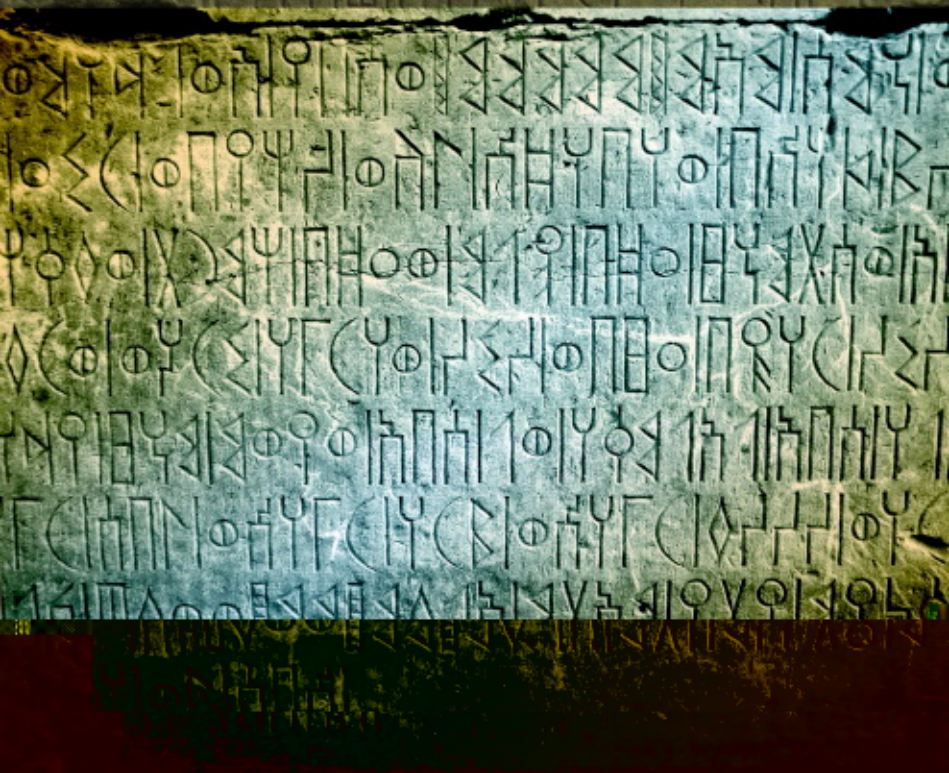


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LANGUAGES

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Elamite

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1. HISTORICAL AND CULTURAL CONTEXTS

1.1 Sources

Texts in Elamite come from the modern provinces of Khuzestān and Fārs, in southwestern Iran. Most are from ancient Susa and the plains of Khuzestān around it, from ancient Persepolis and Anshan (modern Tall-i Malyān) in the high valleys of Fārs, from sites on the way between Susiana and the Persepolis–Anshan area, or from the coast of Fārs. Achaemenid multilingual rock inscriptions of c. 520–450 BC with Elamite versions are also found in central western Iran, near Hamadān, and in eastern Turkey, near Van. Elamite texts on clay tablets from c. 600–550 BC have been found at the Assyrian city of Nineveh, in northeastern Iraq, at the Urartian fortress at modern Armavir Blur in Armenia, and at Old Kandahar in modern Afghanistan. The oldest dated texts are from about 2300 BC, the latest from about 350 BC. The first to come to modern attention were the inscriptions of the Achaemenid kings (c. 522–330 BC), whose Old Persian texts were often accompanied by Elamite and Akkadian versions, all deciphered in the 1840s. Other Elamite texts include royal display or dedicatory inscriptions written on bricks, glazed tiles or other architectural elements, or on stone or metal objects; administrative texts written on clay tablets; engravings on cylinder seals naming the owners of the seals; and a few legal texts, letters, and literary or scholarly texts on clay tablets.

1.2 History of the language and its speakers

The indigenous name for the country of Elam, *Hatamti*, is reflected in Sumerian *Elama*, Akkadian *Elamtu*, Hebrew *‘Elām*, and other forms. The indigenous name of the language is not attested. The usual modern name *Elamite* (used as early as Sayce 1874:467) corresponds to Sumerian and Akkadian usage (e.g., Sumerian *eme Elama*, “language of Elam”). Other modern names once given to the language are *Scythian* and *Median*, on the supposition that the languages of the Achaemenid royal inscriptions were those of dominant populations in the Achaemenid empire; *Susian*, in recognition of the fact that the language used beside Old Persian and Babylonian in the Achaemenid royal inscriptions was related to the language found in older texts from Susa; and *Anzanite*, on the view that the language found on texts from Susa was not original there, but was introduced by rulers from Anshan, whose location was a matter of conjecture.

Because there is some disagreement about the historical geography of ancient Iran, there is also uncertainty about the area in which Elamite was actually spoken. On the maximal

view, the political and cultural area of Elam, where the Elamite language must have been commonly used, extended in the late third and early second millennia over the entire highland territory of Iran, as far northwest as Azerbaijan and as far southeast as Baluchistān. Early Elamite states conquered and held Khuzestān and promoted the use of Elamite there in a population that also spoke and wrote in Akkadian, wrote in Sumerian, and perhaps also included some speakers of Amorite and Hurrian. By the middle of the first millennium, however, after the immigration of Iranian speakers and the rise of the Achaemenid Persian state, the territory called Elam was confined to Khuzestān and the adjoining mountains of Lurestān and northwestern Fārs. The Persian rulers who made the Elamite Anshan into Persia proper continued to write inscriptions and administrative records in Elamite in much of highland Iran (e.g., Vallat 1993, 1998). Critics of this view consider the original Elamite political and language area to be much smaller, but to include Fārs, Khuzestān, and extensions of uncertain distance to the northwest and southeast. Most modern appraisals agree in considering Khuzestān, where most early Elamite texts originate, to be at the edge, not at the center, of the Elamite area, a region where Elamite language coexisted or competed with Sumerian and Akkadian.

The unsettled question of the eastern extent of the Elamite language area is connected with the hypothesis that Elamite is related to the Dravidian languages, considered in various forms since the 1850s. A comprehensive proposal of phonological, lexical, and morphological correspondences and developments, with an inference that Proto-Dravidian and an ancestor of Elamite separated from a common Proto-Elamo-Dravidian before 3000 BC, and probably in the fifth millennium BC (McAlpin 1981), has been embraced by some students of Elamite (e.g., Khačikjan 1998:3 following Diakonoff) and ignored by others. It has not been systematically criticized, and it has not yet had practical consequences for the study of Elamite grammar or lexicon (Zadok 1995:243).

The framework of Elamite history is built chiefly on texts from Mesopotamia. Sumerian, Babylonian, and Assyrian states had intermittent, sometimes intense diplomatic, political, military, and commercial connections with the intermontane valleys of Elamite Iran, rich in timber, semi-precious stones and metals, and sometimes in population. The same Mesopotamian states sometimes fought Elamite states for control of Susiana. The chronological phases into which the Elamite language proper is divided are primarily political phases. (The earliest texts from Elamite territories, however, are in undeciphered scripts called Proto-Elamite and Linear Elamite; see below, §2.1.)

1.2.1 Old Elamite (c. 2600–1500 BC)

Early Sumerian rulers recorded skirmishing with Elamites in southern Mesopotamia as early as c. 2650 BC. The Old Akkadian rulers of southern Mesopotamia (c. 2300–2100) recorded battles with Elamite rulers and campaigns against Elamite highland regions; they took control of Susa. When Old Akkadian power broke down, Susa fell under the control of a ruler from the interior highland, Puzur-Inšušinak of Awan, who also claimed to control other highland territories. Any political integration that lay behind this claim was short-lived, as Sumerian rulers of the Third Dynasty of Ur (c. 2000–1900) reestablished control over the whole of lower Mesopotamia and over Susa, and pushed into the highland districts surrounding Khuzestān with punitive military campaigns, tribute-taking, the creation of occupied provinces in nearer valley-systems, and the maintenance of active diplomacy with more distant territories. In reaction, Elamite states of the interior coalesced in an alliance that sacked Ur, destroyed the Mesopotamian state and its empire, and took its king to die in captivity in Anshan. By about 1750 BC, this alliance had reached the zenith of Elamite

power, becoming the largest regional state of the time, exercising sway over smaller competing alliances in Mesopotamia and northern Syria, and sending expeditionary armies to promote its interests. A defeat at the hands of Hammurabi of Babylon removed the Elamites from Mesopotamian affairs, but the Elamite monarchy remained in place until c. 1500 BC.

1.2.1.1 *Old Elamite texts*

Elamite texts from this long interval are scarce. They include three tablets of uncertain literary or scholarly character (at least one of them excavated in southern Mesopotamia), a treaty with an Old Akkadian king, and four royal inscriptions from about 1800–1700 BC, only one of them nearly complete (Steve 1992:19; Vallat 1990). Additional evidence comes from Elamite names and words that occur in Sumerian and Akkadian texts from Elamite territories, above all in several hundred legal and administrative texts from Susa (Lackenbacher 1998; Zadok 1995:244). There are also five passages in Sumerian and Old Babylonian texts that are perhaps incantations in Elamite (van Dijk *et al.* 1985:4 and 9ff. Nos. 4, 5, and 18; Hinz and Koch 1987:1322 s.vv. Inc. 70 E–H).

