CHAPTER 5

Old Persian

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1. HISTORICAL AND CULTURAL CONTEXTS

Old Persian is one of two Old Iranian languages which are attested in the Achaemenid royal inscriptions (see below), members of that branch of the Indo-European language family called Indo-Iranian, or Aryan (the Persians designate themselves and their language by the term *ariya-*). The Iranian languages began to take shape when the ancestors of the Indo-Aryans left the common homeland in the steppes of Central Asia in the first half of the second millennium BC. The Western Iranian peoples, the Medes who settled in Media and the Persians in Fārs (speaking a Northwestern and Southwestern Iranian dialect respectively), step into the light of history in the ninth century BC, when Median names are first attested in Assyrian documents.

While "Old Persian" was certainly the language of Fārs, the variety which is attested in the Achaemenid inscriptions appears to be a rather artificial idiom, peppered with dialectal and archaic words, unlike any dialect actually spoken (characteristics of a distinct spoken Old Persian may be discerned from certain spontaneous phonetic developments, and from Old Persian words and names as rendered in other languages). The language called Old Persian was thus restricted to royal usage (as was the cuneiform script in which Old Persian was recorded). Even so, Old Persian was neither the lingua franca nor the administrative language of the Achaemenid Empire, roles fulfilled by Aramaic and, to a limited extent, various regional languages spoken within the empire. As a consequence, the linguistic situation of the empire was a quite complex one; and epigraphical Old Persian was itself influenced by these other languages, particularly in its vocabulary and even syntax (e.g., in the occurrence of a postpositive genitive, as in *xšāyaϑiya xšāyaϑiyānām* "king of kings" or *vašnā Auramazdāha* "by the favor of Auramazdā").

The language of the Old Persian inscriptions is dialectologically homogeneous in principle. Only some lexical items (technical terms, etc.) prove to be borrowed from other Iranian languages, mainly the Northwestern Iranian dialect of the Medes (see §6), the political predecessors of the Persian Achaemenids.

The only direct and authentic sources available for the Old Persian language are the cuneiform inscriptions on durable objects (rock, stone, metal, rarely clay tablets) ranging over the period from Darius I (522–486 BC) to Artaxerxes III (359/8–338/7 BC), but dating in the main from the reigns of Darius I and Xerxes I (486–465 BC). In this short period the inscriptions, for the most part, are trilingual (in Old Persian, Elamite, and Babylonian), but even the oldest text, the one of the Bīsutūn monument of Darius I (see below), has sections which are only in Old Persian, or in Old Persian and Elamite. With Artaxerxes I

(465–425/4 BC) the number, size, and significance of the texts begin to decrease rapidly, and they consist almost exclusively of stereotyped formulae, which, in part, seem to have been poorly understood at the time of composition. On the other hand, however, apart from their trilingualism, it is just this monotonous stereotyped style of the texts, along with the great number of parallel texts with their often-repeated invocations of the supreme god and with the regularly quoted royal titles, that has facilitated an understanding of the language and texts and which has allowed reconstruction of fragmentary texts. The abbreviatory system of citing texts is presented at the end of the chapter.

The decreasing number of Old Persian texts after the reign of Xerxes I may be attributed to a loss of fluency with the royal language. By that period, spoken Persian had evolved into a somewhat different form, so discrepancies between everyday speech and the traditional language of inscriptions had arisen. Only upon that basis can the serious grammatical faults which appear in the texts of later Achaemenid kings (mainly of Artaxerxes II and III) be understood.

Most of those "corrupt" forms (incorrect endings, hybrid genitive forms, etc.) can be found in the monolingual inscription A^3Pa of Artaxerxes III; but they also occur in most of the inscriptions of Artaxerxes II and in the monolingual texts claiming to have been composed by Ariaramnes and Arsames in the sixth century BC (that these texts were produced under Artaxerxes III instead, is suggested by the fact that among the later Achaemenids it is only this king who derives his lineage from Arsames, and not only from Darius' father Hystaspes). The use of a form like *būmām* in lieu of the expected accusative singular feminine *būmǐm* "earth" can best be explained by positing an actually spoken monosyllabic [bu:m] (like Middle Persian *būm*) and a scribal attempt to "transform" the spoken form into an Old Persian one (an attempt which was rendered detectable by its lack of success, as it used the *ā*-stems as the normal class of feminine nouns). A similar archaizing process is seen in the pseudo-Old Persian accusative singular *šāyatām* for expected *šiyātim* "happiness," where the later form *šāt* has been changed into *šāyat-* by reversing the regular sound change of Old Persian *āya* to Middle Persian *ā* (though being inappropriate here) and adding again the ending *-ām* of the feminine *ā*-stems.

2. WRITING SYSTEM

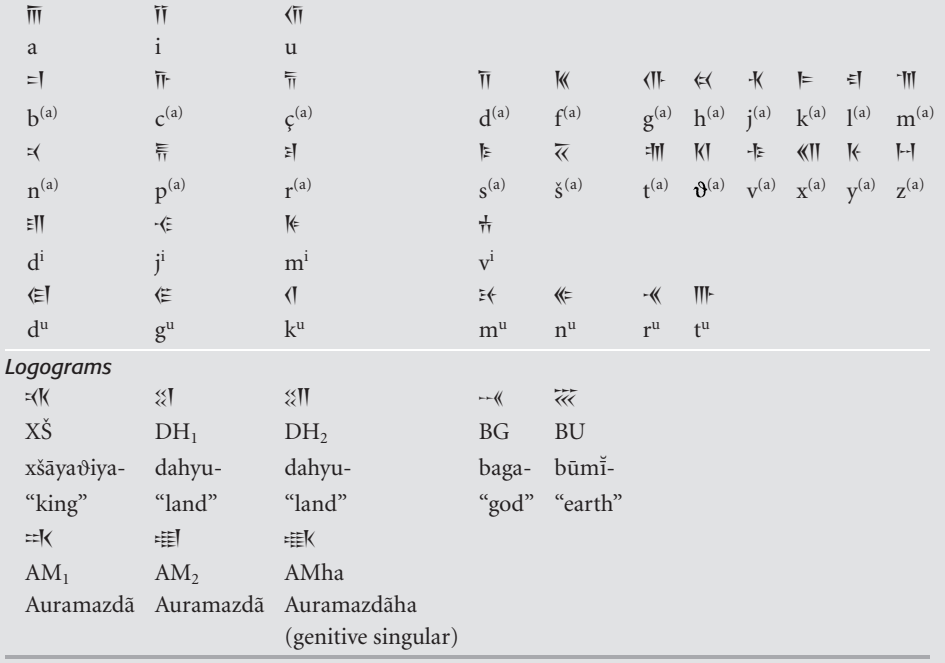
2.1 Graphemic shape and inventory

Old Persian texts are recorded only in a cuneiform script. This script does not, however, directly continue the Mesopotamian cuneiform tradition (see *WAL* Ch. 8, §2), being similar to the other cuneiform systems only in the employment of "wedge-shaped" characters. In other words, the Old Persian script is not the result of an evolution of the Mesopotamian system, but a deliberate creation of the sixth century BC. It remains unclear why the Persians did not take over the Mesopotamian system in earlier times, as the Elamites and other peoples of the Near East had, and, for that matter, why the Persians did not adopt the Aramaic consonantal script (Aramaic being the lingua franca of the Persian Empire; see §1).

Old Persian cuneiform was used only by the Achaemenid kings for two centuries and only for their own language – that is, the rather artificial literary language of their royal inscriptions. The use of this script was thus in effect a royal privilege. It was a splendid and imposing script best suited for hard surfaces, and apparently used neither for poetic texts nor for administrative nor historical writings.

Table 5.1 The Old Persian cuneiform script

Syllabic symbols



Logograms

The total number of phonetic characters (which consist of two to five single elements) is thirty-six. These are naturally divided into four groups:

(1) A. Three pure vowel (V) characters: *a*, *i*, *u*
B. Twenty-two syllabic characters whose vowel component is *a* (C^a), but which can also be used to represent a consonant occurring before another consonant or in word-final position (C): $b^{(a)}$, $c^{(a)}$, $ç^{(a)}$, $d^{(a)}$, $f^{(a)}$, $g^{(a)}$, $h^{(a)}$, $j^{(a)}$, $k^{(a)}$, $l^{(a)}$, $m^{(a)}$, $n^{(a)}$, $p^{(a)}$, $r^{(a)}$, $s^{(a)}$, $š^{(a)}$, $t^{(a)}$, $ϑ^{(a)}$, $v^{(a)}$, $x^{(a)}$, $y^{(a)}$, $z^{(a)}$
C. Four syllabic characters with inherent *i* vowel (C^i): d^i, j^i, m^i, v^i
D. Seven syllabic characters with inherent *u* vowel (C^u): d^u, g^u, k^u, m^u, n^u, r^u, t^u

In addition, there are eight logograms for commonly used words such as “king,” “god” or “land”; these are not obligatory and are not used consistently. The logograms are of a more complex shape, contain up to twelve elements and even show angles placed above angles (as is the case with the numerals). Further, a word-divider is used as well as number symbols (vertical wedges for the units, angles for the tens, and a special symbol for 100 (found in a single inscription).

One of the remarkable stylistic features of Old Persian cuneiform is that the wedges and angles which make up the cuneiform symbols never cross. The attested characters (excluding the numerals and the word-divider) are presented in Table 5.1.

Within the relatively short period of its use this writing system shows a few changes in character shapes – an attempted standardization of the height of those wedges which at first

(i.e., in the Bīsutūn text) took up only half the height of the line. However, the mechanics of the writing system (see below), with all its "imperfections," remain unchanged.

