Pausal Forms

I. INTRODUCTION

A pausal form is the form a word has at the end of a sentence or major phrase or before a pause or stop in the speech flow (waaf), if that is different from the form it takes in the beginning or middle of a phrase. In Classical and Modern Standard Arabic, most words have different pausal and medial forms. Phonetic pausal phenomena probably occur in all languages, although they may differ from language to language, but morphologically conditioned pausal changes are much rarer, and they are the ones most often referred to when discussing pausal forms in Arabic. The morphological pausal phenomena of Arabic prose are of a single general type: the pausal form is produced by subtracting from the base form of the word a final short vowel and the final consonant of certain suffixes. The pausal form is thus shorter than the medial form, and grammatical features (case and mood) that in a full form are marked by suffixes consisting of a short vowel are absent from the pausal form. Therefore, the medial or context form of a word may be appropriately called its full form or basic form, in that the pausal form can be deduced from it but it cannot be derived unambiguously from the pausal form. When mentioning an Arabic word in isolation, one usually cites the pausal form, for two reasons: a word in isolation is, in effect, in pausal position; and the Standard Arabic pausal forms are, on the whole, more similar than the full forms are to the way the words are pronounced in the modern vernacular dialects of Arabic. Thus, if one asks what the Holy Book of Islam is called, or how to say 'city', the answer is given in the pausal form, al-qur'ān or madīna, not the full form al-qur'anu or madinatun.

The most detailed description of the pausal forms in a Western language is by Fleisch (1990: 172–197). Wright (1898:368–373) gives a concise but full statement of the facts, Retsö (1994) presents a lucid synthesis of them, Birkeland (1940) focuses on the historical development of the system, and Roman (1982:493–554) attempts to reconstruct the phonetics and phonology behind it.

2. PAUSAL FORMS IN STANDARD ARABIC

Pausal forms are derived from the basic, full forms by (i) deleting final short vowels (so the pausal form of *kataba* 'he wrote' is *katab*); (ii) deleting a final suffix -n (so the pausal form of *kitābun* 'book' is *kitāb*); (iii) replacing the suffix -at- with -ah (*kitāb-at-u-n* 'writing' becomes *kitābah*). This Standard Arabic morphological alternation between full and pausal forms is absent from the modern vernacular dialects and was lost in the medieval period, if not earlier; the vernacular form of a word is generally derived from the Standard Arabic pausal form, not the full form.

The deletion of final short vowels is integrally related to the fact that, in both Old Arabic and the modern vernacular dialects, with few exceptions, the phonemic opposition of vowel and consonant quantity is neutralized in pausal position. (In some modern dialects this applies only to unstressed vowels.) Thus, the final consonants of the words yad 'hand' and radd 'response' are identical, when not followed by another word (both may be pronounced with a longer or a shorter d). The same is true with vowels. In the Damascus vernacular, for example, "If a final vowel is...unaccented, it varies between long and short depending on the phrasing and intonation. Thus...the i in xadi ['take:IMPER:FEM:SG'] is unaccented (i.e. $x \neq di$), but is sometimes actually long" (Cowell 1964:19), so the difference in the vowels between xôdi 'take!' and xôd\-ha 'take her!' is that in $x \ni d - ha$ the stressed \bar{i} must be long, but in xôdi the unstressed final i may be long or short. Something similar was likely the case in Old Arabic (although stress is not known to have been a factor), and the same is true of Modern Standard Arabic, where the final vowels of 'anti 'you [fem. sg.]' and bintī 'my daughter' are pronounced identically.

A word that ends in a long vowel is unchanged in pausal position, but when a word that basically ends in a short vowel appears in pausal position, it either loses that vowel, lengthens the vowel, or adds h (Retsö 1994). Loss of

xədī-ha

EALL 3_pausal forms_1-0.indd 1 8/22/2007 8:56:09 PM

the vowel is the norm for final short vowels that are suffixes or part of suffixes, so the pausal form of *al-bayt-u* 'the house [Art-house-Nom]', mu'allim-ūna 'teachers [teacher-Nom. p]', bayt-u-ka 'your house [house-Nom-2ms]', daras-a 'he studied [studied-3ms]', daras-nāhu 'we studied it [studied-1p-3ms]', 'an-hu 'from it' are al-bayt, mu'allimūn, baytuk, daras, darasnāh, 'anh respectively. Lengthening is frequent at the ends of lines in poetry. Final short vowels that are not part of suffixes are (in normative Classical Arabic) followed in pause by -h (called by the grammarians $h\bar{a}$) as-sakt, cf. Fleisch 1990:185-186), so the pausal forms of the jussive yaqi 'he protects', the imperative ra 'see!', and kayfa 'how' are yaqih, rah, kayfah.