1.2.2 **Middle Elamite (c. 1500–1000 BC)**

After about 1450 BC, scattered texts from sites in Khuzestān mention a series of “kings of Susa and Anshan,” and after c. 1400 numerous inscriptions, most of them in Elamite, attest the reigns of two dynasties of “kings of Anshan and Susa” who controlled Susa and nearby sites and eventually resumed warfare with contemporary Assyria and Babylonia. These wars culminated c. 1150 in Elamite raids on the cities of Babylonia, from which the Elamites took trophies that include some of the ancient Mesopotamian monuments that are most celebrated in modern times, including the Victory Stele of Naram-Sin of Akkad and the stele with the Laws of Hammurabi. The wars continued with a Babylonian attack on Elam in c. 1120 BC. Thereafter, sources for Elamite political history fade away.

1.2.2.1 *Middle Elamite texts*

Texts from this period, usually considered the classical period of Elamite language and culture, include about 175 royal inscriptions on bricks, steles, reliefs, statues, and large and small votive objects. Most of them are from Susa or Choghā Zanbīl, a few from other sites in Khuzestān, a site in the valleys on the road to Fārs, a site on the Fārs coast of the Persian Gulf, and one from Anshan (Steve 1992:19–21; add van Soldt 1982:44–48; de Maaijer 1996:70–72). Among them is a single Elamite–Akkadian bilingual building inscription. Elamite administrative tablets from Anshan are attributed either to the end of this period or to the earliest phase of Neo-Elamite, as are two fragmentary legal and administrative texts from Susa (Stolper 1984:5–10; Steve 1992:21). Elamite words and titles also appear in Akkadian administrative texts from Haft Tepe, near Susa, written at the beginning of the period (Lackenbacher 1998:343; Zadok 1995:241).

1.2.3 **Neo-Elamite (c. 1000–550 BC)**

By c. 750 BC, when Mesopotamian sources on Elam reappear, much of central and western Iran had been populated by speakers of Iranian languages who lived among, pushed aside, or amalgamated with other ethnic and linguistic groups. The Mesopotamian texts reflect episodic conflict between the Neo-Assyrian empire, then reaching the height of its power, and Neo-Elamite kings who controlled Khuzestān. The theaters of conflict were the central Zagros

valleys, where the Assyrians tried to protect the fringes of a new province, and Babylonia, where the Assyrians tried to stabilize political control against incessant resistance, while the Elamites tried to support buffers against the Assyrians in both places. In the mid-640s these encounters led to an Assyrian sack of Susa and a tour of looting and destruction around the adjoining plains of Khuzestān.

After the fall of the Assyrian Empire, 612–10 BC, successor states arose on Elamite territory, one based at Susa, another probably in the highland valleys to the north of Khuzestān, others in the valleys to the southeast, between Khuzestān and Fārs, and another in central Fārs. The rulers in Fārs were Persians who assumed the Elamite title “king of Anshan.” Their descendant was Cyrus the Great (550–530 BC), who conquered Iran, Anatolia, and Mesopotamia to lay the foundations of the Achaemenid Persian Empire.

1.2.3.1 *Neo-Elamite texts*

Elamite texts from the first phase of this period are very scarce. Texts from after c. 750 BC include about thirty royal inscriptions, most on bricks and stele pieces from Susa, but also including rock inscriptions of a local ruler in eastern Khuzestān, and inscriptions of post-Assyrian local rulers on portable objects (Steve 1992:21–23, partially redated by Vallat 1996a; and add Caubet 1995, Donbaz 1996, and Vallat 1996b, Baššāš-e Kanzaq 1997:19–22; Bleibtreu 1999:21, 54; Henkelman forthcoming). An omen text and a hemerological text in Elamite are assigned to the period before 650 BC. From the period after 650 come a small group of legal texts from Susa, an archive of about 300 administrative texts, also from Susa, letters from Susa, Nineveh, and Armavir Blur in Armenia, and some unprovenienced letters and administrative texts, and Elamite inscriptions on cylinder seals from Susa and heirloom seals used at Persepolis (Steve 1992:22–23, and add Vallat 1997b and Jones in Garrison and Root 2001).

1.2.4 **Achaemenid Elamite (550–330 BC)**

Under the Achaemenids the region administered from Susa became the province of Elam (Old Persian *Huja*, corresponding in multilingual inscriptions to Elamite *Hatamti*, ~ *Haltamti*), and Fārs became Persia proper (Old Persian *Pārsa*, corresponding to Elamite *Parsa* ~ *Paršan* ~ *Paršaš*). Darius I (522–486 BC) and his successors built palace complexes at Susa, which became the main political center of the imperial court, and at Persepolis, not far from the old Elamite center at Anshan. They used Elamite for display and recording, but did not give the Elamite history from which they had emerged any other prominence.

1.2.4.1 *Achaemenid Elamite texts*

Elamite was the first language used by the Achaemenids for formal inscriptions. The Elamite version of the great inscription of Darius I at Bisitūn (Behistān), near Kermānshāh, was the first and for a short time the only version on the rock face. In later royal inscriptions, however, the Elamite always accompanies an Old Persian text to which it usually corresponds very closely. The inscriptions are on prepared rock faces, on architectural elements, reliefs and sculpture from royal residences, on a small number of portable objects and cylinder-seals. Most Achaemenid administrative texts belong to two archives excavated at Persepolis, from about 500–450 BC, but the contemporary pieces from Susa and Old Kandahar imply wider use of Elamite recording (Steve 1992:23–24; add Garrison 1996 [Achaemenid administrative text from Susa], Scheil 1939, No. 468 [administrative text from Susa, probably Achaemenid], Helms 1982:13, 1997:101 [Elamite administrative fragments from Old Kandahār]).

1.2.5 Later Elamite

Under Hellenistic and Parthian rule, Elam continued to be a geographical and cultural entity, mostly called “Elymais” in Greek sources, but without leaving a continuing record of the Elamite language. In the tenth century AD the geographer Iṣṭahrī mentioned an unaffiliated language spoken in Khuzestān, called Khūzī, and Muqaddasī added that Khūzīs spoke an incomprehensible language, said by Muḥammad to be devilish, but whether a survival of Elamite lies behind these remarks is doubtful (Cameron 1948:18, n. 115; Khačikjan 1998:1).

1.3 Status of Elamite in antiquity

The Sumerian king Shulgi of Ur (c. 2000) claimed that he knew Elamite well enough to answer Elamite messengers in their own tongue (Civil 1985:73), but Hammurabi of Babylon (c. 1750) listed Elam among distant mountain lands which had languages that were “twisted” (Gadd *et al.* 1928:44–45, No. 146), a perception of outlandishness also reflected in the Old Babylonian Elamite incantations. Later Mesopotamian scholarly texts characterized plants, tools, or wagons as Elamite, correlated an Elamite calendar with the standard Sumero-Babylonian calendar, and glossed a few Elamite words, but apparently gave little attention to Elamite language.

Since the earliest Elamite texts include probable literary or scholarly pieces, Elamite may have been used more widely as a language of learning than the known sample suggests. Moreover, the writing of Elamite for display and recording may have been more widespread at an earlier date among Elamites of highland Iran than the known sample, dominated by texts from the Mesopotamian border, would indicate. In the known sample, Elamite became the preeminent language for the display inscriptions of Elamite rulers after about 1400 and for administrative and legal recording after about 1100, and by about 600 it was also used for scholarship and for international correspondence.

The hypothesis of Achaemenid “alloglottography” (Gershevitch 1979) holds that Achaemenid Elamite was a medium for transmitting texts that were conceived and dictated in Old Iranian languages, to be read out and understood as Old Iranian texts, and hence that the use of Iranian words and congruence between Elamite and Iranian morphology or syntax are not matters of borrowing or interference, but explicit notations of the underlying text. This hypothesis (which has been neither widely embraced nor rebutted) implies a literate bilingual or multilingual population who knew a living version of Elamite.

1.4 Elamite dialects

Dialects of Elamite have been postulated to account for variations in syntax (Grillot-Susini and Roche 1987:11; Grillot-Susini 1994:1; Khačikjan 1998:47 n. 129), but no dialects have been identified or described. Of the main chronological periods, most descriptive attention is given to Middle Elamite and Achaemenid Elamite. Neo-Elamite has not been systematically analyzed, although it is represented by the largest variety of text types and might allow discrimination between chronological development and dialect differences.

The frequent characterization of Elamite as “poorly understood” means in practice that sharp differences in the translation of individual Elamite texts reflect disagreements about grammar and lexicon. Behind these disagreements lies a nearly complete consensus on the identification of morphemes and paradigmatic sets of forms, as well as a general agreement that knowledge of Elamite phonology is seriously limited. The main areas of disagreement are on the meaning of particular morphemes, especially the verbal auxiliary *ma-*, the

verb- and clause-suffixes *-t(a)* and *-a*; on the construction of pronouns and pronoun clusters with verbs and directional elements; on the understanding of morphological or syntactic differences between Middle and Achaemenid Elamite; and on the meanings of words.