2.2 Orthographic conventions

As the set of CV characters with inherent *i* or *u* vowel shows, the inventory as a whole is inconsistent and asymmetric in its structure, for no ascertained reason (phonetic or otherwise):

(2)

d^a	g^a	j^a	k^a	m^a	n^a	r^a	t^a	v^a
d^i		j^i		m^i				v^i
d^u	g^u		k^u	m^u	n^u	r^u	t^u	

Beyond this, there are no C^i and C^u characters of the form $b^{i/u}$, $c^{i/u}$, $ç^{i/u}$, $f^{i/u}$, $h^{i/u}$, $l^{i/u}$, $p^{i/u}$, $s^{i/u}$, $š^{i/u}$, $ϑ^{i/u}$, $x^{i/u}$, $y^{i/u}$, $z^{i/u}$. Even if the writing system were not plagued by such omissions, the ambiguity of many spellings would not be eliminated; the entire group of C^a graphemes has its own affiliated spelling difficulties, which reveal that this writing system is neither phonemic nor phonetic.

As a consequence of the preceding graphemic problems, a number of *orthographic conventions* had to be employed when particular phonemic sequences are written. The most important of these "rules" (to the extent that they can be identified with certainty) are the following:

1. Long vowels are not distinguished from short ones except for *ā* in medial position.
2. Proto-Iranian final **-a* is written with an additional <a> (i.e., as <-C^a-a>), though in all probability this indicates an actual lengthening of the vowel.
3. The vowels *ǐ* and *ŭ* are written with the vocalic characters <i> and <u>, and medially with an additional preceding <C^i> or <C^u> sign (when available, otherwise <C^a> is used).
4. Final *-ǐ* and *-ŭ* are written with an additional semivowel as <-i-y> and <-u-v> respectively.
5. The "short" diphthongs *ai* and *au* are written <-C^a-i->, <-C^a-u-> (in final position extended by <-y>, <-v>) and therefore can be only partially distinguished from simple vowels (namely, <d^a-i> = *dai*, but <d^i-i> = *di* or *dī*, whereas <t^a-i> = *tai* and *ti* or *tī*).
6. The so-called "long" diphthongs *āi* and *āu* are written <-C^a-a-i->, <-C^a-a-u-> and are thus unambiguous (except in initial position according to **1**).
7. Syllabic *r̥*, which in all probability was pronounced as [ər], is written with consonantal <r> as <C^a-r-C^x> (= *C r̥ C*) in medial position, and as <a-r-> (= *r̥-*) word-initially (where it cannot be distinguished from *ar-* and *ār-*).
8. The nasal consonants *m* and *n* are written before consonants only in special cases, like *mn* in <k^a-m-n^a-> = *kamna-* "few"; otherwise they are not written, so that <b^a-r^a-t-i-y> spells *baranti* "they bear" as well as *barati* "(s)he bears."
9. In word-final position the only consonants which appear are *-m*, *-r*, and *-š*. Thus, while final *-m* is commonly written, as in <a-b^a-r^a-m> = *abaram* "I brought," final *-n* (from Proto-Iranian **-n* and ultimately from **-nt)* is omitted: <a-b^a-r^a> = *abaran* "they brought."
10. The postconsonantal glides *y* and *w* are usually written <-i-y-> and <-u-v-> (with <-$C^{i/a}$-i-y-> spelling [Ciy]).

11. Early Iranian **h* (from Indo-Iranian **s*) is omitted in writing before Old Persian *ŭ*, *m*, and *r* (cf. <a-u-r-> = *Aura-*, equivalent to Avestan *ahura-* "lord"), apparently reflecting its phonetic status in the particular Old Persian dialect, on which the inscriptional language is based.
12. The Early Iranian cluster **hw* is likewise spelled as Old Persian <u-v> (by **10** and **11**).
13. The vowel *ĭ* is commonly omitted after the *h* sign, though not without exception, as in <h-i-d^{u}-u-š> = *Hinduš* "Indus."

Given the cumbersome nature of the writing system, clear, one-to-one correspondences between graphs and phonemes do not exist. Some of the above spelling rules result in critical morphology being hidden, particularly rule **5** (e.g., the absence of a distinction between *tai* and *ti* means that third singular, indicative present endings, active *-ti* and mediopassive *-tai* cannot be distinguished) and rule **8** (the omission of preconsonantal *n* blurs, for example, the distinction between the third-person singular and plural endings *-ti*, *-tu* and *-nti*, *-ntu*).

The ambiguous nature of Old Persian spelling means that there is normally some set of possible interpretations of a word. In any particular case then a correct reading is dependent upon careful philological and linguistic (in particular, etymological) analysis – chiefly by comparison with cognate languages (Avestan, Vedic, etc.) or with later Persian developments. In the case of names and technical terms, the forms which they take in Elamite and Babylonian versions of an Old Persian inscription plays a decisive role. For example, the Old Persian spelling <a-s$^{(a)}$-t$^{(a)}$-i-y$^{(a)}$> "is" has, according to the above rules, seventy-two possible readings. Only from Avestan *asti*, Vedic *ásti*, Middle and Modern Persian *ast*, and so forth, does it become clear that the correct interpretation of this sequence is *a-s-t-i-y*, that is, *asti*. That the geographical name spelled <k$^{(a)}$-p$^{(a)}$-d$^{(a)}$> is to be read *Kampanda* (with two nasals omitted in the spelling by rule **8** above) can be ascertained by the Elamite rendering *Ka-um-pan-taš*. Things are not, however, always so simple; a great number of uncertain readings remain unresolved, among them, for example, the second syllable of King Cambyses' Persian name.

It is important to distinguish sharply between graphic and phonemic (and eventually phonetic) units in the publication of Old Persian inscriptions and discussion of lexical or grammatical problems. Most of the existing manuals (text editions, grammars, etc.) use a "normalizing" interpretation – a kind of blend of the graphic and the phonemic which often is determined by the views about Old Persian held by the particular scholar, her/his scholarly tradition, or her/his time.

2.3 Origin of the script

The problems of the origin of the Old Persian cuneiform script, of the date and process of its introduction, have been treated again and again without general agreement having yet been reached concerning the controversial issues. There are several factors that one must take into account:

1. The passage DB IV 88–92, in which a new "form of writing" (Old Persian *dipiciçam*) is mentioned that Darius has made and is said to be *ariyā* "in Aryan."
2. A number of archeological and stylistic observations regarding the Bīsutūn monument, by which several subsequent stages in its genesis may be established.
3. Those Old Persian inscriptions that are supposed or claimed to predate Darius I.
4. The structural analysis of the script itself.

Though the oldest attested inscriptions in Old Persian language are the Bīsutūn texts (first the minor captions, then the major inscription), the creation of a new type of writing for recording the king's mother tongue seems to have begun already under Cyrus II. This assumption is based not least on the observation that the characters k^u and r^u needed for writing the royal name *Kuruš* must belong to some initial set of characters, for their shapes have a quite simple pattern, even though the phonemic sequences expressed by them are not very common. A similar observation reveals that this writing system was created for the Old Persian language and not for some other Iranian dialect like Median: the fricative *ç*, which is the Old Persian reflex of Proto-Iranian **ϑr* and which was foreign to Median, likewise is represented by one of the simplest characters, which must have been among the earliest of signs created.

A number of striking features appear to suggest that the *invention* of the script indeed began under Cyrus, but that Darius was the first to employ it. An original strategy seems to have aimed at a consistent and unambiguous system of marking short and long vowels and diphthongs by means of a complete set of three CV characters – for each consonant – used in conjunction with three V signs; for example:

(3) *<b^a> =*ba* *<b^i> = *bi* *<b^u> = *bu*
*<b^a-a> = *bā* *<b^i-i> = *bī* *<b^u-u> = *bū*
*<b^a-i> = *bai*
*<b^a-a-i> =*bāi*
*<b^a-u> = *bau*
*<b^a-a-u> = *bāu*

But this concept (which would have required a total of sixty-nine symbols) must have been abandoned at some point in favor of the attested system with its many ambiguities. As can be seen from the system's inconsistent structure (see [2]), the reorganization of the original system must have been regulated by extralinguistic (formal and stylistic) considerations – for example, the tendency to avoid complex signs with crossed wedges or with more than five elements. In any event, the principle of "Occam's razor" was not employed in devising the Old Persian spelling practices to the extent that many spellings are quite uneconomical (e.g., that of final *-i*, *-u*, etc.).

It is the history and genesis of the Bīsutūn monument itself which strongly suggests that the Old Persian script was introduced in connection with these texts. The Old Persian captions of the figures represented in the relief and likewise the Old Persian text of the major inscription do not belong to the original design of the monument, but were added only later to the Elamite and Babylonian versions. That the mother tongue of the kings had been at first neglected on this monument certainly suggests that the Old Persian language had not been previously set to writing.

2.4 Decipherment

Because Old Persian cuneiform fell into disuse with the fall of the Achaemenid Empire, and thus knowledge of that script and of the values of its individual characters was lost already in antiquity, this writing system had to be deciphered in the modern era. Old Persian texts first came to the attention of the West during the seventeenth century. A solid basis for the decipherment was laid by C. Niebuhr, who in 1778 published the first precise copies of Achaemenid trilingual texts and who recognized that the first and most simple system was written from left to right. Following the identification of the word-divider and the attribution of the texts to the Achaemenids, G. F. Grotefend, in 1802, began the process

of decipherment. By assuming that the inscriptions were records of the ancient Persians and might therefore contain the names, titles, and genealogies of some of their kings, he succeeded in determining the approximate phonetic values of about ten signs.

