yaRMii ‏يَـــرْمِي‎	(3ms Impf Act I)
NaDaWat ‏نَـــدَوَتْ‎	a..a	aa	a	NaDat ‏نَـدَتْ‎	(3fs Perf Act I)

2. vGvv

(a) The glide in this sequence is stable only if the long vowel that follows it is /aa/. Again, however, the heterogeneous /iWaa/ (‏وَا‎ ـ) and /uYaa/ (‏يَا‎ ـ) must become /iYaa/ (‏يَا‎ ـ). (The 'i-sound' prevails) Examples:

Strong pattern	'i-sound' prevails	Becomes	
RaMaYaa ‏رَمَيَـــا‎	--	-stable	(3md Perf Act I)
yaNDuWaani ‏يَنْـدُوَان‎	--	-stable	(3md Impf Act I)
yaRMiYaani ‏يَرْمِيَـــان‎	--	-stable	(" " " ")
'inQiWaaDun ‏إنْقِـــوَاد‎	iYaa	'inQiYaaDun ‏إنْقِيَـــاد‎	(vn VII hollow)

(b) In all other cases /vGvv/ is unstable and the glide drops out, the remaining vowels combining to form a long vowel as shown on the bottom right of the diagram: /a/ combines with the /uu/ or /ii/ that follows to form the diphthong /aw/ (‏وْ‎ ـ) or /ay/ (‏يْ‎ ـ); otherwise the long vowel formed is simply /uu/ or /ii/, according to the long vowel which originally followed the glide. Examples:

Strong pattern	Glide drops out	Long vowel formed	Becomes	
yaBQaYuuna ‏يَبْقَيُـــونَ‎	a..uu	aw	yaBQawna ‏يَبْقَـــوْنَ‎	(3ms Impf Act I)
taBQaYiina ‏تَبْقَيِـــنَ‎	a..ii	ay	taBQayna ‏تَبْقَـــيْنَ‎	(2fs Impf Act I)
yaJRiYuuna ‏يَجْرِيُـــونَ‎	i..uu	uu	yaJRuuna ‏يَجْـــرُونَ‎	(3ms Impf Act I)
taNDuWiina ‏تَنْـدُويِـــنَ‎	u..ii	ii	taNDiina ‏تَنْـدِيـــنَ‎	(2fs Impf Act I)

3. Note: <u>vG</u> This sequence does not appear on the diagram, because when
the glide carries no vowel it acts naturally, not as a consonant but
as a vowel lengthener. E.g.:

Strong pattern		
RaMaYtu رَمَيْتُ	RaMa<u>y</u>tu	(1s Perf Act I)
NaDaWtu نَدَوْتُ	NaDa<u>w</u>tu	(" ")
BaQiYtu بَقِيتُ	BaQ<u>ii</u>tu	(" ")
yaNDuWna يَنْدُونَ	yaNDu<u>u</u>na	(3fp Impf Act I)

But in the jussive and imperative forms, when no consonant or vowel
follows the glide the signification of the form requires a short, not a
lengthened vowel ending, so the glide simply drops off. Examples:

Strong pattern	Becomes	
yaRMiY يَرْمِي	yaRMi يَرْمِ	(3ms Juss Act I)
'uNDuW اُنْدُو	'uNDu اُنْدُ	(2ms Impv Act I)

Illustration for Hollow Verbs

1. Hollow verbs are conjugated like strong verbs in forms II, III, V, and
VI (and with some roots, indicated in the dictionary, in forms IV and X
also). In the remaining forms the rules of the diagram apply just as for
defective verbs, with one additional rule and one exception.

2. The sequence <u>Gv</u>, which occurs when the first radical of a hollow verb
carries no vowel, is unstable. It is transformed as usual: the glide
drops out, the vowel becomes long, and is shortened in closed syllables.
Examples:

Strong pattern	(i) G drops out	(ii) Vowel is lengthened	(iii) In closed syllables	Becomes	
'aJWaZa أَجْوَزَ	..a	aa		'aJaaZa أَجَازَ	(3ms Perf Act I)
'aJWaZta أَجْوَزْتَ	..a	aa	a	'aJaZta أَجَزْتَ	(2ms Perf Act I)
yaSYiRu يَسْيِرُ	..i	ii		yaSiiRu يَسِيرُ	(3ms Impf Act I)

3. Note: <u>vGv</u> The same rules apply as for defective verbs (e.g., QaWaLa

becomes QaaLa) but with one exception. In the perfect active of form I
hollow verbs, the long vowel /aa/ shortens in closed syllables not to
/a/ but to the vowel corresponding to the elided glide (e.g., QaWaLta
becomes Qa..aLta then QuLta, not QaLta). But if the first-form hollow
verb is one whose hypothetical strong form has /i/ in the perfect stem
(indicated by the presence of /a/ as the vowel of the imperfect stem),
this i-sound prevails over a middle-radical /W/. Therefore the /aa/ of
open syllables shortens in closed syllables not to /u/ but to /i/. E.g.,
NaaMa (نَامَ) (from NaWiMa) shortens to NiMta (نِمْتَ), KaaDa (كَادَ)
(from KaWiDa) shortens to KiDta (كِدْتَ), and XaaFa (خَافَ) (from XaWiFa)
shortens to XiFta (خِفْتَ). A few verbs of this pattern avoid the
problem altogether, however, by conjugating as strong verbs (e.g.,
'aWiRa (عَوِرَ), and HaWiSa (هَوِسَ).*