The suffix -n, marking the absolute state of nouns and adjectives or the energetic mood of verbs, is also deleted in pause; thus, the pausal forms of bayt-u-n 'a house [house-Nom-Abs]' is bayt. However, for words ending in a-n, the -n is deleted, but the -a (which may be the marker of accusative case or part of the stem) is not dropped but rather lengthened, so the pausal forms of bayt-a-n 'a house [house-Acc-Abs]', fata-n 'a boy [boy-Abs]' are baytā, fatā.

Pausal forms are based on the corresponding medial, full forms, and not directly on the abstract underlying form. For example, fatan 'boy' is derived from an underlying form /fatayu-n/ [boy-Nom-Abs], via an intermediate stage fatā-n; if the pausal form were derived directly from /fatay-u-n/, deletion of the final -u-n would yield the incorrect form *fatay (which is, however, attested in certain ancient dialects, cf. Rabin 1951:116). Rather, the pausal form must be derived from the full form fata-n (or an intermediate form fatā-n), yielding fatā. Similarly, in both the indicative and jussive forms of the verb 'he stands': yaqumu and yaqum, the stem vowel is underlyingly long (indicative /yaqūm-u/, jussive /yaqūm/), but in the jussive the $/\bar{u}$ / becomes u by the general rule that shortens vowels in closed syllables. The difference of vowel length between the indicative yaqumu and the jussive yaqum is maintained in their pausal forms, which are respectively yaqum and yaqum. The vowel in the pausal indicative yaqum does not shorten. A special case concerns words like qādi-n [judge-Nom/Gen-Abs], which is derived from /qadi-n/ by the same vowel-shortening rule. In pause, where the -n is deleted, the word may have the form $q\bar{a}d\bar{i}$, $q\bar{a}d$, or $q\bar{a}d\bar{i}$ (Carter 1990). Two of these are problematic: $q\bar{a}d\bar{i}$ is not acknowledged by the foremost grammarian, Sībawayhi, and probably is not used in oral Modern Standard Arabic; and $q\bar{a}d\bar{i}$ ends in a short vowel, which is unexpected in pausal position (where in any case it is not phonemically distinct from a long \bar{i}).

A special rule applies to the suffix -at-, which marks several different morphosyntactic features on nouns and adjectives, most often feminine gender but also some masculines and plurals. Regardless of function, -at- has the pausal form -ah, so for the full forms mu'allim-at-u-n [teacher-fs-Nom-Abs], xalīfat-a-n [caliph-at-Acc-Abs], al-harāmiyy-at-u [Art-thieves-at-Nom], the corresponding pausal forms are mu'allimah, xalīfah, al-ḥarāmiyyah. (This does not apply to the suffix -at which marks the 3rd person feminine singular on verbs; katab-at 'she wrote' is unchanged in pause.) In many dialects, the suffix is -a rather than -ah, and for this reason the suffix is often represented in conventional transcriptions simply as -a. That the suffix was -ah in Old Arabic is clear from the facts that some modern dialects preserve the h and that in classical poetry it rhymes with stems ending in ah, and not with final \bar{a} . One might suppose that the formation of this pausal -ah from -at- is a twostep process, first deleting the -t specifically in this suffix and then epenthesizing -h after the final short vowel by the general process. This might well have been the historical sequence of events, it this does not account for hayāh, the pausal form of hayātun (haya-at-u-n) 'life', where deletion of the final t-u-n would leave hayā, which does not end in a short vowel and so would not get an epenthetic h. In Modern Standard Arabic, there is an alternative pausal form hayāt, a back-formation from suffixed forms like hayāt-ī 'my life'.

Arabic orthography does not normally indicate the difference between pausal and full forms. The spelling is based on the pausal forms rather than full forms, and a word is spelled identically, whether in medial position or in pause. To be precise, the basic spelling, composed of letters of the alphabet, represents the pausal form, even in medial position, while the optional diacritics that augment the basic spelling with additional phonological information, including short vowels, represent the full form, even at the end of a sentence.