2. WRITING SYSTEMS

2.1 Proto-Elamite

The earliest texts from the area where Elamite was spoken and written appear in scripts called *Proto-Elamite* and *Linear Elamite*. Neither script has been deciphered. It is plausible but not provable that both scripts rendered versions of Elamite language.

Proto-Elamite writing was so named at a time when “Elamite” was mostly used as a geographical term, not as the name of a language, so the name “Proto-Elamite” originally described texts without ambiguity – the first texts from Elamite territory, but not necessarily in the language that came to be called Elamite. Proto-Elamite writing was impressed or incised on clay tablets. About 1,600 texts are known, most of them from Susa, others from sites across southern and eastern Iran, as far south as Kermān and as far east as Seistān. The tablets are from archeological contexts dated c. 3100–2900 BC. Most of the tablets, perhaps all of them, are administrative records, having clear entries with groups of signs followed by groups of numerals, sometimes with a corresponding total on the reverse. They use sexagesimal and bisexagesimal systems that are identical with approximately contemporary Proto-Cuneiform texts from Mesopotamia. They also use a decimal system that is without a parallel in archaic Mesopotamian texts. About 5,000 attested forms of nonnumerical characters (a few clearly pictographic, most abstract patterns) probably represent about 1,000 signs or less, with paleographic variations (Brice 1962–1963; Meriggi 1971–1974; Friberg 1978–1979; Vallat 1986; Damerow and Englund 1989; Englund 1996, 1998).

2.2 Linear Elamite

This script is known from eighteen inscriptions carved on stone objects and incised on clay objects, and one inscription punched on a silver vase. Most are from Susa, one from Fārs and one from southeastern Iran. One occurs with a counterpart text in Old Akkadian (perhaps not a close translation) in the name of Puzur-Inšušinak, c. 2100 BC (see §1.2.1). Most or all of the texts are probably dedicatory inscriptions. Only 103 sign forms are attested, 40 of them attested only once (Hinz 1969:11–44, 1975a; Meriggi 1971–1974: I 184–220; André and Salvini 1989; Salvini 1998).

2.3 Elamite cuneiform

Readable Elamite texts are written in versions of the same cuneiform script that was developed in Mesopotamia to write Sumerian and Akkadian from the early third millennium BC on, and that was also adapted to write Eblaite, Hittite, Hurrian, and Urartian. The first progress of the nineteenth-century decipherers of cuneiform scripts came from work on inscriptions of the Achaemenid Persian kings in Old Persian, Akkadian, and Elamite. The decipherers recognized that the Akkadian and Elamite versions were written in two varieties of a single script. Hence, when the readings of the Akkadian texts were confirmed, they were also applied to Elamite cuneiform. Evidence from the Elamite versions themselves, however, did not contribute to the decipherment.

Like other versions of Mesopotamian cuneiform script, Elamite cuneiform includes several types of characters: those with syllabic values (syllabograms), those indicating words (logograms), unpronounced characters indicating semantic categories (determinatives), and numerals. Some symbols belong to more than one of these categories; some have more than one syllabic value; and some syllabic values are represented by more than one sign or sequence of signs. Regarding the last two points: in all periods, *polyphony* of signs (that is, single signs with two or more syllabic values) and *homophony* of signs (that is, two or more signs with the same syllabic value) are less common than in Mesopotamian scripts, and more often limited to writings of particular words or sequences. In Achaemenid Elamite, homophony and polyphony are almost (but not entirely) eliminated (Steve 1992).

2.3.1 Syllabograms

Syllabic symbols occur having the values V (vowel), VC (vowel + consonant), CV, and CVC (including C₁VC₁ and C₁VC₂). Almost all syllabic values of Elamite signs are the common values of the same signs in Mesopotamian cuneiform; a few are uncommon in Mesopotamia and specialized in Elamite; and a few are unique to late Elamite writing. Mesopotamian VC and CVC signs do not distinguish between voiced, voiceless, and emphatic final stops, and some CV signs do not distinguish between voiced and voiceless initial stops; the counterpart Elamite signs also do not represent a corresponding distinction between stops.

2.3.2 Logograms

As in Mesopotamian cuneiform, almost all logograms are Sumerograms, that is, historical writings of Sumerian words used to indicate words with the same meaning in Akkadian or in Elamite. The Elamite words written with Sumerograms are sometimes unknown (e.g., Sumerian DUMU, “son,” Akkadian *māru*, Elamite *šak*; but Sumerian ŠE.BAR, “barley,” Akkadian *uṭṭētu*, Elamite uncertain). Akkadian loanwords appear in Elamite, but Elamite cuneiform lacks Akkadograms of the kind found in Hittite cuneiform (see Ch. 18, §2).

2.3.3 Determinatives

Most determinatives precede the words they qualify. The postpositive determinatives found in Mesopotamian cuneiform (for example, marking the preceding words as names of birds or plants) do not occur in Elamite. Some determinatives have the same value as the counterpart signs in Mesopotamian cuneiform: for example, signs that mark the following words as divine names, as personal names, as feminine personal names or words describing women, or as wooden things. Others are Mesopotamian signs used with determinative values specific to Elamite cuneiform: for example, a horizontal wedge to mark a following place name or location (commonly indicated in Mesopotamian cuneiform with different sign, postposed). The only postpositive determinative is the sign that in Mesopotamian cuneiform has the value MEŠ and marks the preceding word as a plural, but in Elamite cuneiform marks the preceding word as a logogram (this usage is also found with lower frequency in some so-called “peripheral” cuneiform writing – that is, cuneiform orthography for Akkadian in non-Akkadian speaking environments, e.g., Ugarit and Nuzi – and in Neo-Assyrian; van Soldt 1991:428–429). Postposed MEŠ also marks some pseudologograms (that is, historical spellings of Elamite words, e.g., Achaemenid Elamite *puhu* “boy,” *ulhi* “house,” both with nonphonemic *-h-*), and MEŠ sometimes appears after apparently ordinary syllabic spellings

(e.g., *tar-mu*^{MEŠ} [a grain]). Conversely, not all logograms are followed by MEŠ (e.g., EŠŠANA = *sunki*-, “king,” DUMU = *šak*-, “son” are never followed by MEŠ [Vallat 1987a]).

2.3.4 Direction and division

As in Mesopotamian cuneiform and other adaptations of it, writing runs left to right, top to bottom. Word division is not ordinarily marked. Determinatives do not double as word-dividers, since most of the preposed determinatives also have common syllabic values (e.g., GIŠ [determinative for wooden objects, fruits, etc.] is used syllabically with the value *iz*), and postpositive MEŠ may be followed by signs indicating grammatical morphemes (e.g., LÚ (= *ruh*) “man” in ^{DIŠ}LÚ^{MEŠ}-*ip*, “men”). In most Elamite texts, lines of writing are not divided at word boundaries, as they are in Mesopotamian cuneiform.

2.3.5 Graphemic inventories and spelling practices

The inventory of Mesopotamian cuneiform signs and the uses of the signs were adapted for writing Elamite. Most of the adaptations were motivated by economy, few if any by specific properties of the Elamite language. In all periods, Elamite used a smaller inventory of cuneiform signs than Mesopotamian scripts; a little more than 200 signs are attested overall. For any period, only 100–140 signs are attested.

The forms of cuneiform characters found in Old Elamite, Middle Elamite, and early Neo-Elamite texts are similar in composition and general appearance to forms in contemporary Mesopotamian scripts, with very few idiosyncrasies. Forms of many signs in Neo-Elamite texts after about 650 BC and in Achaemenid Elamite inscriptions and tablets are sharply and systematically distinct from forms in contemporary Mesopotamian scripts. To a modern eye, the difference is perhaps as great as the difference between standard and *Fraktur* forms of the Roman alphabet.

Royal inscriptions, which dominate the corpus of Old and Middle Elamite texts, use few logograms. Administrative texts, numerous only in Neo-Elamite and Achaemenid Elamite, use many. Conversely, Middle Elamite and Neo-Elamite inscriptions use more syllabic signs, with more syllabic values, than Achaemenid Elamite texts. Logograms are not used to write verbs, rarely used to write adjectives (other than “big” and “small” or “male” and “female”), and never used to indicate grammatical categories (such as plurality or noun derivation).