From this starting point, other scholars, progressing step by step, brought the decipherment to its conclusion. In 1826 R. Rask identified the $n^{(a)}$ and $m^{(a)}$ signs in the genitive plural ending *-ānām* (corresponding to Avestan-*aṇąm*) and thus produced the first evidence for a close relationship with the Avestan language. In 1836 E. Burnouf and C. Lassen undertook a more systematic comparison with Avestan. Lassen, in 1845, made the very important discovery that the consonant characters of the Old Persian script could have an inherent vowel, as in the ancient Indian scripts. The work was completed in 1846/1847 by H. C. Rawlinson with his publication, translation, and interpretation of the entire DB text. A final touch was added in 1851 by J. Oppert, who established the value of the last (and most rarely used) of the phonetic signs, $l^{(a)}$, which even now is attested only in four foreign names for the marginal phoneme /l/ (not belonging to Old Persian proper).

3. PHONOLOGY

3.1 Phonemic inventory

Identifying the complete system of Old Persian phonemes is a rather difficult task, since only a minimal set of phonemes is revealed by the attested graphemes. In order to advance beyond that set, the data must be analyzed and evaluated on a language-internal basis and by methods of historical-comparative linguistic analysis.

3.1.1 Consonants

The following consonantal phonemes can be confidently identified for Old Persian:

(4)

	Bilabial	*Labiodental*	*Interdental*	*Dental*	*Velar*
Stop					
Voiceless	p			t	k
Voiced	b			d	g
Fricative		f	ϑ		x
Nasal	m			n	

(the velar nasal [ŋ] is only a positional variant with allophonic status). In addition, Old Persian possesses two so-called "palatal" affricates *c* and *j*, which in all probability were palato-alveolar /č/ and /ǰ/. There also occur six fricatives – /s/, /z/, /ç/, /š/, /ž/, and /h/, the liquids /r/ and /l/, and the glides /y/ and /w/.

The actual pronunciation of those phonemes is not as secure as is suggested by the conventional representation. Thus, regarding the voiced stops /b, d, g/, it has been hypothesized that they were – at least in intervocalic position (if not more generally) – voiced fricatives [β, ð, ɣ]. The sibilant /ž/, which is not represented graphically by a separate character, but is written with the *j* sign, must be postulated for reasons of historical phonology: DB II 64 *n-i-j-a-y-m* = [niž-āyam] "I departed, went off" presents evidence for the Proto-Aryan verbal root **ay* + prefix **niš-/niž-* (with a *j* sign denoting the reflex not of Proto-Aryan **ǰ*, but of **ž*, the voiced counterpart of **š* in the position before a voiced sound). For the time being, however, the question of whether *ž* and *ǰ* are two distinct phonemes or only allophones of one and the same archiphoneme remains unresolved.

The fricative phoneme identified as the palatal /ç/ is the Old Persian reflex of the Proto-Iranian cluster **ϑr* (which is preserved in [nearly] all other Old Iranian dialects). Its phonetic realization remains unclear, however. It can be said with certainty only that the sound was pronounced as a voiceless sibilant (certainly not as a palato-alveolar sibilant [š] and not as an affricate [č]); in Middle Persian its reflex has merged with that of Old Persian /s/.

Old Persian has a syllabic [r̥], which is only a contextually conditioned allophone of the liquid /r/ (between stops), however, and not an independent phoneme. The lateral /l/ has a marginal position in the phonemic inventory of Old Persian, since it is attested only in four foreign names.

3.1.2 Vowels

Old Persian possesses three short and three long vowel phonemes, presented in Figure 5.1:

	FRONT	*CENTRAL*	*BACK*
HIGH	ī / i		ū / u
LOW		ā / a	

Figure 5.1 Old Persian vowels

Whether the long vowels are somewhat lower than the short ones cannot be established. In addition, there are two "short" and two "long" diphthongs, which are not phonemes, but only biphonematic combinations of the short or long low-central vowel with a subsequent short high-front or back vowel; since the first is the syllable nucleus, those diphthongs result in

(5)

Short diphthongs	*Long diphthongs*
ai	āi
au	āu

Those four diphthongs, inherited from Proto-Iranian, are preserved in Old Persian as such at the time of the origin of the Old Persian cuneiform script and during the reign of Darius I and Xerxes I, as can be deduced from their regular orthographic representation (see §2). From a later period, there is evidence of a monophthongization of *ai* and *au* to *ē* and *ō* respectively – seen in the development from Old to Middle Persian and revealed by transcriptions of Persian words in other languages (the "collateral" tradition; see §6). The only transcription evidence of any linguistic weight for Old Persian proper is provided by the Elamite language, which has no diphthongs itself (see *WAL* Ch. 3, §3.2). The Elamite script therefore lacks a regular means of spelling such sounds and so offers little possibility of documenting an early (pre-460 BC) monophthongization. Even so there are, in fact, unmistakable Elamite attempts to render Old Persian diphthongs: for example, *ti-ig-ra-ka-u-da* for Old Persian *tigra-xauda-* "with pointed caps."

It should be noted that not every graphic sequence seemingly pointing to *ai* and *au* actually records a diphthong. Spellings like *a-i-š-t-t-a* "he stood" (from Proto-Iranian **a-hišta^{o}*), the theonym *a-u-r-m-z-d-a* (from Proto-Iranian **Ahura Mazdā*) or the country name *h-r-u-v-t-i-š* (from Eastern Iranian **Harahwatī-* "Arachosia") record sequences of two syllables, [-a$i-] and [-a$u-] (i.e., *A-uramazdā*, not *Au-ramazdā*, etc.).

3.2 Phonotaxis

Vowels and diphthongs are not subject to any phonotactic restrictions, and likewise all single consonants appear in initial and intervocalic position. For the final position, however, only single consonants (neither geminate consonants nor any other consonant clusters) are found, and only *-m*, *-r*, and *-š* are written. Those final consonants which are omitted in writing were perhaps still pronounced but in some manner phonetically reduced. Note that original Proto-Iranian **-a* is written as Old Persian <-a> (i.e., [-a:]), but original **-an* or **-ad* is written as -<C^{a}> (i.e., [-a]).

Even if Old Persian shows a certain preference for open syllables (see §3.3; suggested also by historical developments like that of the Proto-Iranian clusters **Cy*, **Cw* to *Ciy*, *Cuw*), consonant clusters appear in great number, especially biconsonantal clusters, and particularly in word-internal position. More complex clusters with three (*xšn-*, *-xšn-*, *-xtr-*, *-ršn-*, *-nst-*) or even four elements (only non-native *-xštr-*) are rare. Because of the very limited corpus of Old Persian texts, only a small subset of all clusters possible is actually attested. The most commonly occurring of the attested clusters are (i) those of the form *Cr* and *rC*; (ii) those having an initial sibilant (*sk*, *st*, *zd*, *zb*, *zm*, *šk*, *št*, etc.); and (iii) those having an initial nasal (though not written; *nk*, *ng*, *nt*, *nd*, *mp*, *mb*, etc.).

3.3 Syllable structure

It is difficult to make specific observations about the syllable structure of Old Persian. Most syllables appear to be open: [$(C)V]; more rarely [$C$_1$C$_2$V$] (e.g., *xša-ça-* "kingdom") or even [C_1C_2C_3V] (e.g., *xšnā-sā-ti* "he may know"). In the case of consonant clusters the syllable boundary may fall within the cluster or before it; the position of the boundary may depend on various criteria: the relative sonority of the particular elements of the cluster; the presence and position of a morpheme boundary; whether or not the cluster concerned is permissible in word-initial position; and so forth. Syllables also occur with the structure [VC], [CVC], and [C_1C_2VC] (e.g., *u-fraš-ta-* "well punished"), and perhaps also those with two consonants following the syllabic nucleus (e.g., *ϑans-ta-nai* "to say").

3.4 Accent

Accent is not marked in the Old Persian writing system; consequently both the nature and the position of the accent are quite uncertain. In the development from Old to Middle Persian, final syllables disappear, suggesting that the accent was fixed in the manner of Classical Latin or later Old Indo-Aryan. There may be (indirect) evidence for the hypothesis that the inherited free accent (perhaps a pitch or tonal accent), of which there are traces in Avestan and in modern Iranian languages (especially Pashto), survived until the reign of Darius I.

3.5 Diachronic developments

In this section, only the most interesting and significant diachronic phonological developments will be presented (and only vis-à-vis Proto-Iranian).

3.5.1 Consonants

Among consonantal developments, the most distinctive concerns the Old Persian reflexes of the Proto-Iranian continuants (presumably affricates **t^{s}* and **d^{z}*), which are themselves

reflexes of the Proto-Indo-European palatals $*\hat{k}$, $*\hat{g}$, $*\hat{g}^h$: in contrast to the other Iranian languages Old Persian shows *ϑ* in, for example, *viϑ-* "house, royal house" = Avestan *vīs-* = Vedic *víś-* from Proto-Aryan $*wíć$-, and *d* (if not [ð]; see §3.1.1) both in, for example, *yad-* "to worship" = Avestan *yaz-* = Vedic *yaj-* from Proto-Aryan $*yaǰ$-, and in *adam* "I" = Avestan *azəm* = Vedic *ahám* from Proto-Aryan $*aǰ^h ám$.