PAUSAL FORMS 3

This practice brought about the creation of two orthographic features that exist specifically to represent the full-pausal alternation. One is the representation of the absolute-state suffix -n, which is deleted in pausal forms. Rather than being written with the letter $\langle N \rangle$ ($n\bar{u}n$), it is indicated by doubling the diacritical sign that represents the short vowel preceding it. For example, dār-i-n [house-Gen-Abs] is written دار <DaARii> (transliterating Arabic letters with roman capitals, and optional diacritics with lowercase letters); and this spelling indicates a full pronunciation dārin and at the same time a pausal pronunciation $d\bar{a}r$. The sequence -an, which becomes $-\bar{a}$ in pause, is written with the letter 'alif that normally represents the <DaArAaa> دَارا Sound ā, so دُارا <DaARaaA> or دَارا 'house' (accusative, absolute) represents the full form dāran and the pausal form dārā. The second orthographic feature specific to a pausal phenomenon is the representation of the suffix -at-, which is -ah in pause. This is spelled with the symbol ö, known as tā' marbūṭa 'tied T', which is a hybrid of two letters: it has the shape of ٥ <H> but the dots of ت <T>. Thus, a spelling like مَدينَة <MaDiYNaHtuu> 'city (nom., absolute)' (representing the dots of <T> with a superscript) simultaneously indicates the full pronunciation madinatum and the pausal pronunciation madinah. When -at- is followed by a suffix that contains a long vowel or a consonant other than the suffix -n, so that the -at- is not final and cannot change to -ah in pause, as in the word madīnatī 'my city', the مَدينَتي :<tā' marbūṭa is replaced by a regular <T> <MaDiYNaTiY>.

The indigenous medieval grammarians describe several other phonetic features of Old Arabic in connection with the pausal phenomena (cf. Owens 2006:21-23, 230-234). In some ancient dialects or recitation traditions, a final short vowel might be neither deleted nor lengthened but rather shortened (this is referred to as rawm), or in place of a final u the lips might be inaudibly rounded after the preceding consonant ('išmām), and perhaps something analogous could occur with i. A final consonant might be lengthened (tad'īf 'doubling'), so that 'aḥmad (the name Aḥmad) could sound like 'ahmadd in pause, and this is quite audible in some modern dialects. If deletion of a final vowel would leave a word ending in a consonant cluster, metathesis (*naql*) might take place instead, so that *bakr-u-n* [Bakr-Nom-Abs] would become *bakur* (Rabin 1951:39).

In Modern Standard Arabic, speakers follow the same three basic rules: deletion of final short vowels, of the suffix -n, and of the t of the suffix -at- (usually pronouncing this as -a rather than -ah). Vowel reduction and metathesis are obsolete. However, the sequence -a-n, which in Classical Arabic should be -aa in pause, is more often retained as -an when reading, and deleted in spontaneous speech.

All the pausal phenomena that occur in prose also appear in poetry, but in poetry there is another possibility, which in fact occurs more frequently: a final short vowel may either be deleted or lengthened, as required for the \rightarrow rhyme. Although -i and -u rhyme with $-\bar{\imath}$, $-\bar{u}$ and presumably they were to be pronounced as long, they are often written as short, but final -a in such cases is always written long. Thus, 'antimight rhyme with binti, and be pronounced 'anti, although both 'anti and binti might be written with a long or short final vowel. A similar option exists for the suffix -at-: a word like $mad\bar{\imath}n-at$ -u-n may appear in pause as either $mad\bar{\imath}nah$ or $mad\bar{\imath}nat\bar{\imath}$ (but not as $mad\bar{\imath}natun$).

3. Where do pausal forms occur?

What kinds of actual pauses, or the ends of what kinds of phrases, trigger the appearance of pausal forms? Because the technical term in Arabic is waqf 'stopping, standing', it is usually assumed that pausal forms should appear before actual pauses. However, in speech, intonation contours signaling the end of a clause or other major syntactic constituent often are followed without delay by further sound, and the contrary is also true: one may pause to think, swallow, cough, or correct oneself in the middle of a phrase without applying a final intonation contour. Rather than viewing pausal forms as, ideally, an automatic consequence of a following actual pause, or silence, it is more realistic to think of pausal forms as signaling the end of a major syntactic constituent (Fleisch 1990:196-197). What is formalized for Qur'anic recitation applies to all sorts of utterances: "The types of pauses are characterized by the syntactic and semantic completeness or incompleteness of the preceding phrase and determine whether the reciter is to stop, to continue with what follows, or back up to bridge a break in meaning or syntax" (Nelson 1985:19). It is the syntax that determines the potential for the use of pausal forms as well as for appropriate actual pauses in speech.