Illustration for participles, masdars, and defective nouns

1. All the above rules apply with the following addition. The sequence
vvGv is stable when the glide is preceded by the long vowel to which it
is homogeneous: /uuWv/ (ـُو) and /iiYv/ (ـِيّ). When the preceding
vowel is heterogeneous, the sequence is made stable by the 'i-sound'
prevailing: /iiWv/ (ـِو) and /uuYv/ (ـُوي) both become /iiYv/ (ـِيّ).
Finally, when the preceding vowel is /aa/, the glide is replaced by
hamza (ـَاء). Examples:

Strong pattern		Becomes	
maNDuuWun منْـدُو		stable	(Passive participle I)
maQDuuYun مَقْضُوي	iiYu	maQDiiYun مَقْضِيّ	(" ")
'iJRaaYun اجْـرَاي	aa'u	'iJRaa'un اجْـرَاء	(verbal noun IV)

2. Note: Gvv This sequence occurs in three nominal forms of the hollow
verb--the verbal nouns of forms IV and X and the passive participle of
form I. It follows the rule for Gv: the glide is unstable and drops out,
leaving a ready-formed long vowel. However, as compensation for this
loss of the middle radical, the two verbal nouns are given the tā'
marbūta ending, and, in verbs whose lost middle radical is /Y/, the form
I passive participle is formed with /ii/ instead of /uu/. Examples:

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* For an attempt to seek regular rules for XaaFa-XiFta data, see Michael
Brame, "Arabic Phonology," unpublished Ph. D. dissertation, M.I.T.,
1970; and Mary Mansnerus Levy, "The Plural of the Noun in Modern
Standard Arabic," unpublished Ph. D. Dissertation, Michigan, 1971,
esp. Chapter IV on Arabic Phonology.

Strong pattern		Becomes	
'iQWaaMun	aa	'iQaaMa(t)	(Verbal noun IV)
اقــــــوام		اقــــامــة	
'istiQWaaMun	aa	'stiQaaMa(t)	(Verbal noun X)
إســـتـقـوام		اسـتـقـامـة	
maBYuu'un	ii	maBii'un	(Passive participle I)
مـبـيـــوع		مَـبـيــوعَ	

3. Note. In the strong verb, the verbal nouns of forms V and VI contain /u/ before the final radical. In defective verbs, the presence of /Y/ as the final radical converts this /u/ to /i/, thus allowing the verbal noun to decline according to the pattern of defective active participles (forms I to X) and defective nouns, all of which have /i/ before the weak final radical. This pattern will be illustrated in full for the form I active participle from the root J-R-Y:

Masculine		Strong pattern	(i) G drops out	(ii) vv is formed	(iii) In closed syllables	Becomes
Singular						
Indef.	nom.	JaaRiYun	i..u	ii	i	JaaRin
		جـــارٍ				جـــار
	acc.	JaaRiYan	(stable)			JaaRiYan
		جـاريـاً				جـاريـاً
	gen.	JaaRiYin	i..i	ii	i	JaaRin
		جـــارٍ				جـــار
Def.	nom.	'al-JaaRiYu	i..u	ii	(open)	'al-JaaRii
		الجـاري				الجـاري
	acc.	'al-JaaRiYa	(stable)			'al-JaaRiYa
		الجـاريَ				الجـاري
	gen.	'al-JaaRiYi	i..i	ii	(open)	'al-JaaRii
Dual		الجــاري				الجــاري
Indef.	nom.	JaaRiYaani	(stable)			JaaRiYaani
		جـاريـــان				جـاريـــان
	acc/gen	JaaRiYayni	(stable)			JaaRiYayni
		جـاريَـيْن				جـاريَـيْن
Def.		(as indef.)				
Plural						
Indef.	nom.	JaaRiYuuna	i..uu	uu	(open)	JaaRuuna
		جـاريـونَ				جـارونَ
	acc/gen	JaaRiYiina	i..ii	ii	(open)	JaaRiina
Def.		(as indef.) جـاريـــنَ				جـاريـــنَ

In the feminine, all cases end in /-iYa(t)../ or in /-iYaat../, and the glide is therefore stable.

The paragraphs above illustrate the diagram's application, and each of the five notes explains a point not mentioned in the diagram. Not every student finds it easier to learn complicated verb paradigms by first grasping the abstract rules which they follow. But for teaching those that do, it is hoped that this diagram may be a help.