Loss of some CV symbols made it impossible to mark a consistent distinction between two kinds of labial, palatal, and dental stops consistently (utilizing the signs that distinguished voiced from voiceless in Akkadian cuneiform). Furthermore, loss of some VC values, mostly for sonorants and fricatives (*up*, *us*, *uš*, *al*, *ar*), made it impossible to write certain CVC sequences with the unambiguous combination CV₁-V₁C. These sequences were commonly represented with “broken writings” of the type CV₁-V₂C, in which V₂ is always *i* or *u*: for example, late Neo-Elamite, Achaemenid Elamite *du-iš* versus Middle Elamite *du-uš* for *duš*, “he received.” Similar broken writings were even used when not required by the inventory of syllabic signs: for example, singular *šá-lu-ur* and *šá-lu-ir* (not required); plural *šá-lu-ip* (required) “gentleman/men”; singular *li-ba-ir* (required), plural *li-ba-ap* and *li-ba-ip* (not required), “servant(s).” Some word-final variations between required broken spellings and “harmonic” spellings with different vowels, however, may represent loss of vowel distinction or presence of consonant clusters at ends of words: for example, *du-nu-iš* (required), *du-na-iš* (not required), *du-na-áš* (harmonic), “he gave” (Justeson and Stephens 1994).

Table 3.1 Middle Elamite and Early Neo-Elamite (before c. 650 BC) syllabic signs: V, CV, VC

V Symbols: a e i u, ú

CV Symbols				VC Symbols		
ba	be	bi		ap	ip	up
pa		pi	pu			
ga		gi	gu?	ak	ik	uk
ka, ka ₄		ki	ku			
da		di	du	at	it	ut
ta	te	ti	tu, tu ₈ ?			
sa		si	su	as	is	us
za		zi, zí	zu			
ša, šá	še	ši	šu	aš, áš	iš	uš
ma	me	mi	mu	am	im	um
na	ne	ni	nu	an	en	in
la		li	lu	al	el	il
ra		ri	ru	ar	ir	ur
ha		hi	hu	Vh, V?		

Table 3.2 Late Neo-Elamite (after c. 650) and Achaemenid Elamite syllabic signs: V, CV, VC (values in parentheses are not attested in Achaemenid)

V Symbols: a e i u, ú

CV Symbols				VC Symbols		
ba	be					
pa		pi	pu	ap	ip, íp	
		gi				
ka ₄		ki	ku	ak	ik	uk
	te	ti	tu, tu ₄	at	it	ut
da			du			
sa		si	su	as	is	(us)
za		zí				
ša, šà	še	ši	šu	áš	iš	
ma	me	mi	mu	am	im	um
na		ni	nu	an	en	in
la		li	lu		el?	ul
ra		ri	ru	(ar)	ir	ur
ha		hi	hu	Vh		

In Achaemenid Elamite, as in late Mesopotamian cuneiform scripts, CVC signs may be ambiguous as to vowel color (e.g., *tup-pi-ra*, *tup-pi-ip* ~ *ti-pi-ra*, *ti-pi-ip*, “scribe(s)”; *šá-tin* ~ *šá-tan*, “priest”). In Achaemenid Elamite, and sometimes earlier, as in Mesopotamian cuneiform, CVC sequences are sometimes made unambiguous by plene writings of the types CVC-VC- (e.g., *tan-an-* beside *tan-* and *da-an-*), CV-CVC (e.g., *-ri-ráš-*) or CVC-CV- (e.g., *gal-li-*, *gal-lu-* beside *gal-*; *hal-la-tam₅-ti* beside *hal-tam₅-ti*, “Elam”; see Vallat 1989).

Late Neo-Elamite and Achaemenid Elamite introduced some syllabic values not found in Mesopotamian (e.g., *mak*_x [KUR], *tam*_x [GIM]), as well as one syllabic character not found in Mesopotamian cuneiform (*ra*_x [from SAL+BAR]), and two determinatives: (i) the horizontal wedge (equivalent to AŠ) to mark place names, words indicating locations, and certain other words (e.g., “month” and “day”); and (ii) the signs BE and HAL, graphic variants of each other, to mark personal names and words indicating persons. Neo-Elamite and Achaemenid Elamite variants of some logograms betray misunderstanding of their Mesopotamian graphic etymologies: for example, Neo-Elamite E.GAL for historically correct É.GAL, “palace”; Achaemenid Elamite SI.KAK (once, probably erroneously) beside historically correct ŠI.KAK, “spear”; and the Sumerograms ANŠE “equid,” GEŠTIN “wine,” and NUMUN “seed” treated as combinations of two signs (PA+x, DIN+KAK, NU+MAN, respectively), sometimes separated by line divisions.

2.3.6 Transliteration and transcription

Elamite forms are represented below in sign-by-sign transliteration, morphological transcription, or conventional transcription. In *transliteration*, hyphens mark off syllables, logograms are in capitals, and determinatives are superscript (e.g., *hu-ud-da-an-ti*, ^dITI^{MEŠ}). In *morphological transcription*, placed within square brackets herein (not within slanting brackets, as often, in order to avoid confusion with phonemic representation), hyphens mark off morphemes, and parentheses sometimes indicate vowels or doubled consonants that are inherent in syllabic writings but are apparently not morphemic (e.g., [hutta-n-t(i)]). *Conventional transcriptions* are commonly used representations that reflect underlying transliterations but do not consistently reflect inferred phonology or morphology (e.g., singular *hupirri*, plural *hupibe*, written *hu-pír-ri*, *hu-pi-be*, probably to be analyzed [hupi-r(i)], [hupi-p(e)]). Unattested or reconstructed forms are marked with *.

The following abbreviations are used: DN (divine name); GN (geographical name); PN (personal name); RN (royal name).

3. PHONOLOGY

The use of Mesopotamian cuneiform script presents obstacles to recognizing Elamite phonology. In ordinary use for writing Akkadian, the script distinguishes only three vowels consistently (*a*, *i*, *u*) and a fourth in some sequences (*e*); it does not render initial or final consonant clusters or medial clusters of more than two consonants unambiguously; it does not distinguish voicing of syllable-final stops. The simplification of the script for use with Elamite further narrowed the possibilities of expressing distinctions. Changes in Elamite phonology were not necessarily accompanied by corresponding changes in writing; thus, although *h* was probably no longer phonemic in Achaemenid Elamite, Achaemenid Elamite writing retained a complete set of hV signs, a Vh sign, and some hVC signs, and *h* is written frequently, in some words regularly. Writing conventions for expressing phonological features peculiar to Elamite are not easily recognized or interpreted. The greatest obstacle to understanding Elamite phonology and its phonetic realization, however, is the lack of a securely identified close cognate language with a well-known phonology.

Resources for the study of Elamite phonology include transcriptions of words and names from other languages in Elamite texts (Iranian words and names in Achaemenid Elamite have been much studied (see, e.g., Hinz 1975b; Mayrhofer 1973; Tavernier 2002), but Akkadian and West Semitic words and names in Achaemenid and earlier Elamite have not);

transcriptions of Elamite words and names into other languages and scripts (words and names in Sumerian and Akkadian texts from Mesopotamia and Iran contemporary with Old Elamite and Middle Elamite have not been studied comprehensively as sources for phonology); and spelling variations within Elamite texts.

Much of this evidence, especially spelling variation, is ambiguous in that it may support either inferences about phonology or inferences about writing conventions. Conversely, where the writing does express phonemic distinctions that do not have counterparts in Mesopotamian languages, it cannot make their phonetic realizations plain.

3.1 Consonants

The consonantal inventory of Elamite is summarized in (1), though this summary is qualified below:

(1) Elamite consonants

p	t	k
b	d	g
	s	š
	z	
v/f(?)		h
m	n	
	l	r

3.1.1 Stops

There are two series of stops, ordinarily indicated in transliteration and transcription by *p*, *k*, *t* versus *b*, *g*, *d*. Elamite syllabaries do not allow consistent distinction of all pairs in all positions. Regular geminate spellings of medial stops in some words (e.g., *hutta-* (not **hu-ta-*) “do,” *-ikki* “to” versus *igi* “brother”) and regular choices of initial signs in others (e.g., *pari-* (not **ba-ri-*) “go”) indicate that a phonemic distinction was made. However, spelling variations within Elamite (e.g., *dumanpi*, *dumanba* but not **dumanpa*) and Elamite transcriptions of foreign words and names (e.g., Middle Elamite *pi-it* for Akkadian *bīt(u)*, “house,” Achaemenid Elamite *Ba-ir-šá* (never **Pa-*) for *Pārsa* “Persepolis”) indicate that the two series were not distinguished by voicing. A contrast between tense (rendered with *p*, *k*, *t*) and lax (rendered with *b*, *g*, *d*) stops, as in Dravidian, is sometimes suggested (e.g., Reiner 1969:115; Khačikjan 1995).

3.1.1.1 Allophonic variation

Spelling variations like *Šu-šu-ga* ~ *Šu-šu-un-ka*, “Susa (+ marker of grammatical concord),” *šu-ul-lu-me-ka* ~ *šu-ul-lu-me-en-ka* (a verbal form of uncertain meaning), *hi-nu-ka* ~ *hi-nu-un-ka* “(which) we (will) have,” and perhaps *su-un-ki-ir* ~ *su-gir* “king” (all Middle Elamite) suggest nasal allophones of the velar series. Late Neo-Elamite royal inscriptions from Khuzestān that spell a final first-person morpheme *-k* (below) with signs containing *h* suggest spirantization of the velar (Khačikjan 1995:109; Vallat 1996a:387). An affricated pronunciation of dentals may lie behind an Achaemenid Elamite spelling *zī-da-el* ~ *zī-za-el* (Hinz and Koch 1987:1288), and Akkadian writings of Elamite names of the eighteenth–seventeenth centuries BC (hence contemporary with Old Elamite) with such variations as *tempti-* ~ *šimti-* “lord,” *kutir-* ~ *kušir* ~ *kusir-* “carrier” (Zadok 1984:3; Vallat 1996c:315).