For classical Arabic prose we do not know where pausal forms occur, because the spelling does not differentiate between full and pausal forms. For classical poetry, the rhyme makes it clear that words at the end of a line, which always coincides with the end of a major syntactic constituent, are to be read in pausal form, and the meter shows that full forms appear in midline. In the Qur'an, too, rhyme frequently shows where pausal forms are called for. For example, in sura 1, al-Fātiḥa, the words ar-raḥīmi, al-'ālamīna, ad-dīni, nasta'īnu, mustaqīma, and ad-dāllīna nearly rhyme as arraḥīm, al-ʿālamīn, ad-dīn, nastaʿīn, mustaqīm, ad-dāllīn. According to the rules of $\rightarrow tajwid$, which prescribe the phonetics of Qur'anic recitation, pausal forms are used at the end of a verse and at certain spots in midverse, which are indicated by special symbols in the standard editions of the Qur'an, but reciters have some discretion as to which of the indicated pausal locations to actually apply. An enlightening discussion of the rules and esthetics is found in Nelson (1985:27-31). Pause is obligatory following "semantic and syntactic independence of what precedes or follows....[where] the phrase preceding the obligatory pause is selfcontained and takes the form of an epigram or summation and most commonly signals the end of a subject matter" (1985:28), while, if there is "syntactic and semantic dependence on what follows, yet it may be a complete phrase...[p]ause...is permitted here, especially if the phrase is the first half of a conditional sentence, or similarly syntactically dependent on the following phrase" (1985:29).

In the oral use of Modern Standard Arabic, the practice is complex and variable (Meiseles 1977; Schulz 1981; Diem 1974:36–37 and passim; Holes 2004:63–68). Since the Standard Arabic system of cases and moods, which are marked for most words by short-vowel suffixes, is not part of any modern vernacular dialect, Arabs must expend significant effort as part of their schooling to learn it, and, like all school subjects, some individuals master it thoroughly

and others less so; some can apply it 'on the fly', while others need to think before deciding on the appropriate form. Using pausal forms eliminates the need to make case and mood distinctions in many types of words. In the most formal situations, i.e. the reading of a prepared script by a skilled reader such as a professional newscaster or some public speakers, pausal forms are relatively few and found almost exclusively before actual pauses, i.e. silences or phrase-final intonation contours at the ends of clauses and sentences. At the opposite end of the spectrum, speaking spontaneously, all or nearly all words may be in their pausal forms. Thus, full forms connote formality, and pausal forms in medial position connote informality (Diem 1974:37), and for this reason full forms occasionally occur even before actual pauses. The grammatical function of the word may also influence whether a pausal or a full form is used. Holes (2004:63-68) observes the following tendencies in the retention of full forms in pausal position, in recent news broadcasts: nouns but not adjectives tend to keep the -i-n marking the genitive absolute; and the accusative absolute -a-n is generally retained in adverbs like tagrīb-a-n, may be retained or dropped in masculine nouns and adjectives, but is dropped in feminine nouns after the -at-, which becomes -a(h). Extensive transcripts of speech in different registers, showing varying degrees of use of full and pausal forms, are given by Diem (1974).

4. From Old Arabic to the modern vernacular dialects

Most scholars accept that in Old Arabic full and pausal forms alternated just as the indigenous grammarians described, and that over the course of time the full forms (and with them the case and mood distinctions, represented predominantly by short final vowels) were lost from ordinary speech, surviving only in the learned use of Classical Arabic, so that the forms that appear in the modern vernaculars are derived from the Old Arabic pausal forms. Diem (1991) shows that the high degree of redundancy of the case and mood marking in Classical Arabic, followed by the loss of the syntactic-semantic categories of case and mood, must have preceded, and been conducive to, the elision of the final short vowels, that is,

PAUSAL FORMS 5

the generalization of pausal forms to medial position. Just when the full forms dropped out of colloquial use is a matter of dispute, with opinions ranging from a couple of centuries before the time of Muḥammad to a couple of centuries after. The issue of timing has profound implications for the understanding of how natural or artificial the language of early Arabic poetry was, and hence to what extent that poetry should be relied on as a basis for interpreting the Qur'an. As important as the question of timing is, it does not affect the general picture of the history of the language, for it is clear that the short-vowel case endings were features of Proto-Semitic, having cognates in other Semitic languages, and that the pausal forms correspond closely to the forms in the modern dialects; the transition from the former type to the latter in Arabic could not have been abrupt, so there must have been a period of variation.