There are also certain distinctive Old Persian consonantal changes of a conditioned or syntagmatic type. These changes show an Old Persian development which has progressed beyond that seen in the other Old Iranian languages. Thus, the Proto-Iranian cluster $*ϑr$ develops into Old Persian *ç* in, for example, *puça-* "son" = Avestan *puϑra-* = Vedic *putrá-*. That this change is of a rather late date is suggested by the fact that Proto-Persian $*ϑr$, where *ϑ* is a reflex of Proto-Indo-European $*\hat{k}$, Proto-Iranian $*t^s$, has also undergone the change: thus, one finds Old Persian *ni-çāraya-* "to restore" = Avestan *ni-srāraiia-* from Proto-Aryan $*ćrai$- and Proto-Indo-European $*\hat{k}lei$-.

Before $*n$ or $*y$ Proto-Iranian $*ϑ$ became Old Persian *š*: for example, *a-r-š-n-i-* ([arašni-]) "cubit" from Proto-Iranian $*araϑni$- = Vedic *aratní-*; *h-š-i-y-* ([hašiya-]) "true" = Avestan $ha^iϑiia$- from Proto-Iranian $*haϑya$- = Vedic *satyá-*.

Old Persian *šiy* develops from Proto-Iranian $*čy$ (i.e., from a Proto-Indo-European $*k^w$ that was palatalized before $*y$): for example, *š-i-y-a-t-i-* ([šiya:ti-]) "happiness" = Avestan $šā^iti$- from Proto-Aryan $*čyāti$- = Latin *quiēti-*, nominative *quiēs*.

A completely independent development of Old Persian, setting it apart from all the other Iranian languages (and thus one of its chief innovative characteristics), is the simplification of the Proto-Iranian clusters $*t^sv$ and $*d^zv$, producing Old Persian *s* and *z* (not *sp* and *zb*): for example, *a-s-* ([asa-]) "horse" = Avestan *aspa-* = Vedic *áśva-*; v^i*-i-s-* ([visa-]) "all" = Avestan *vīspa-* = Vedic *víśva-*; *h-z-a-n-m* (acc. sg. [hiza:nam]) "tongue" (for the spelling *h-z-* see §2.2, **13**), evolving from Proto-Iranian $*hid^zvā^o$ as do Avestan *hizuuā-* or Parthian *ʿzb ʾn* ([izβa:n]) from earlier $*hizbān^o$.

3.5.2 Vowels

The vowels and diphthongs of Proto-Iranian remained unchanged in Old Persian at least until the period of Darius I and Xerxes I (on the later monophthongization of the short diphthongs see §3.1.2). The reflex of Proto-Iranian word-final short $*$*-a* is usually written as <-C^a-a> = *-ā*, as in *u-t-a* ([uta:]) "and" (Avestan *uta*, Vedic *utá*); it appears probable that this lengthening was a linguistic reality and not only a graphic phenomenon. Vowel contraction seems to play a minor role in Old Persian. The most obvious example is that of $*$*-iya-* producing *-ī-*, as in *n-i-š-a-d-y-m* ([ni:ša:dayam]) from uncontracted $*ni$-*a-šādayam* "I have put down" (cf. the alternative form *n-i-y-š-a-d-y-m*), and in *m-r-i-k-* ([mari:ka-]) "young man" from $*mariyaka$- (with a secondary *-Ciya-* from$*$*-Cya-*, from Proto-Aryan $*maryaka$- (= Vedic *maryaká-*).

Proto-Iranian sonorants, $*m$, $*n$, $*y$, $*w$, and $*r$ (including Proto-Iranian $*ar$ from Proto-Aryan $*r̥H$ as in *darga-* "long" = Old Avestan *darəga-* = Vedic *dīrghá-*, etc.), remain unchanged in Old Persian. Proto-Aryan $*Cy$ and $*Cw$ developed into Old Persian *Ciy* and *Cuw* respectively, regularly written as <C$^{i/a}$-i-y> and <C$^{u/a}$-u-v>: for example, *a-n-i-y-* ([aniya-]) "other" = Avestan a^iniia- = Vedic *anyá-*; *h-r^u-u-v-* ([haruva-]) "all" = Avestan ha^uruua- = Vedic *sárva-*.

Syllabic $*r̥$ as an allophone of consonantal $*r$ occurring between consonants (C_C) and word-initially before a consonant (#_C) likewise is preserved in Old Persian and probably

was pronounced as [ər]. Since in Old Persian orthography this [ər] can be rendered only in a makeshift fashion (like the sequence [ar]) by <(C)a-r-C>, other unambiguous evidence is required to confirm the value [ər] – either morphological (e.g., *k-r-t-* "made, done" = [kərta-] with the zero-grade of the root like Avestan *kərᵊta-* and Vedic *kr̥tá-*), or etymological (e.g., *a-r-š-t-i-* "spear" = [aršti-], revealed by Vedic *r̥ṣṭí-*). A special case is the development of Proto-Iranian **r̥* to Old Persian *u* in the present and aorist stems of the root *kar* "to do" (e.g., k^{u}*-u-n-u-t-i-y* [kunauti] "he does" = Avestan *kərᵊnaoⁱti* = Vedic *kr̥ṇóti*); these are usually explained as allegro forms originating in (and spreading from) the imperative.

Two phonetic phenomena, which have given such a strange appearance to many Avestan words (see Ch. 6, §§3.3; 3.4.2; 3.4.10), are without significance for Old Persian. Epenthesis (i.e., the insertion of *i* or *u* into an existing syllable) is completely foreign to Old Persian, and anaptyxis (i.e., the development of a vowel between two consonants) is nearly unknown. The Avestan epenthesis, which is triggered by an ensuing *i/y* or *u/w* (as in Avestan *haⁱϑiia-* "true" from **haϑya-*, see §3.5.1), is not attested in Old Persian inscriptions (transcription of Old Persian words in other languages may reveal that a late process of this sort characterized colloquial Old Persian). Anaptyxis is found only in the case of the clusters *dr* and *gd* when followed by *u*: for example, one finds d^{u}*-u-*r^{u}*-u-v-* ([duruva-]) "firm" = Avestan *druua-* ([druwa-]) = Vedic *dhruvá-*; present tense stem d^{u}*-u-*r^{u}*-u-*j^{i}*-i-y-* ([duruǰiya-]) "to lie" = Vedic *drúhya-*; *s-u-*g^{u}*-u-d-* ([Suguda-]), as well as *s-u-g-d-* ([Sugda-]), "Sogdiana."

4. MORPHOLOGY

4.1 Morphological type

Typical of ancient Indo-European, Old Persian is an inflectional language with synthetic morphological patterns. Owing to lack of evidence, both the nominal and pronominal and, still more, the verbal paradigms are known only partially in most instances. Therefore it is not possible to give a fully formed account of the formation, function, and actual use of nominal, pronominal, and verbal forms. The same is true, by and large, with regard to nominal and verbal stem formation.

4.2 Nominal morphology

The grammatical categories marked on the Old Persian noun are case (seven), gender (three), and number (three). Whereas the three genders (masculine, feminine, and neuter) and the three numbers (singular, dual, and plural) inherited from Proto-Indo-European have preserved their usual significance and function, the case system has been reduced by one in Old Persian. Likewise gender and number show the expected and customary grammatical agreement (see §5.6), though there are some instances in which two singular subjects occur not (as would be expected) with a dual, but with a plural form of the verb.

The seven attested nominal cases are the following: (i) nominative (for subject); (ii) vocative (for direct address); (iii) accusative (for direct object and direction); (iv) genitive (used as possessive, subjective, objective, and partitive genitive); (v) locative (for indication of place or goal); (vi) instrumental (for indication of means, cause, and extension); and (vii) ablative (only combined with prepositions). The functions of the Proto-Indo-European dative (as the case of the indirect object) have been absorbed by the Old Persian genitive (e.g., *haya sĭyātim adā martiyahyā* "who created happiness for man"). Moreover, the case

system has also been reduced and simplified by abandoning formal distinctions; thus, for example, there are only three separate forms in the singular of the *ā*-stems: nom., voc. *-ā*; acc. *-ām*; gen.(-dat.), abl., loc., instr. *-āyā*.

4.2.1 Stem formation

Old Persian has inherited from Proto-Indo-European its two chief means of nominal stem formation: (i) *derivation* (by means of primary or secondary suffixes attached to the underlying [verbal] root itself or to an already derived nominal stem), and (ii) *composition* of two word stems (with or without a particular [compositional] suffix). Also playing a role in stem formation are *ablaut* (see *WAL* Ch. 17, §3.2) and, for derivation, the vowel-lengthening process known as *vr̥ddhi*. Only some subset of the numerous inherited nominal suffixes of Old Persian can be treated here, since the scanty evidence available does not allow one to judge whether some particular formation is only a traditional relic within Old Persian or actually remains a living and productive process.

One of the productive suffixes is undoubtedly the "locatival" suffix *-iya-*, forming adjectives, especially ethnics such as *Armin-iya-* "Armenian" (from *Armina-*), *Ūj-iya-* "Elamite" (from *Ūja-*), *Mac-iya-* "inhabitant of Makrān" (from *Maka-*), and so forth. The Proto-Iranian suffix **-hwa-*/**-šwa-* forming fractions (see §4.6) seems to be similarly productive.