3.1.2 Fricatives

At least three fricatives (sibilants), transcribed as *s*, *š*, and *z*, are expressed with signs which have common Mesopotamian values including *s*, *š* and *z* (or *ṣ*).

Variations between spellings with *s* and *š* (e.g., *Insušnak* ~ *Inšušinak* [a divine name], *mušika* ~ *muššika* ~ *musika*, “it is counted”) suggest that *s* can represent an affricate. Moreover, variations between spellings with *š* and *z* (e.g., *Anšan* ~ *Anzan* [a place name], both in Elamite and in Akkadian), along with the use of signs with *z* to transcribe Iranian /č/, and the Achaemenid Elamite spellings *ku-ti-iš* and *ku-iz*, for [kutš], “he carried,” suggest the existence of an Elamite phoneme /č/. However, the spellings *ku-iz-iš-da* and even *ku-iz-da-ti-iš-da* may suggest that the writers perceived a cluster /-tšt-/ to be clarified with the same graphic convention used otherwise for CVC signs (§2.3.5).

In Old and Middle Elamite, syllabic symbols with Akkadian values including *ḥ* consistently represent a phoneme transcribed as *h*. Its phonetic value is uncertain, but it was not a velar fricative like Akkadian /ḥ/. Spellings cease to be consistent when this /h/ ceases to be phonemic in late Neo-Elamite and Achaemenid Elamite, though many historical spellings with *h* and sometimes with *-hh-* occur.

A labial fricative such as /f/ or /v/, not represented unambiguously or consistently, is suggested by the spelling variations *ligawe* ~ *likame*, *suhterwe* ~ *suhterme*, and Akkadian *Ši/Ši-we-*, *Še-ep-* ~ Elamite *Si-me-* (in the royal name *Sim/we-palar-huhpak*); see Khačikjan 1995:107, 1998:8.

3.1.3 Sonorants

Elamite possesses nasal and liquid phonemes; the phonemic status of glides is less clear.

3.1.3.1 Nasals

Both /n/ and /m/ are unambiguously represented in Elamite spelling. Some words are regularly spelled with geminate *m* or *n*, but a phonemic distinction is uncertain.

From at least Middle Elamite on, /n/ was assimilated to following /l/ (e.g., /ullina/ < [un lina]) and perhaps to following palatal and dental consonants. In late Neo-Elamite and Achaemenid Elamite, /n/ was labialized before a bilabial stop and written as *m* (e.g., *tahhampa* < **tahhanpa*; *sitmamba* ~ *sitmap*; *dumamba* and even *du-ma-ma* ~ *dumanba* (all plural forms on verbal stems), but also the exceptional *tah-ha-ma-am-ri*, perhaps back-formed from the plural; also in pronoun-verb phrases like *ú-um beša* “he (who) created me,” *um parimanka* “I will (not) be coming there”; see Paper 1955:62; Vallat 1996a:387–388). Achaemenid Elamite spellings *hu-ut-tan-ti* ~ *hu-ut-tam₅-ti* do not indicate dissimilation, but reflect a graphic convention also found in late Mesopotamian cuneiform: *CVm* ~ *CVn* ~ *CV-Vn*.

3.1.3.2 Liquids

The liquids /l/ and /r/ are written unambiguously. The writing of Akkadian *La-gamāl* as Elamite *Lagamar* and of Elamite *Ruhuratir* as Akkadian *Lahuratil* (both divine names), as well as Achaemenid Elamite *ka-ri-ri* ~ *kar-li* “lamb,” suggest a non-trilled [r] (Khačikjan 1995: 107f., 1998:8f.). The spelling variations *pi-ri-ip* ~ *pa-ri-ip* “they went to, reached,” *pa-ri-iš* ~ *pa-iš* “he/they set out, went,” and perhaps *mar-ri-ia* ~ *ma-ú-ri-ia* “I seized” (all Achaemenid Elamite) suggest a vocalic [ɾ].

3.1.3.3 Glides

The phonemic status of [y] and [w] is unclear. The intervocalic use of the syllabograms *-i-* or *-ia-* represents a glide [y]. In contrast, word-initial *ia-*, rare except in proper nouns, represents juncture between syllables or words: thus, *ia-ak* for *a-ak* “and” in the sequence *intikka yak*; *ia-áš-pu*, a *Kulturwort* corresponding to Akkadian *ašpu* (a semi-precious stone), in the sequence *rišakki i yašpu*. Word-initial *a-a* represents two syllables separated by a glide or juncture (*a-a-ni* ~ *a-hi-in*, *a-ah-in* “family(?)”, *A-a-pír* [a place-name]). In Achaemenid Elamite, the sequence *(-)ú-uC* also represents glide, syllable-boundary, or word-initial juncture (*hu-ut-ti-ú-ut* ~ *hu-ud-da-hu-ut* ~ *hu-ud-du-ud-da* “we made”; *hu-ut-ti-ip* ~ *ú-ut-ti-ip* “makers”). But the unique Achaemenid Elamite spelling *a-áš-šá-ir-ki-* for *Manšarki* (a month name) seems to suggest some phoneme with allophones [y], [w] and perhaps [ʔ].

3.2 Vowels

The vowels /a/, /i/, and /u/ are expressed unambiguously. The vocalic phoneme /e/ is confirmed by minimal pairs (e.g., *tetin* “beam(?)” vs. *titen-* “lying”) and supported by transcriptions of foreign words (e.g., *alumelu* from Akkadian *ālum ēlum*), but it is not often expressed unambiguously by the writing system. Final [-e] and [-i] were probably not distinguished phonemically. Many spellings with final *Ci* probably indicate final [-C], especially in clusters (e.g., *hu-ud-da-an-ti* for [huttant] “you do”). Disagreement prevails concerning the existence of phonemic /o/, sometimes postulated on the basis of distinctive uses of the signs *u* and *ú* (Paper 1955:17; Khačikjan 1998:6).

Contemporary variation in spellings using signs with *u* and signs with *i* in some words (e.g., *tu₄-ru-iš* ~ *ti-ri-iš*, *mu-ši-in* ~ *mi-ši-na*, all Achaemenid Elamite) may reveal a common reduced allophone shared by /i/ and /u/. Variation in spellings of vowels in the final syllables (e.g., *dunuš* ~ *dunaš* “he gave”) may indicate a reduced vowel or a final cluster with sonorant.

Spelling variations like *Hu-ban* ~ *Hu-um-ban* (a divine name), *te-em-ti* ~ *te-ep-ti* “lord,” *na-ra-an-da*, *na-ra-an-te* ~ *na-ra-da*, *na-ra-te* “daily” suggest the existence of nasalized vowels.

Vowel length is not phonemic. Most long writings of vowels are susceptible to graphic explanations: for example, avoidance of one-sign spellings of open monosyllables (*a-ak* vs. *a-gi* for /ak/ “and”), or marking of final vowel versus final consonant cluster (*te-la-ak-ni-e* vs. *te-la-ak-ni* for /telakni/ not /*telakn/).

Diphthongs do not occur. In Achaemenid Elamite, some spellings with *-a-uC* appear to reflect the pronunciation of following sonorants: *mauriya* ~ *marriya* (perhaps with vocalic [ɾ]) “I seized”; *zaumip* ~ *zammip* ~ *zamip* (perhaps with labial continuant; see §3.1.2) “laborers.”

3.2.1 Vowel contraction

Monosyllabic pronouns in clusters, and pronouns in constructions with directional elements were often susceptible to contraction and written without word-division. The sequence *i u* does not normally occur; *u i* contracts to *u*, and *i i* to *i*: thus, [li-n-a ap u in] written *li-na-pu-un*; [pat-r ir u-r] written *pa-at-ru-ur* (Reiner 1969:99, Grillot 1983:210, Grillot-Susini and Roche 1987:9).

3.3 Accent

Neutralization of some final vowels and elision of some medial vowels suggests that stress was nonfinal, probably initial (Grillot-Susini and Roche 1987:11, 1994:15; Khačikjan 1998:10).

4. MORPHOLOGY

4.1 Word formation

Elamite is an agglutinative language. Most roots are of one or two syllables, of the types CV (*da-* “place”), VC (*ki* “one”), CVC (*nap* “god,” *ruh* “man”), VCV (*igi* “brother”), CVCV (*zana* “lady”), and perhaps CVCCV (*sunki-* “king,” *tingi-* “take away” [or: CVCV *suⁿki-*, *tiⁿgi-* ?]). Some roots produce only nominal forms, others both nominal and verbal forms. All inflection is marked with suffixes attached to a root or to a base derived from a root with the addition of a thematic vowel, a derivational suffix, by reduplication, or by compounding. Most trisyllabic bases can be identified as composites or loanwords (Grillot-Susini 1994:1–8).