However, Owens (1998; 2006) has challenged this picture, suggesting that varieties of Arabic with full forms, case, and mood, and varieties without them, coexisted for many centuries, and in fact that such coexistence may have predated the rise of Arabic as a distinct Semitic language. If so, they must have remained in close contact and shared in the many innovations of grammar and vocabulary that characterize Arabic as a whole vis-à-vis other Semitic languages. In this view, Classical Arabic represents the variety that retained case and mood endings, while the modern dialects descend from a form that lacked them, and not from Classical Arabic at all.

There are, however, good reasons to believe that pausal and full forms coexisted within a single variety of Arabic and that such a variety is the ancestor of the modern dialects (Hoberman 1995:162-164). The grammarians, especially Sībawayhi, took pains to describe the language as they observed it in use, and would not have invented as pervasive a phenomenon as the pausal/full alternation; Classical Arabic poetry can be parsed for meter and rhyme only if words in midline are in their full forms but at line-ends are in pausal forms; there is also evidence from non-Classical spellings in the early Islamic period and from a transcription of an Arabic text in Greek letters (Hopkins 1984). Another sort of evidence comes from relics of the alternations that survive in the modern dialects. These are of two kinds.

The first involves the suffix -at- (pausal -ah). Nouns with this suffix have two forms in modern vernacular Arabic, a form ending in -t that appears when suffixed or followed immediately by another noun in a 'construct phrase' (→ 'idāfa), as in sayyārt-i 'my car' or savyārit it-tabīb 'the doctor's car', and the other form, without -t, that appears everywhere else: sayyāra. The structure of sayyārit it-ṭabīb derives from an Old Arabic genitive structure like sayyārat-u aṭ-ṭabīb-i 'the doctor's car [car-Nom Art-doctor-Gen]'. When final short vowels were lost, Old Arabic full forms (like sayyāratu) were replaced by pausal forms (sayyārah) wherever possible, i.e. at the end of every phrase, but the t was retained in a construct because the first element of a construct phrase is not a noun phrase but a single noun. Furthermore, the t has survived as a fossil in two types of words: as a 'connective t' in a few vowel-initial noun plurals after numerals, such as xams-t-iyyām 'five days', from Old Arabic xams-at-u 'ayyāmi-n, and as t in the numerals from 13 through 19, for instance xamsta'š(ar) from xams-at-a 'ašar-a. These examples are from Syrian Arabic (Cowell 1964:170-171), but the forms are similar in many dialects.

Alternations like sayyāra ~ sayyārit are found in all modern dialects. The second relic exists in only a few (Blau 1965:187-202; Fischer and Jastrow 1980:120-121; Owens 1998:215-217). In these dialects, an indefinite noun may be linked to a following adjective, prepositional phrase, or relative clause by a suffix consisting of a short vowel plus n. This is evidently a relic of the Old Arabic absolute state suffix -n, which is deleted in pausal forms (→ nunation). Thus, an Old Arabic structure like nās-u-n katīr-u-n 'many people [people-Nom-Abs many-Nom-Abs]', or in pause nās-u-n katīr, became nāsen četīr [people-Linker many], where the -n survives internally but not at the end of the construction. Furthermore, this accounts for the *n* in such relic forms as Baghdadi *šinu* 'what', from ('ayyu) šay'-i-n huwa [(which) thing-Gen-Abs it].

The survival of the t and n medially, but not finally, in these two modern productive alternations ($sayy\bar{a}ra \sim sayy\bar{a}rit$ and $n\bar{a}s \sim n\bar{a}s$ -en) and in the fossilized relic forms shows that at some time pausal and full forms coexisted in the same variety of Arabic, in synchronic alternation very much as the grammarians described it.

5. PAUSAL PHENOMENA IN MODERN VERNACULAR DIALECTS

The ends of phrases in modern Arabic dialects, as in all other languages, are marked by slight phonetic modifications of the sounds of words. In the simplest case, there might be a prolongation of some sounds. Thus, in Damascus Arabic, "the end of a phrase is often signaled by drawling out what comes after the accent.... With certain kinds of intonation – in questions, for instance – the phrase-end drawl is often exaggerated so that a post-tonic short vowel is as long as or longer than a true *long* vowel in other positions. In the question kīf ḥālak? 'how are you?', the last a may actually be longer than the \bar{a} in the preceding syllable" (Cowell 1964:17). In some dialects, the phrase-end effects are greater. In the dialect of the Negev Bedouin, in pause, stressed a is followed by a glottal stop (medial mišá, pausal mišá' 'he went'), and stressed long vowels may be followed by [h] (medial damm\, pausal damm\h 'my blood'), among other effects (Blanc 1970:119, 122-123). Final \bar{i} and \bar{u} become diphthongs in some dialects of Maltese and Lebanese and Palestinian Arabic (Borg 1977). In parts of Egypt (including Cairo until the end of the 19th century), final a is replaced by e in pause (Blanc 1973–1974). Some of these effects are strikingly reminiscent of those described for Classical Arabic.