A distinctive phenomenon of derivation which Old Persian has inherited and which, as several indisputable examples show, is still productive in this language, is the lengthening of the first vowel of a word, a process traditionally called *vr̥ddhi* (a term coined by the ancient Indian grammarians). The clearest examples attested are the ethnic *Mārgava-* "inhabitant of Margiana," derived from *Margu-* "Marv, Margiana"; and the month name *Bāgayādi-*, based on **baga-yāda-* "worship of the gods." Other apparent cases are not without problems: for example, the month name Θ*āigraci-*; a form which – could *vr̥ddhi* be confirmed – would be essential for settling the question of whether Old Persian derivatives of words with *i* or *u* vowels have the *vr̥ddhi* form *āi* and *āu* like Old Indo-Aryan or the short diphthong *ai*, and *au*, as it is found in Avestan.

4.2.2 Nominal declension

Old Persian nouns have been traditionally grouped into declensional classes, though with regard to the origin of the nominal system at an earlier stage of the Indo-European parent language, a number of other criteria are of relevance, chiefly accent placement and ablaut variation and their distribution over the root, the (optional) suffix, and the ending (see *WAL* Ch. 24, §4.1.1.3). Old Persian evidence is available for stems ending in *-a-*, *-ā-*, *-i-*, *-ī-*, *-ī/yā-*, *-u-*, *-ū-*, *-h-* or *-š-*, *-r-*, *-n-* and in several stops and fricatives. The only productive stems, however, are those ending in vowels, and in particular those of the *a*-class, as those lexemes suggest which show forms of different declensions side by side: most clearly *tunuvant-* "strong" (in nom. sg. *tunuvā*) versus *tunuvanta-* (in gen. sg. *tunuvantahyā*); compare the "bridge" accusative singular *tunuvantam*.

The only paradigms which are known somewhat extensively are those of the stems in *a-* and *ā-*; their singular and plural forms may be given in (6) and (7) (for the dual see below); all other case forms and declensional patterns are presented only in the larger summary of (8) and (9):

(6) The Old Persian *a*-stems

	Singular		*Plural*	
	Example	*Ending*	*Example*	*Ending*
Animate				
Nom.	martiya "man"	-ø < *-s	martiyā	-ā < *-ās
			bagāha "god"	-āha < *-āsas
Voc.	martiyā	*-ø	—	
Acc.	martiyam	-m	martiyā	-ā < *-āns
Gen.	martiyahyā	-hyā	martiyānām	-ānām
Abl.	Pārsā	-ā < *-āt	Sakaibiš	=instr.
Instr.	kārā "army"	-ā	martiyaibiš	-aibiš
Loc.	Pārsai	-i	Mādaišuvā	-aišu + -ā
	dastay-ā "hand"	-i + -ā		
Neuter				
Nom.-acc.	xšaçam "kingdom"	-m	āyadanā "place of worship"	-ā < *-ā

(7) The Old Persian *ā*-stems

	Singular		*Plural*	
	Example	*Ending*	*Example*	*Ending*
Animate				
Nom.	taumā "family"	-ø	stūnā "column"	-ā < *-ās
Voc.	—		—	
Acc.	taumām	-m	[hamiçi]yā "rebellious"	-ā < *-āns
Gen.	taumāyā	-yā < *-yās	°zanānām "with . . . races"	-ānām
Abl.	Same as genitive		—	
Instr.	framānāyā "order"	-yā	—	
Loc.	Aϑurāyā	-i + ā	maškāuvā "skin"	-u < *-su + -ā

The set of case endings attested in Old Persian may be summarized in (8) and (9) without differentiating them by declensional class and without a detailed historical-comparative interpretation:

(8) Summary of Old Persian singular case endings

Animate	
Nom.	-ø, -š from *-s; -ø from *-ø
Voc.	-ø from *-ø
Acc.	-m, -am from *-m, -m̥
Gen.	-a from *-as; -ø, -š from *-s; -hyā from *-sya; -yā from *-yās
Abl.	-ā from *-āt; -ø from *-t; or identical to the genitive
Instr.	-ā from *-ā; -yā from *-yā
Loc.	-i from *-i; -ø from *-ø, both with or without postpositive -ā
Neuter	
Nom.-acc.	-m from *-m; -ø from *-ø

(9) Summary of Old Persian plural case endings

Animate	
Nom.	-a from *-as; -ā from *-ās; -āha from *-āsas
Voc.	Identical to the nominative, but not attested
Acc.	-ā from *-āns; -ø, -š from *-ns
Gen.	-ānām, -ūnām from *-V̄nām
Abl.	Identical to the instrumental
Instr.	-biš, -aibiš from *-biš
Loc.	-aišuvā, -šuvā from *-šw-ā; -uvā from *-sw-ā, attested only with postpositive -ā
Neuter	
Nom.-acc.	-ā from *-ā

Several dual forms are securely attested in Old Persian texts, such as nom. *u-b-a* ([uba:]) "both"; acc. *g-u-š-a* ([gauša:]) "both ears"; gen. *g-u-š-a-y-a* ([gauša:ya:]); instr. *d-s-t-i-b-i-y-a* ([dastaibiya:]) "with both hands," all belonging to stems in *-a-*. In addition, the following occur: nom. *u-š-i-y* ([uši:]), as well as *u-š-i-y-a* ([ušiya:]), three times each, and instr. *u-š-i-b-i-y-a* ([uši:biya:]), from neuter *uši-* "intelligence" (literally "ear" and therefore in dual number).

Adjectives behave like the nouns with regard to stem formation and declension. The comparative is formed by means of the Proto-Indo-European suffix *-*yes-*/-*yos-* and the superlative by *-*is-to-*. As examples, consider Old Persian nom. masc. sg. *t-u-v*^{i}*-i-y-a* ([taviya:]), from **tau-yah-* "stronger," and *m-ϑ-i-š-t* ([maθišta]) "greatest."

4.3 Pronominal morphology

A variety of pronouns is attested in Old Persian: (i) personal pronouns (including the so-called anaphoric pronoun); (ii) several demonstrative pronouns; (iii) relative; and (iv) interrogative-indefinite pronouns.

4.3.1 Personal pronouns

The personal pronouns are characterized (i) by an absence of grammatical gender; (ii) by a remarkable heteroclisis between the nominative and oblique cases; and (iii) by the existence of frequently used enclitic forms. All these characteristics have Proto-Indo-European ancestry. The following personal pronouns are attested in Old Persian:

(10)

	Accented forms		
	First	*Second*	*First Plural*
Nominative	adam	tuvam	vayam
Accusative	mām	ϑuvām	—
Genitive	manā	—	amāxam
Ablative	-ma	—	—
	Enclitic forms		
Accusative	-mā	—	—
Genitive	-mai	-tai	—

The dual forms are not attested at all; the genitive has taken over the function of the dative. Ablative *-ma*, though being attested only in combination with the preposition "by," *h-c-a-m* ([hacā-ma]) "by me," is not enclitic (demonstrated by accented Vedic *mát*).

The anaphoric pronouns "he, she, it" share the characteristic features of the personal pronouns, though there are no nominative forms and no heteroclisis. Old Persian exhibits enclitic forms built from the stems *-ša-/-ši-* and *-di-*: acc. sg.*-šim* "him," gen. *-šai* "his," acc. pl. *-šiš* "them," gen. *-šām* "their"; acc. sg. *-dim* "him" and acc. pl. *-diš* "them."

4.3.2 Demonstrative pronouns

Other pronominal stems exhibit grammatical gender distinctions and, in part, are characterized by a declension differing from that of nominal stems in *-a-* and *-ā-*. Included in this group are three demonstrative pronouns. The pronoun *iyam* (nom. sg. masc./fem.) "this" combines forms of the stems *i-*, *ima-*, and *a-*: for example, *ima* (nom.-acc. sg. neut.), *anā* (instr. sg. masc.), *ahyāyā* (loc. sg. fem.). The remaining two are *aita-* "this here" (more emphatic), and *hau-* (nom. sg. masc./fem.) "that"; the paradigm of the latter is supplemented in the oblique cases by the stem *ava-*: for example, *ava* (nom.-acc. sg. neut.), *avai* (nom.-acc. pl. masc.), *avaišām* (gen. pl. masc.), *av[ā]* (nom. dual masc.).

4.3.3 Relative and interrogative pronouns

The relative pronoun, which has also acquired the function of an article (see §5.5), is an Old Persian innovation. Its stems *haya-* (nom. sg. masc./fem.) and *taya-* (elsewhere) "who, which" emerged from the fusion of the Proto-Aryan correlating demonstrative and relative pronouns **sá-/*tá-* + **yá-* "the one, who." The interrogative pronoun is not attested in Old Persian texts and can be recovered only from the indefinite pronouns *kaš-ci* (nom. sg. masc.) "somebody," *ciš-ci* (neut.) "something," which are derived by means of the generalizing particle *-ci*, as in *ya-ci* (nom.-acc. sg. neut.) "whatever."

4.3.4 Pronominal adjectives

The declension of certain adjectives, which are semantically close to the pronouns, shares also the special declensional forms of pronouns. Old Persian attests only *aniya-* "other" (e.g., nom.-acc. sg. neut. *aniya*, abl. sg. masc. *aniyanā*); *haruva-* "all" (e.g., loc. sg. fem. *haruvahyāyā*); and *hama-* "the same" (in gen. sg. fem. *hamahyāyā*).

4.4 Verbal morphology

The grammatical categories of the Old Persian verbal system were inherited from Proto-Aryan, the consequent and consistent structure of which can still plainly be observed in the earliest Vedic texts. But with regard to both function and form, a great number of fundamental innovations and reorganizations have occurred which leave the distinct impression that Old Persian, like Young Avestan (see Ch. 6, §1), has begun to part company with the Proto-Aryan system and already represents a kind of transitional stage from Old to Middle Iranian. This is revealed by phonetic developments and innovations in nominal morphology, but especially by changes in the system of verbal morphology: (i) the aspectual opposition of aorist versus imperfect has been lost; (ii) aorist and perfect tense forms are attested only rarely; (iii) a periphrastic "neo-perfect" has emerged (see §4.4.6); and (iv) present stems in *-aya-* begin to gain prominence.