4.2 Nominal morphology

Nominal inflection affects substantives, attributes of substantives (including clauses), demonstratives and pronouns, numerals, the negative particle, and some verbal forms (derived from the bare verb-stem (gerunds or participles), and from the “nominal conjugations” formed on the verb-stem with suffixed *-k-* (Conjugation II) and suffixed *-n-* (Conjugation III)).

4.2.1 Gender, person, and number

Nominal inflection distinguishes two genders, animate and inanimate. Inflection of animates distinguishes three personal classes, corresponding to the three persons of verbal inflection. The first-person (I-class) form is sometimes called *locutive*; the second-person (you-class) *allocutive*; and the third-person (he-it-class) *delocutive*. Inflection of third-person animates distinguishes singular and plural. These suffixes mark agreement (i) between subject and verb, and (ii) between parts of possessive and attributive constructions and subordinate clauses (see below and §5.2); the gender/person/number suffixes are as follows:

(2)	<i>Animate</i>		
	<i>Singular 1st</i>	-k	([sunki-k] “I, king”)
	<i>2nd</i>	-t	([hutta-n-t] “you, doing” [katu-k-t] “you, living”)
	<i>3rd</i>	-Ø	([nap] “he, god,” [zana] “she, lady”)
		-r	([nap-ir] “he, god,” [sunki-r] “he, king”)
	<i>Plural 3rd</i>	-p	([nap-ip] “they, gods,” [sunki-p] “they, kings”)
	<i>Inanimate</i>		
	<i>3rd</i>	-Ø	([hal] “town, land,” [mur] “place”)
		-me	([sunki-me] “kingdom, kingship”)
		-n	([siya-n] “temple,” [muru-n] “earth”)
		-t	([hala-t] “clay, mud brick”)

Third-person suffixes are derivational. The animates indicate agent nouns (*huttira* “maker, doer”), members of a class, or persons (*Babilira*, *Babilip* “Babylonian(s)”; *libar*, *libap* “servant(s)”). The inanimate *-me* indicates abstracts (*takkime* “life”). In Achaemenid Elamite, *-ta* ~ *-te* indicates generality (*marrita* “everything”). Doublets are common: thus, Achaemenid Elamite [muši-n] ~ [muši-me] “account.”

In possessive and attributive constructions, the suffixes appropriate to the possessor or the determined substantive are added to the possessed or attribute. Consider the following Middle Elamite examples:

- (3) A. [u PN šak PN₂-k(i) sunki-k GN-GN₂-k(a)]
 “I, PN, son of PN₂, king of GN (and) GN₂”
 with first-person suffixes throughout
- B. [PN meni-r GN ak GN₂-r(i) šak hanik PN₂-r(i) ak PN₃-r(i)]
 “he, PN, ruler(?) of GN and GN₂, beloved son of PN₂ and PN₃”
 with third-person suffixes throughout

In Neo-Elamite a postposition *-na* (derived from the neutral inanimate *-n* with final “relative” *-a*), sometimes expresses possession, and in Achaemenid Elamite most possession and some attributive relationships are expressed with *-na*: Neo-Elamite [zalmu PN-na] “image of PN”; Achaemenid Elamite [halmi PN-na] “seal[ed document] of PN.”

4.2.2 Case

Only personal pronouns (see §4.3.2) are marked for nominal case, distinguishing between an object-case and a subject/indirect object-case. Other spatial relationships and relationships between nouns and verbs are expressed with resumptive pronouns and with postpositions attached to nouns, to noun phrases, or to clauses.

4.2.3 Indeclinable nominals

Kinship terms in which possessive or attributive relationships are inherent (*šak* “son,” *puhu* “child,” *igi* “brother,” *šutu* “sister,” *amma* “mother,” *rutu* ~ *riti* ~ *irti* “wife,” *ruhušak* “sister’s son”) are indeclinable; that is, they do not have markers of gender and person where other nouns have such markers (Reiner 1969:88). As the possessed noun in some possessive constructions, they are marked with nominal suffixes that refer to the possessor: Neo-Elamite, Achaemenid Elamite [PN šak-r(i)], [PN riti-r(i)] (Grillot-Susini and Roche 1987:23).

4.2.4 Adjectives

Elamite adjectives do not constitute a distinct morphological class. They are marked with the personal suffixes and postpositions that express attributive and possessive constructions, including the personal marker of the modified substantive ([*temti riša-r*] “great lord”; [*upat lansiti-p(a)*] “brickwork (anim. pl.!) of gold,” i.e., gilded or enameled?); and the possessive postposition *-na* ([*sunki-na*] “of the king,” i.e., “royal”), productive in Achaemenid Elamite: e.g., GURUŠ-*na* “male”; MUNUS-*na* “female” (the Elamite words underlying the logograms are unknown); *punna*, *berna*, etc. (qualifying animals). There are no comparative or superlative forms. Superlatives are expressed with a possessive construction: Achaemenid Elamite [*akka irša-r-a napi-p(e)-na*] ~ [*akka irša-r-a nap-b(e)-r(a)*] (corresponding to Old Persian *haya maθišta bagānām*) “[Ahuramazda] the greatest of the gods”; Middle Elamite [*riša-r napi-p(i)-r(a)*] “[Inšušinak], greatest of the gods.”

4.3 Pronouns

Elamite has demonstrative, personal, possessive, relative, indefinite, and resumptive pronouns.

4.3.1 Demonstrative pronouns

The Middle Elamite demonstrative pronouns are *hi* ~ *i* (animate singular and inanimate) and *ap* ~ *api* (animate plural). Achaemenid Elamite distinguishes between near-deictic *hi* ~ *i* and *ap* “this, these,” and far-deictic *hube* (inanimate), *hupirri* (animate singular), *hupibe* (animate plural) “that, those.” The demonstrative pronouns also serve as third-person personal pronouns.

4.3.2 Personal pronouns

The personal pronouns distinguish an “unmarked” nominative/dative form for subjects or indirect objects, and a “marked” accusative form for direct objects:

(4)	Singular		Plural	
	<u>Nominative</u>	<u>Accusative</u>	<u>Nominative</u>	<u>Accusative</u>
1st	u	un	nika ~ nuku	nukun
2nd	ni ~ nu	nun	num ~ numi	numun
3rd	i ~ hi	ir ~ in	ap ~ ap(p)i	ap(p)in
Inan.	i ~ in	i ~ in		

In Achaemenid Elamite, first-person singular accusative pronouns written *unan*, *unahan*, *unanku* ~ *uhanaunku* also occur. Analysis of them is a matter of disagreement (Paper 1955:95 and Khačikjan 1998:22). Also in Achaemenid Elamite, *ha-ap* appears once as a variant spelling of *ap*.

4.3.3 Possessive pronouns

Possessives of the personal pronouns are formed like other possessive constructions, by adding the suffixes appropriate to the possessor (see §4.2.1) or by adding the possessive postposition *-na* ~ *-ni*: Middle Elamite [napir-u-r(i)] “my god,” [sunkip urip-u-p(e)] “kings, my predecessors,” [takkime puhu nika-me-na ~ nika-me-me] “the live(s) of our children”; Achaemenid Elamite [ulhi nuka-me] “our house,” [libar-u-r(i)] “my servant,” [libar-e-r(i)] “his servant,” [sunkime appi-ni] “their kingship (= rule over them),” but first-person singular with an enlarged base [libame u-ni-na] “my servitude (= servitude to me)” and first-person plural without animate/inanimate distinction [kir akkayaš nuka-me] “one colleague of ours.”

In addition, there is a third-person animate singular possessive suffix *-e* that may derive from the pronoun *hi* ~ *i*, without suffix: Middle Elamite [PN ak puhu-e] “PN and her children”; Middle Elamite, Achaemenid Elamite [hiš-e] “his name.” A corresponding third-person plural animate possessive is formed by adding *-e* to the demonstrative/personal pronoun: Middle Elamite [hiš(-)api-e] “their name”; Achaemenid Elamite [puhu appi-e] “their boys.” Hinz and Koch 1987 diverge from Hallock 1969 and others in interpreting final *-še* in Achaemenid Elamite writings of substantives of Iranian origin as representing the Old Persian possessive *-šay*, rather than as including Elamite *-e*.

Achaemenid Elamite also has a first-person possessive suffix *-ta* (only in the construction [u atta-ta] “my father”) and a second-person singular possessive suffix *-ni* (NUMUN-*ni* “your lineage,” [širi-ni] “your *s*”).