BIBLIOGRAPHICAL REFERENCES

Birkeland, Harris. 1940. *Altarabische Pausalformen*. Oslo: Dybwad.

Blanc, Haim. 1970. "The Arabic dialect of the Negev Bedouins". Proceedings of the Israel Academy of Sciences and Humanities 4:7.112–150.

—. 1973–1974. "La perte d'une forme pausale dans le parler arabe du Caire". *Mélanges de l'Université Saint-Joseph* 48.375–390.

Blau, Joshua. 1965. The emergence and linguistic background of Judaeo-Arabic: A study of the origins of Middle Arabic. Oxford: Oxford University Press.

Borg, Alexander. 1977. "Reflexes of pausal forms in Maltese rural dialects?" Goldenberg (1977:211–225).

Carter, Michael G. 1990. "Qādī, qādi, qād: Which is the odd man out?". Studies in the history of Arabic grammar, II: Proceedings of the 2nd Symposium on the History of Arabic Grammar, Nijmegen, 27 April–1 May 1987, ed. Kees Versteegh and Michael G. Carter, 73–90. Amsterdam and Philadelphia: J. Benjamins.

Cowell, Mark W. 1964. A reference grammar of Syrian Arabic (based on the dialect of Damascus). Washington, D.C.: Georgetown University Press. Diem, Werner. 1974. Hochsprache und Dialekt im Arabischen: Untersuchungen zur heutigen arabischen Zweisprachigkeit. Wiesbaden: F. Steiner.

—... 1991. "Vom Altarabischen zum Neuarabischen: Ein neuer Ansatz". *Semitic studies in honor of Wolf Leslau*, ed. Alan S. Kaye, 297–308. Wiesbaden: O. Harrassowitz.

Fischer, Wolfdietrich and Otto Jastrow. 1980. Handbuch der arabischen Dialekte. Wiesbaden: O. Harrassowitz.

Fleisch, Henri. 1990. Traité de philologie arabe. I. Préliminaires, phonétique, morphologie nominal. 2nd ed. Beirut: Dar El-Machreq.

Goldenberg, Gideon (ed.). 1977. Israel Oriental studies, VII. Tel Aviv: Tel Aviv University.

Hoberman, Robert D. 1995. "Subtractive morphology and morpheme identity in Arabic pausal forms". *Yearbook of morphology*, 1995, ed. Geert Booij and Jaap van Marle, 161–174. Dordrecht: Kluwer Academic Publishers.

Holes, Clive. 2004. *Modern Arabic: Structures, functions, and varieties*. Washington, D.C.: Georgetown University Press.

Hopkins, Simon. 1984. Studies in the grammar of Early Arabic. Oxford: Oxford University Press.

Meiseles, Gustav. 1977. "Restitution of 'word-endings' in Modern Literary Arabic". Goldenberg (1977:173–195).

Nelson, Kristina. 1985. *The art of reciting the Qur'an*. Austin: University of Texas Press. (Repr., Cairo: American University in Cairo Press, 2001.)

Owens, Jonathan. 1998. "Case and Proto-Arabic".

Bulletin of the School of Oriental and African
Studies 61.51-73, 215-227.

—. 2006. A linguistic history of Arabic. Oxford: Oxford University Press.

Rabin, Chaim. 1951. Ancient West-Arabian. London: Taylor's Foreign Press.

Retsö, Jan. 1994. "The treatment of final syllables in the classical Arabic metres: The linguistic background". *Arabic prosody and its applications in Muslim poetry*, ed. Lars Johanson and Bo Utas, 99–106. Uppsala: Swedish Research Institute in Istanbul.

Roman, André. 1982. Etude de la phonologie et de la morphologie de la koinè arabe. Marseille: Université de Provence.

Schulz, David E. 1981. Diglossia and variation in Formal Spoken Arabic in Egypt. Ph.D. thesis, University of Wisconsin-Madison.

Wright, W. 1898. A grammar of the Arabic language, II. 3rd ed. Cambridge: Cambridge University Press. (Repr., 1971.)

ROBERT D. HOBERMAN (Stony Brook University)