Old Persian verbal forms are marked for tense (originally aspect), voice, mood, and the usual three persons and three numbers. The Old Persian evidence is, however, rather

unbalanced, owing to the nature of the contents of the inscriptions: thus, for example, the only dual form found in the texts is the third plural imperfect active *ajīvatam* "they both (still) lived." Together with the three persons and numbers, two of the three voices (i.e., active and middle) find expression in two sets of personal endings: the so-called *primary* endings in the present indicative (which alone denotes a real present time) and subjunctive (which may do the same, at least in the speaker's view), and the *secondary* endings otherwise, apart from the imperative, which has distinctive endings.

4.4.1 Voice

The voices usually have their customary functions (inherited from the Indo-European parent language). A particularly striking exception is provided by certain third plural middle forms which lack middle function and are to be interpreted as having arisen only to avoid ambiguity. Passive morphology is more innovative, with the following attested: (i) forms built from the passive stem in *-ya-* (e.g., imperfect *a-θanh-ya* "it has been said"), common to Indo-Iranian for the present stem; (ii) middle forms like *a-naya-tā* "he was led"; and (iii) phrases consisting of a verbal adjective in *-ta-* plus the copula (which usually is omitted, however, in the third person: see §4.4.6).

4.4.2 Mood

The five moods attested in Old Persian are indicative, subjunctive, optative, imperative, and, as an Indo-European relic, injunctive (see below). Typical of Iranian is both the use of the perfect optative for the irrealis of the past, and (even more so) the use of the present optative with the temporal augment *a-* (thus looking like an imperfect optative) to express a repeated action of the past (e.g., *avājaniyā* from **ava-a-jan-yā-t* "he used to slay").

The Old Persian moods exhibit the same functions as their counterparts in Young Avestan. The *indicative* is used to express factual statements – present indicative (formed with the primary endings) for those in present time, and imperfect indicative (the augment *a-* and secondary endings being added to the present stem) for those in past time. The *subjunctive* expresses the eventual or potential realization of actions in the present or future; the present subjunctive is formed with primary endings, which are added to the present stem enlarged by *-a-* (e.g., *ah-a-ti* "it may be"). The *optative* is used for wishes and prayers and is formed with a stem in *-iyā-* (in the athematic singular) or *-ī-* (otherwise) – suffixes descended from Proto-Indo-European **-yeh*$_1$*-*/**-ih*$_1$*-*; the optative takes secondary endings (e.g., 2nd sg. mid. *yadaišā* "you may worship"). The *imperative* is the mood of command and prayer and makes use of distinctive imperative endings which are added to the present or aorist stem.

The *injunctive* (with secondary endings) is found in Old Persian only in prohibitive constructions introduced by the particle *mā* "not!" but even in preventive clauses never combined with forms of the aorist tense stem. Together with the loss of the aorist (see §4.4.3) Old Persian obviously has lost the inherited distinction between the inhibitive present injunctive and the preventive aorist injunctive. Moreover, if combined with the optative present, the prohibitive particle *mā* denotes a corrective notion with regard to a present action: for example, *daivā mā yadiyaiša* "the Daivas shall not be worshiped any longer!"

4.4.3 Tense

The tenses find expression in stem formations which had originally been used to distinguish aspect (imperfective vs. perfective) and still did so in Proto-Aryan and Proto-Iranian. Several doublets of such forms make it clear, however, that the imperfect (which is built on the present stem and thus expressed the imperfective aspect of a past action) and the aorist (being the counterpart in the perfective aspect) are used in Old Persian without any obvious difference

in function, suggesting that aspectual distinctions were no longer being productively made. The "sigmatic" aorist *adarši* "I took possession of" (1st sg. indic. aor. middle of the root *dar-*) alone seems to point to a living use of the aorist indicative (i.e., for conveying the perfective aspect of an action). The one perfect form attested is an optative expressing past irrealis, *caxriyā* "he might have done." Regarding perfect morphology, therefore, all that can be said is that Old Persian inherited stem reduplication (*ca-xr-* from Proto-Aryan **ča-kr-* and Proto-Indo-European **$k^{w}e$-$k^{w}r$-*), but nothing can be discerned about the particular endings of the perfect indicative active.

4.4.4 Verbal stems

The stem formations occurring in Old Persian are essentially those inherited from Proto-Aryan and in the end often from Proto-Indo-European. This includes the inherited distinction between the *thematic* and the *athematic* stems marked by the presence or absence of the thematic vowel *-a-* (from Proto-Indo-European **-e/o-*; see *WAL* Ch. 17, §3.4) preceding the personal endings (e.g., athematic *as-ti* "he is," but thematic *bav-a-ti* "he becomes"). The present and aorist stems (and likewise the only perfect stem attested; see §4.4.3) are formed either from the verbal root to which one of a set of suffixes is attached, or from the unsuffixed root itself (root presents and root aorists). Most numerous and to a certain degree productive are the present stems in *-aya-* like *tāvaya-* "to be able," *mānaya-* "to wait, expect," and so forth. Ancestral formations of Proto-Indo-European origin are the stems in *-sa-* (= Avestan *-sa-*) like *p̥rsa-* "to ask, interrogate" (= Avestan *pərəsa-*), *t̥rsa-* "to be afraid" (= Avestan *tərəsa-*), *xšnāsa-* "to know."

4.4.5 Verbal endings

The various sets of verbal endings are only partially attested in Old Persian; these are presented in (11)–(16) together with their Proto-Aryan preforms:

(11) The Old Persian primary endings: active

	Singular
First	-mi from **-mi (also in the thematic verbs); -ni from **-ni (subjunctive)
Second	-hi from **-si (attested only in subjunctive)
Third	-ti from **-ti
	Plural
First	-mahi from **-masi
Second	—
Third	-nti from **-nti

(12) The Old Persian primary endings: middle

	Singular
First	-ai from **-ai; -nai from Proto-Iranian **-nai (subjunctive)
Second	-hai from **-sai
Third	-tai from **-tai
	Plural
	Not attested

(13) The Old Persian secondary endings: active

	Singular
First	-m from *-m; -am (athematic) from Proto-Aryan *-am replacing Proto-Indo-European *-m̥
Second	-ø from *-s
Third	-ø from *-t; -š after ai, au (in imperfect and optative forms like *akunauš* "he did" = Avestan *akərəˀnaoṯ*)
	Dual
Third	-tam = Avestan -təm (see §4.4)
	Plural
First	-mā from *-ma
Second	—
Third	-ø from *-nt; -h after a and -š after ai (in imperfect and optative forms like *abaraha* "they brought" or *yadiyaiša* "they shall not be worshiped") from *-s

(14) The Old Persian secondary endings: middle

	Singular
First	-i from *-i
Second	-šā from *-sa
Third	-tā from *-ta
	Plural
First	—
Second	—
Third	-ntā from *-nta

(15) The Old Persian imperative endings: active

	Singular
Second	-ā from *-a (thematic) and -di from *-d^{h}i (athematic)
Third	-tu from *-tu
	Plural
Second	-tā from *-ta
Third	-ntu from *-ntu

(16) The Old Persian imperative endings: middle

	Singular
Second	-uvā and -šuvā from *-swa
Third	-tām from *- tām
	Plural
	Not attested

4.4.6 Nonfinite verbal forms

Old Persian exhibits only one type of infinitive: a construction with the formant *-t-n-i-y* ([-tanai] or [-tani]?), being an oblique case, dative (or locative) singular, of an action noun in *-tan-*, and built on the full-grade verb root: for example, *cartanai* "to do"; *bartanai* "to bear;"

ϑanstanai "to say." In the case of *kantanai* "to dig" and *nipaištanai* "to engrave, write," the passive interpretation "to be dug," "to be engraved" cannot be ruled out.

The only reliably attested active participles are *tunuvant-* "strong" (literally "being able"; nom. sg. masc. *tunuvā*, from **-wānt-s*) and *yaudant-* "being in turmoil" (only acc. sg. fem. *y-u-d-[t-i]-m* ([yaudant-i(:)m]). Present middle participles are formed by means of the suffix *-mna-* = Avestan *-mna-*, as in *xšaya-mna-* "being in control of."

The commonly occurring verbal adjective or perfect passive participle in *-ta-* is inherited from the Proto-Indo-European formation in **-to-*, which usually is added to the zero-grade verbal root: for example, *kr̥ta-* "done, made"; *jata-* "slain"; *pāta-* "protected"; but also *basta-* "bound" like Young Avestan *basta-* (in contrast to Vedic *baddhá-*) and the like. In addition, there are also some formations in *-ata-* (like *ϑak-ata-* "passed" or *han-gm-ata-* "assembled"; cf. Avestan *gmata-*) which go back to Proto-Indo-European **-eto-*.

The verbal adjective in *-ta-* is used in Old Persian particularly for creating the new periphrastic perfect of the type *manā kr̥tam* "(it was) done by me" (cf. Middle Persian *man kard*) replacing the inherited Proto-Aryan active perfect for expressing an accomplished action and/or a situation achieved by it. In origin this "neo-perfect" was formed by combining the copula "to be" with the *-ta*-adjective, though the third singular *asti* "she/he/it is" normally has been deleted. Moreover, the agent of transitive verbs is expressed in the genitive case (though the sense of the construction is not a possessive). Examples include the following: *ima, taya manā kr̥tam* "this [is], what [has been] done by me"; *taya Br̥diya avajata* "that Smerdis [had been] slain"; *yadi kāra Pārsa pāta ahati* "if the Persian people shall be protected."