4.3.4 Relative pronouns

The Elamite relatives are animate *akka* “who” and inanimate *appa* “which, what.” A corresponding animate plural *akkap(e)* also appears in Neo-Elamite and Achaemenid Elamite. In Achaemenid Elamite the inanimate form doubles as the accusative of the animate: *appi* 9 *sunkip appa u... mauriya* “these are the nine kings whom I captured.” In Achaemenid Elamite, the relative pronouns appear as calques on the Old Persian relative pronouns and articles, *haya/hayā/taya*, connecting substantive and attribute or possessor and possessed pronouns; such calques are frequent in multilingual royal inscriptions (PN *akka Makuš* “PN the Magian,” *taššup appa* PN-*na* “the troops of PN,” *taššup appa unina* “my troops”); the usage also occurs in administrative texts (PN *akka* GN-*ma kurdabattiš* “PN the chief of workers at GN”). Occasional uses of the relative pronouns in expressing dates, however ([^dITI^{MEŠ} *appa* NN-*na-ma*] “in the month of NN,” *bel appa* 24-*ummemana* “the 24th year”), do not have Old Persian parallels.

The inanimate substantive *mur(u)*, unmarked and undeclined, serves as the locative relative “where”: Middle Elamite [muru huma-hš(i)-ta in-me durna-h] “where they took (it) I do not know”; Achaemenid Elamite [mur halmarraš hi kuši-k-a] “where this fortress is built.”

4.3.5 Indefinite pronouns

An animate indefinite pronoun, “anyone,” is formed from the relative *akka* with personal suffix *-r*; it occurs in negated clauses: for example, Middle Elamite [sunki-p uri-p-u-pi akka-r(a)... in-r(i) hutta-n-r(a)] “(what) former kings, any (of them) did not do,” i.e., “what no former king did”; Achaemenid Elamite [appa-n-lakki-me akka-r(i) inni hutta] “I did not commit a trespass against anyone.”

The inanimate indefinite *aški* “anything,” also found in negated clauses, is perhaps formed with the numeral *ki* “one” (Hinz and Koch 1987:88; Khačikjan 1998:29; otherwise Hallock 1969:670).

4.3.6 Resumptive pronouns

Nominal constituents of a clause are frequently “resumed” by one or more pronouns placed immediately before the verb at the end of the clause. In Middle Elamite these resumptives are in clusters: [ap u in (written *a-pu-un*) duni-h] “to them [the gods] I gave it [the temple].” In contrast, Achaemenid Elamite normally allows only a single resumptive to precede the verb: *u* DN *un nušgišni* “I, may Ahuramazda protect me”; *u* PN *ir halpi* “I, PN, I killed him”).

The element *aha* (Middle Elamite, Neo-Elamite) ~ *ah* (Neo-Elamite, Achaemenid Elamite) ~ *ha* (Achaemenid Elamite) also appears before the verb at the end of a clause, replacing or, less often, preceded by resumptive personal pronouns. In Achaemenid Elamite it is commonly transcribed as a proclitic. In Middle Elamite it sometimes takes nominal suffixes *-r*, *-n*, or *-t* to mark concord. Characterizations of this formant disagree. On a narrow interpretation, it is a locative and only a locative, indicating “here,” “there,” or even both “here” and “there” contrasted in a single phrase. Some contexts are susceptible only to translation with locatives: Middle Elamite [ir aha-r murta-h] “I placed him [the image

of the god] in it [the temple],” expressed elsewhere [sian-r(a) ir murta-h] “his temple, I placed him” (see Grillo-Susini and Roche 1987:20–21, but cf. Grillo 1970:235 n. 40; Giovinazzo 1989:13–14). On a broad interpretation *aha* ~ *ah* ~ *ha* is a general oblique resumptive pronoun, referring to substantives of any gender and number, and indicating not only “in, at it” but also “to, for, with it” (see Hallock 1969:9, 1973:148 n. 4; Stolper 1984:25; Malbran-Labat 1995:80; cf. Khačikjan 1998:25). Some contexts are susceptible only to translation with nonlocatives: thus, Middle Elamite [upat... tepu-h ulhi i aha kuši-h] “I fashioned bricks, with them I built this house.” The comparison among Achaemenid Elamite *hupimer* “then, after that,” *hamer* “then,” and *hami* “there” favors identifying *ha* as demonstrative and pronominal. An agnostic view identifies Achaemenid Elamite *ha-* as a prefix or particle of uncertain function and meaning (Grillo-Susini, Herrenschildt, and Malbran-Labat 1993:51; Tucker 1998:175).

In Achaemenid Elamite administrative texts *kaš* sometimes replaces *hi* as an oblique singular resumptive pronoun (Hallock 1969:9). Vallat (1987b), accounting for this non-paradigmatic form as a ghost word arising from the misreading of an archaic form of the sign *hi*, is not supported by collation.

4.3.7 Reflexive pronouns

The reflexive *du(h)-*, perhaps related to the verb *du-*, “take, receive,” occurs with possessive suffix *-e* in Middle and Neo-Elamite ([hiš duh-e] “his own name”) and in Achaemenid Elamite ([halpi duh-e-ma] “by his own death” (i.e., a natural death). In Achaemenid Elamite, it also forms an animate plural (also in possessive constructions, e.g., [GUD^{MES} du-p-e-ma ~ du-p(i)-ni-ma] “for their own cattle” vs. pleonastic [GUD^{MES} du appi-ni-ma]), and an animate singular object-case, like the personal pronouns (e.g., [du-n nušgiš] “protect yourself”).

In Achaemenid Elamite, the element *hisu* indicates emphasis of the subject of an action: *hisu x makiš* “he himself consumed x [grain].” It also appears with a “generalizing” inanimate suffix *-t* ([PN hisu-t(a) x du-ma-k-a] “x [grain] was received by PN himself”), but it is not marked for case or number.

4.3.8 Other pronouns

“Each, every” is expressed in Achaemenid Elamite with *unra* (referring to persons: 90 *kurtas unra* 20-*irmaki dušda* “90 workers received a twentieth [measure of wine] each”) and *lurika* (referring to animals and inanimates: UDU.NITA^{MES} *lurika x ŠE.BAR^{MES} ha-lika* “for each sheep x barley was delivered”). The form *unra* varies with *unra-na*, with the adjectival *-na* suffix.

“All” is expressed in Achaemenid Elamite by *marrida*, with the “generalizing” *-t* (*hupe marrida... hutta* “I did all that”), also *marribepda* ~ *marbepda*, with animate plural marker ([taššup marri-p(e)-p-t(a) ~ mar-p(e)-p-t(a)] “all the people,” but elsewhere *taššup marrida* (otherwise Hinz and Koch 1987, segmenting a word *marri*, plural *mar(ri)bep* from *da* “also”).

4.4 Nominalized negative particle

In Middle Elamite and Neo-Elamite, and exceptionally in Achaemenid Elamite, the negative particle *in-* takes nominal suffixes (first-person singular *in-ki*, third-person *in-ri*, **in-pi*, inanimate *in-ni*, *im-me* (< **inme*)) indicating concord with the logical subject (either the

subject of the verb or the subject of attention). In Achaemenid Elamite, the inanimate form *inni* is general: [taššup appa unina in-ni tiriman-p(i)] “people who do not call themselves mine.”

4.5 Verbal morphology

Verb bases are simple (*ta-* “put,” *dunu-* “give”), compound (*mur-ta-* “put in place”), or reduplicated. Reduplicated bases are mostly of the type $C_1V_1C_1C_2V_2-$ (*beti-* > *bepti-* “rebel”), rarely of the form $C_1V_1C_1V_1-$ (*li-* > *lili-* “give, deliver”) or the form $C_1V_1C_1V_1C_2V_2-$ (*tallu-* > *tatallu* (earlier **taltallu*) “write”). The change of meaning that reduplication conveys is not established; Steiner (1990:152–153) proposes plurality of action or patient.

4.5.1 Verb conjugations

Verbs produce three primary sets of forms labeled “conjugations”: one “verbal conjugation” (*Conjugation I*) and two “nominal conjugations” (most often called *Conjugation II* and *III*, also called *participles*, *paraverbal forms*, or *appellatives*). Particular verbs do not belong to a single conjugation; most verbs produce forms in more than one conjugation. All three conjugations distinguish three persons and two numbers. The *nominal conjugations* are formed by adding the suffixes that mark person, gender, and number in nouns (see §4.2.1). The *verbal conjugation* is formed by adding suffixes that are specific to verbs.