4.5 Compounds

In principle, Old Persian exhibits all the types of compounds known from the other ancient Aryan languages (see Ch. 2, §4.4.2) and inherited from Proto-Indo-European (see *WAL* Ch. 17, §3.5.1). Compounds contain two elements, the last of which is inflected. Attested are *determinative* and *possessive* compounds (including those which have an inseparable prefix like *a(n)-* "without, un-"; *u-* "well-"; or *duš-* "mis-, dis-" as first element), but no *copulative* compounds are attested as yet. Especially remarkable are the compounds having a verbal stem as the first element; Old Persian exhibits a number of such formations in anthroponomastics: for example, the throne names of Darius and Xerxes, *Dāraya-vauš* "holding the good" and *Xšaya-r̥šan-* "having command of heroes." These forms reveal that Old Persian does not share in the Aryan recasting of the first element as a participial form in *-at-*, as one finds in Avestan and Old Indo-Aryan (cf. Avestan *Dāraiiaṭ.raϑa-* "holding the chariot," *xšaiiaṭ.vac-* "having (a good) command of speech"; Vedic *dhārayát-kṣiti-* "sustaining the creatures," *kṣayád-vīra-* "having command of heroes").

4.6 Numerals

Since the cardinals are normally indicated by numeral signs and not written phonetically, hardly anything can be said about them. The number 1 is *aiwa-*, which like Avestan *aēuua-* goes back to Proto-Indo-European **oi-wo-* "one, alone" (= Greek *oî(w)os* (οἶ(Ϝ)ος)). One hundred must have been **ϑata-* (= Avestan *satəm* = Vedic *śatám*) and in all probability is attested in the name of the province Sattagydia, *Θata-gu-*. Other cardinals are reflected in the "collateral" linguistic traditions (see §6), especially in Elamite garb, in compounded titles like **daϑa-pati-* (Elamite *da-sa-bat-ti-iš*) "chief of ten, decurion" or **ϑata-pati-* (Elamite *sa-ad-da-bat-ti-iš*) "chief of hundred, centurion."

Of the ordinals there are attested in the Old Persian inscriptions: *fratama-* "first" = Avestan *fratəma-*; *duvitĭya-* "second" = Old Avestan *d^{ai}bitiia-*, Young Avestan *bitiia-* (= Vedic *dvitíya-*); *çitĭya-* "third" = Avestan *θritiia-*; *navama-* "ninth" = Avestan *naoma-* (from **nawəma-*).

A quite interesting Iranian innovation is found in the fractions formed by addition of the Proto-Iranian suffix **-swa-* (realized as Avestan *-huua-* or *-šuua-*). The Old Persian reflexes are attested in Elamite renderings only and can be reconstructed as **çišuva-* "one-third" (Elamite ši-iš-maš; cf. Avestan *θrišuua-*); **caçušuva-* and (with haplology) **caçuva-* "one-quarter" (Elamite *za-aš-maš*, *za-iš-šu-maš*, *za-iš-šu-iš-maš*; cf. Avestan *caθrušuua-*); **pancauva-* "one-fifth" (Elamite *pan-su-ma-iš*; cf. Avestan *paŋtaŋhuua-*); **aštauva-* "one-eighth" (Elamite *aš-du-maš*; cf. Avestan *aštahuua-*); **navauva-* "one-ninth" (Elamite *nu-ma-u-maš*); **daθauva-* "one-tenth" (Elamite *da-sa-maš*) and **vīstauva-* "one-twentieth" (Elamite *mi-iš-du-ma-kaš*, with an additional *ka*-suffix).

5. SYNTAX

5.1 Word order

The word order found in the Old Persian inscriptions is on the whole rather free, as is common among the ancient Indo-Iranian languages. The "unmarked" order, however, is Subject–Object–Verb (SOV):

(17) Auramazdā-mai upastām abara
Auramazdā-me aid he brought
"Auramazdā brought me aid"

For enclitic *-mai*, see §5.3. Other complements, especially those indicating place, may follow the verb. There are attested, however, a number of cases showing varying order of the sentence constituents: for example, (i) of copula and predicate noun (cf. DNb 42f. *θanuvaniya uθanuvaniya ami* "as a bowman I am a good bowman" vs. DNb 44 *r̥štika ami uvr̥štika* "as a spearman I am a good spearman"); or (ii) of two coordinated constituents (DB IV 72f. *yadi imām dipim vaināhi imaivā patikarā* "if you shall look at this inscription or these sculptures" vs. DB IV 77 *yadi imām dipim imaivā patikarā vaināhi*).

Nevertheless some peculiarities of word order must be noted, mainly "marked" sentence-initial or sentence-final position of words for reasons of emphasis. Here belong, for example, the initial position of the object (OSV) when expressed by a deictic pronoun

(18) ima hadiš adam akunavam
this palace I I have built
"I have built this palace"

or the nonfinal (medial) position of verbs expressing an urgent plea. Notable is also the uncommon initial position of the verb in the formulaic expression *θāti NN xšāyaθiya* "proclaims NN, the king."

When two or more coordinated elements form the subject or the object of a sentence, only the first element is placed before the verb, and the remaining elements follow, for example:

(19) mām Auramazdā pātu utamai xšaçam
me Auramazdā may he protect and my kingdom
"May Auramazdā protect me and my kingdom!"

Within phrases the word order is more fixed. A noun or pronoun (in the genitive case) which is dependent upon a noun precedes that noun: for example, *Kurauš puça* "son of Cyrus"; *manā pitā* "my father." Exceptions which are attested in royal titles (cf. *xšāyaϑiya xšāyaϑiyānām* "king of kings" in contrast to Middle Persian *šāhān šāh*) or religious formulae (*vašnā Auramazdāha* "by the favor of Auramazdā") are caused by foreign influence.

5.2 Topicalization

A striking feature of Old Persian syntax and stylistics is the frequent use of a sentence-initial (so-called) *casus pendens* (usually an absolute nominative), which is resumed by a demonstrative pronoun (20A) or adverb (20B):

(20) A. Vištāspa manā pitā, hau Parϑavai āha
Hystaspes my father that one in Parthia he was
"Hystaspes my father, he was in Parthia"
B. Pr̥ga nāma kaufa, avadā . . .
Pr̥ga by name mountain there
"There is a mountain, Pr̥ga by name, there . . . "

This phenomenon is often combined with another stylistic peculiarity found in the Old Persian inscriptions, the origin of which must be sought, as Vedic parallels in prose texts show convincingly, in colloquial Proto-Aryan and not, as has been previously presumed, in Aramaic influence. This concerns parenthetical (more exactly, prosthothetical) constructions taking the form of nominal (i.e., verbless) clauses which introduce less common personal or geographical names: for example, *Dādr̥šiš nāma Arminiya, manā bandaka, avam* . . . "[There is] an Armenian, Dādr̥ši by name, my vassal, him . . . "

It should be noted that nominal sentences are very frequently used in Old Persian, mainly because the third singular form of the copula is normally omitted; consider DB I 27:

(21) ima, taya manā kr̥tam
this what by me done
"This [is], what [has been] done by me"

with relevant examples in both the main and relative clauses.

5.3 Clitics

Old Persian attests a number of enclitics (atonic lexemes which in Old Persian form a graphic unity with the preceding word); chiefly the following: (i) the oblique cases of the personal pronouns (including the anaphoric pronoun); (ii) the copulative and disjunctive conjunctions (*-cā* "and," *-vā* "or"); and (iii) various emphatic particles. According to *Wackernagel's Law* the enclitics are attached to the first accented word of the sentence or clause in Old Persian, as in Proto-Aryan and, still earlier, in Proto-Indo-European. This becomes particularly clear from examples like (17), *Auramazdā-mai upastām abara* "Auramazdā brought me aid," when contrasted with

(22) pasāva-mai Auramazdā upastām abara
afterwards-me Auramazdā aid he brought
"Afterwards Auramazdā brought me aid"

Enclitics which are construed with single words only and not with an entire sentence do

not follow Wackernagel's Law, but are attached to that particular word: for example, *yaϑā paruvam-ci* "just as [it was] previously." For a special treatment of enclisis see Schmitt 1995.

5.4 Coordination and subordination

In the Old Persian inscriptions both coordination and subordination are used for expressing complex statements. It is not uncommon to find short simple sentences following one another, either accompanied by a connector (a coordinating conjunction like *utā* "and" or a temporal adverb like *pasāva* "afterwards, then"), or without such (asyndeton). In other cases (and, in part, in closely parallel passages), subordinate clauses occur introduced by a relative pronoun or by some appropriate conjunction. Most conjunctions used in Old Persian are derived from the (original) stem of the relative pronoun (as is the case in the cognate languages, too): for example, *yaϑā* (often correlated with *avaϑā* "thus") "when, after, so that" (introducing temporal, modal, and consecutive clauses); *yadi* "if" (normally with a subjunctive verb), "when" (with an indicative; introducing temporal and conditional clauses). While both of these are inherited, *yātā* "until, when, as long as" is a new formation, as is *taya* "that, so that" (acc. sg. neut. of the relative pronoun) which introduces causal, explicative clauses, indirectly reported speech, and so forth. Relative clauses are commonly attested, positioned both before and after the main clause.

There are also some passages that show a subordinate infinitive. Typical is that construction after a main clause containing verbs like "to order," "to be able," "to dare" (e.g., *adam nīštāyam imām dipim nipaištanai* "I ordered to engrave this inscription"); another likewise typical use of an infinitive construction is that expressing purpose after verbs like "to go," "to send" (e.g., *paraitā patiš Dādṛšim hamaranam cartanai* "went forth against Dādṛši to fight a battle").

5.5 Relative constructions

The relative pronoun *haya-*/*taya-* functions as a definite article in expressions indicating various attributive complements to nouns, with case attraction if appropriate; for example:

(23) A. Gaumāta haya maguš (nominative)
Gaumātam tayam magum (accusative)
"Gaumāta the magus"
B. kāram tayam Mādam (accusative)
"The Median army"
C. viϑam tayām amāxam (genitive plural)
"Our [royal] house"
D. xšaçam taya Bābirau (locative)
"The kingship in Babylonia"

Those constructions have similar counterparts in Avestan, but have spread considerably in Middle Persian and are ultimately the source of the Modern Persian *iẓāfat* construction.

5.6 Agreement

Grammatical agreement in Old Persian is of the sort common to the older Indo-European languages: (i) appositive and attributive adjectives and nouns agree in gender, number, and case; (ii) predicate nouns and adjectives agree at least in case, but now and then there are particular conditions for gender and number; (iii) relative, resumptive, and anaphoric

pronouns agree in gender and number, whereas their case is dependent upon their syntactic use (examples of case attraction not being attested); (iv) verbs agree with their subject in person and number. The existence in Old Persian of the Proto-Indo-European use of a singular verb with a neuter plural subject cannot be demonstrated, both for lack of evidence and for orthographic reasons. The only evidence is found in the usual dating formulae (see §6), and there the copula *āha* (with *θakatā* nom. pl. neut.) may be third-person singular as well as plural.

5.7 Stylistics

A comprehensive and systematic study of the stylistic features that may be detected in the Old Persian inscriptions (which show clear traces of stylization), is an urgent desideratum. There is found evidence for the stylistic figures of the asyndeton, of chiasmus, parallelism, and so forth; see the discussion in Kent 1953 (pp. 99f. §§ 316–317 in the relevant paragraphs). Some additional stylistic features can be briefly noted here. Epiphora (repetition of the same words at the end of each of a set of sentences) occurs several times: for example, in DPd 22 and 24 *hadā visaibiš bagaibiš* "with all the gods." Examples of personification are attested: for example, with *dahyu-* "land" (which "does not fear anybody else") or *dušiyāra-* "crop failure" (which "may not come"). But attempts to demonstrate rhyming phrases in Old Persian texts or to detect metrical passages (especially in DB) are not convincing in this author's view.

6. LEXICON

The Old Persian vocabulary is known only in part owing to the limited corpus of the texts and to their stereotyped character. On the whole it corresponds closely to the vocabulary of the other attested ancient Aryan languages, Avestan and Old Indo-Aryan (especially Vedic). A striking characteristic feature of Old Persian is the considerable quantity of foreign words and names which it uses. Such foreign influences, however, are only to be expected in such a multinational state as that of the Persian Empire. Among those foreign elements, borrowings from the Median language take a special place, and they can be justified historically without difficulty. The fact that particular terms are of Median origin can sometimes be established by phonetic criteria, even if the non-Persian phonetic developments observed are not unique to the Median language, but also belong to other Old Iranian dialects. Medisms occur more frequently among royal titles and among terms of the chancellery, military, and judicial affairs (*vaz̥ṛka-* "great," *zūra-* "evil," *zūrakara-* "evil-doer," etc.); they are found not least in the official characterizations of the empire and its countries (*uvaspa-* "with good horses," *vispazana-* "with all races," etc.).

From a dialectological perspective, one notes some peculiar developments. Particularly striking is the case of the verb "to say, speak"; Old Persian continues neither Proto-Iranian **wač-* nor **mrau-*, both of which are attested in Avestan, but has *gaub-*. A similar case is found with "to hear": Old Persian has lost Proto-Iranian **srau-* (Avestan *srauu-*), and has instead the root *ā-xšnau-* (literally "to grasp, understand").

In addition to the shared isogloss of Old Persian *gaub-* "to say, speak" and Sogdian *γwβ-* ([ɣo:β-]) "to praise," there are a number of remarkable features common to Old Persian (Southwest Iranian) and Sogdian (East Iranian). For example, to both belong **kun-* "to do" (from Proto-Iranian **kar-*, pres. **kr̥nau-*) in Old Persian *kunau-* = Sogdian *kwn-* ([kun-]). Both share the meaning "to have" for the Iranian root **dar-* "to hold, keep" (Old Persian *dar-*, pres. *dāraya-*), and the dating formulae of the type Old Persian *NN māhyā X raucabiš θakatā*

āha "in the month NN X days had passed" and Sogdian *pr 'tδrtyk YRH' pr 10 sγth* "in the third month at/after ten passed [days]."

In other cases, borrowings from some East Iranian language have been assumed: for example, *kāsaka-* "semiprecious stone." In addition, the influence of the other languages spoken by the indigenous peoples of the Ancient Near East can be detected in the Old Persian lexicon. Thus, the Persians seem to have acquired *dipi-* "inscription" from Elamite, *maškā-* "[raft of] skin" from some Semitic language, and *pīru-* "ivory" likewise from some Near Eastern source.

A considerable portion of the Old Persian lexicon has simply not survived (because of the nature of the texts). However, the possibility exists of reconstructing Old Persian lexemes, provided they are inherited from Proto-Aryan (and from Proto-Indo-European), by comparing the Proto-Aryan vocabulary (which can be reconstructed from the very rich records available in Old Indo-Aryan) with Middle and Modern Persian words, since such later attested lexemes necessarily must have passed through an Old Persian stage.

In addition, a great many Old Persian lexemes, including proper names, are preserved in a borrowed form in non-Persian languages – the so-called "collateral" tradition of Old Persian (within or outside the Achaemenid Empire). The main sources of that tradition are Elamite (especially the Persepolis tablets), Late Babylonian (with numerous administrative texts), Aramaic (as the lingua franca of the official imperial administration), Hebrew, Egyptian, and Greek authors (from Aeschylus and Herodotus) and inscriptions. It must be borne in mind, however, that not every purported Old Iranian form attested in this manner is an actual lexeme of Old Persian. Thus, for example, the title "satrap," best known in its Greek form σατράπης, in fact mirrors Median **xšaϑra-pā-*, whereas the first element of the Old Persian form was *xšaça-* and the form attested epigraphically is *xšaça-pā-van-*. A collection of the complete material attested in the various branches of the collateral tradition is not available; Hinz 1975 offers the most comprehensive collection, though is far from being complete (e.g., by omitting even Median **xšaϑra-pā-*) and is often unreliable.

7. READING LIST

The most comprehensive treatment of Old Persian (containing a full descriptive as well as historical grammar, the transcribed texts with English translation, and a lexicon with full references) is found in Kent 1953; for a traditional grammar see also Meillet and Benveniste 1931. A more structured outline of morphology and an etymological lexicon (including, in part, the collateral tradition) is presented by Mayrhofer in Brandenstein and Mayrhofer 1964 (pp. 55–82 and 99–157). Mayrhofer 1979: II (pp. 11–32) provides a special treatment of the personal names attested in the inscriptions. A brief account of the Old Persian language (with the most essential bibliography) is also presented in Schmitt 1989.

A complete corpus of all Old Persian Achaemenid inscriptions is not available; there are only partial collections outdated by later discoveries or limited to certain groups or types of texts. The Old Persian texts alone can be found in Kent 1953: 107–157 (with an English translation); this has been supplemented by Mayrhofer 1978, who also provides a full inventory list of the Old Persian texts (pp. 37–47); though even this list is not up to date.

Abbreviations

The most important Old Persian texts are listed below. Texts are usually cited utilizing a system of abbreviations, in which the king's name normally appears first (D = Darius I, X = Xerxes I, A^{1-3} = Artaxerxes I–III, etc.), followed by the place of origin (B = Bīsutūn,

P = Persepolis, N = Naqš-i Rustam, S = Susa, etc.). Several texts by the same king at the same place are distinguished by additional small letters:

DB: the major inscription of Darius I at the rock of Mt. Bīsutūn, the most extensive and most important trilingual inscription, with five columns and 414 lines of Old Persian text (newly edited by Schmitt 1991).

DNa, DNb: two major trilingual inscriptions at the tomb of Darius I at Naqš-i Rustam, the lower text DNb being some kind of guide for the ideal ruler (new edition by Schmitt 2000:23–44).

DPd, DPe: two monolingual Old Persian inscriptions which form part of an ensemble of texts at the southern wall of the Persepolis terrace and in all probability are the oldest Persepolitan inscriptions (new edition by Schmitt 2000:56–62).

DSab: the trilingual cuneiform text on the Egyptian-made statue of Darius I excavated in Susa in 1972.

DSe, DSf: two major trilingual building inscriptions from the palace of Susa, which are preserved, however, only in a great number of fragments.

DZc: the longest of the cuneiform inscriptions from the Suez Canal.

XPf: a bilingual (Old Persian and Babylonian) foundation document of Xerxes from Persepolis, which is of special historical importance owing to some details reported about the king's succession.

XPh: the trilingual, so-called Daiva-inscription describing a revolt and praising the cult of Auramazdā (rather than the Daivas).

XPl: an Old Persian text on a stone tablet, which is essentially parallel to DNb, but associated with the name of Xerxes I.

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