4.5.1.1 Middle Elamite verbs

Conjugations I–III of Middle Elamite are presented in (5)–(7), utilizing *kulla-* “pray”; *hap(i)-* “hear”; *hutta-* “do”; *туру-* “say”; and *tahha-* “help(?)”:

(5) Conjugation I (verbal conjugation) – Middle Elamite

	<i>Singular</i>	<i>Plural</i>
<i>1st</i>	[kulla-h]	[kulla-hu]
<i>2nd</i>	[hap-t]	[hutta-h-t]
<i>3rd</i>	[hutta-š]	[hutta-h-š]

(6) Conjugation II (base + -k-) – Middle Elamite

	<i>Singular</i>	<i>Plural</i>
<i>1st</i>	[*-k-k]	
<i>2nd</i>	[*-k-t]	
<i>3rd animate</i>	[hutta-k-r]	[hutta-k-p]

(7) Conjugation III (base + -n-) – Middle Elamite

	<i>Singular</i>	<i>Plural</i>
<i>1st</i>	[hutta-n-k]	
<i>2nd</i>	[hutta-n-t]	
<i>3rd animate</i>	[hutta-n-r]	[tahha-n-p]

Since the personal suffixes on nouns include no first-person plural, no first-person plural form is expected in (6)–(7). Two clear first-person plurals with a suffix *-nunk* (*turununki* “we say,” *hinunka* “we get [children]”) may correspond to Conjugation II first-person singulars (*hinka*, Neo-Elamite *turunka*). There is, however, disagreement on the analysis of these

forms, and of a counterpart Achaemenid Elamite first-person plural on a base enlarged with auxiliary (-)ma-, *tiri(-)ma-nun* “we call ourselves” (summarized by Khačikjan 1998:36; Tucker 1998:188 n. 41).

4.5.1.2 Achaemenid Elamite verbs

Conjugations I–III of Achaemenid Elamite are presented in (8)–(10), illustrated with *marri-* “hold”; *hutta-* “do”; *šinnu-* “come”; *katu-* “live”; *na-* “say”:

(8) Conjugation I (verbal conjugation) – Achaemenid Elamite

	<i>Singular</i>	<i>Plural</i>
<i>1st</i>	[marri-Ø (~ -y, -ʔ)]	[hutta-Ø-ut] (written <i>-hu-ut</i> and <i>-ú-ut</i>)
<i>2nd</i>	[* -t]	[* -t]
<i>3rd</i>	[hutta-š]	[hutta-h-š]

As a result of the loss of phonemic /h/ and inconsistency in the writing of historical *h*, singular and plural were not distinguished in the third person – at least not distinguished in writing. A juncture or syllable boundary was still pronounced at the end of first-person singular forms, however, reflected in writings of forms with suffixed *-a* as *marriya*, *pariya*, *beliya*, *tengiya*. The first-person plural form, marked with an enclitic *-ut* that also appears on nominal forms ([sunkip-ut] “we are kings”), was productive (Hallock 1973:151).

(9) Conjugation II (base + -k-) – Achaemenid Elamite

	<i>Singular</i>	<i>Plural</i>
<i>1st</i>	[šinnu-(k)-k-ut]	
<i>2nd</i>	[katu-k-t]	
<i>3rd animate</i>	[hutta-k-Ø]	[šinnu-Ø-p]

The third-person forms expected from the Middle Elamite paradigm occur as nouns or attributive adjectives (inanimate *katuka*, animate singular *katukra*, animate plural *katukpe*) but not clearly as predicates (Tucker 1998:171–173). The ending of the first-person singular, always written *-gi-ut*, apparently contains the same particle *-ut* found in the Conjugation I first-person plural, and on nominal forms and phrases (*sunkir appi-ni-gi-ut* “I am king of them,” *titu-kur-ra-gi-ut* “I am (not) a liar”), where *-gi-ut* corresponds to Old Persian *āham* “I am” and is parallel to *ha-um*, an Elamite transcription of Old Persian *āham*.

(10) Conjugation III (base + -n-) – Achaemenid Elamite

	<i>Singular</i>	<i>Plural</i>
<i>1st</i>	[na-n-k]	
<i>2nd</i>	[na-n-t]	
<i>3rd animate</i>	[na-n-r]	[na-n-p]

For the first-person plural *tirimanun*, “we call ourselves,” see the Achaemenid Elamite forms noted in §4.5.1.1. A similar form, *hutti-nun* has been treated as a first-person plural of *hutta-* “do,” although it occurs in the phrase *hutti-nun-(h)uba*, corresponding to an Old Persian infinitive meaning “[in order] to do [battle]”; analysis of the form is disputed (summarized in Khačikjan 1998:37).

4.5.1.3 Auxiliary and suffixed (-)ma-

Verb phrases occur in Middle and Neo-Elamite in which an auxiliary *-ma-*, with endings of Conjugations I, II, or III, follows either (i) a bare verb base ([*miši-ma-n-*] “becoming dilapidated”), or (ii) Conjugation II or III stems (Neo-Elamite *pali-k-ma-n-k*, *pera-n-ma-n-k*), or (iii) verbal nouns with animate marker *-r* (*pepši-r-ma-h* “I renovated”). In Achaemenid Elamite, the element *-ma-* only follows the bare verbal-stem and precedes the personal suffixes, producing secondary sets of forms that are usually called Conjugations Im, IIm, and IIIm. Attested Achaemenid forms are presented in (11):

(11) Achaemenid Elamite secondary conjugations

		<i>Singular</i>	<i>Plural</i>
Conjugation Im	<i>1st</i>	-ma-Ø	
	<i>3rd</i>	-ma-š	
Conjugation IIm	<i>3rd</i>	-ma-k	-ma-p
Conjugation IIIm	<i>1st</i>	-ma-n-k	
	<i>3rd</i>	-ma-n-ra	-ma-n-p

Conjugation Im forms are rare, except for the verb *du-ma-* “receive.” Conjugation IIm plural forms are also rare.

4.5.1.4 Conjugation functions

There is broad agreement on the distinctions of meaning among the conjugations, but authorities differ in emphasis on aspect, transitivity, and/or voice (perfective/imperfective, active/passive, taking one, two, or three arguments). Conjugation I is mostly active, transitive, sometimes intransitive (including verbs of motion and verbs of speaking), having neutral or absolute aspect, mostly of past tense. Conjugation II is mostly intransitive or passive, perfective in aspect hence often past. Conjugation III is transitive or intransitive, imperfective, non-past (see, among others, Hallock 1959; Grillot 1970:216–218; McAlpin 1981:71 and 80; Khačikjan 1998:33–36; see also Malbran-Labat 1990, distinguishing verbs with a single argument, with no Conjugation I, from verbs with two or three arguments in Conjugation I but fewer arguments in Conjugations II and III).

There is only partial consensus on the meaning of auxiliary (-)ma- (Malbran-Labat 1986): durative (Labat 1951:36); intensive or emphatic, iterative and durative (Hallock 1959:18); indicating will, intent, decision, or declaration (Grillot and Vallat 1975, Grillot-Susini and Roche 1987:36); uncertain, indicating change of state (Khačikjan 1998:36).

When Achaemenid Elamite reflects translation of an underlying Old Persian text or simply contact with Old Iranian speakers, historically original distinctions are affected by calquing on Old Iranian. Old Persian subjunctives with future meaning are regularly translated with Conjugation III forms, and Old Persian presents usually with Conjugation IIIm forms (McAlpin 1981:71; Tucker 1998:181–182).

4.5.2 Verb moods

Several modal uses of various conjugation forms can be identified.

4.5.2.1 Precative or optative

Forms of Conjugations I and II with the suffix *-ni* ~ *-na* are precative or optative: Middle Elamite [*tela-k-ni*] “may it be dedicated(?)”; Neo-Elamite [*hutta-hš-ni*] “may they do”; Achaemenid Elamite [*kata-k-t(i)-ni*] “may you live”; [*dunu-š-ni*] “may he give.” Achaemenid

Elamite forms in *-ni* sometimes correspond to Old Persian optatives: thus, [sura-k nima-k-ni], and [šura-k-ni], both rendering Old Persian *miḍa kariyaiš* “would do harm.” The particle *-ni* may also be asseverative (Middle Elamite [hutta-h-ni] “I indeed made,” [šatu-h-ni] “I will truly š.”; see Grillot 1978:29 n. 65) and perhaps concessive (Middle Elamite [kuši-k-ni] “although(?) it was built [formerly of unbaked brick, I rebuilt it of baked brick]”).

4.5.2.2 Imperative

In Middle Elamite, the second person of Conjugation I serves as the imperative (*kullak-ume hap-t(i)* “hear my prayer”). In Achaemenid Elamite, the third person of Conjugation I serves as an imperative: [mite-š... halpi-š] “go, defeat.” In a parallel phrase the first of two imperatives, an intransitive, is rendered with the bare stem: [mite ~ mida... halpi-š]. See also Vallat 1994:266, arguing for *iddu* < **in du* “he is to receive it,” a bare stem used as third-person imperative or optative.

4.5.2.3 Prohibitive

Prohibitives are Conjugation III (imperfective, non-past) forms preceded by the particle *anu* ~ *ani*: for example, Middle Elamite [par ani kutu-n] “may he not be assured of(?) progeny”; Neo-Elamite [anu i-n kuti-n-k(i)] “I must surely not support(?) him”; Achaemenid Elamite [hupe anu hutta-n-t(i)] (written *huttamti*) “do not do that”; [anu u ir turna-n-p(i)] (written *turnampi*) “lest they know me,” corresponding to Old Persian *mā taya-* with a subjunctive.

4.5.3 Nonfinite verbals

The bare verbal stem used as a substantive is usually termed an “infinitive”: for example, Achaemenid Elamite GN-*mar* GN₂ *laki* “a crossing from GN to GN₂,” occurring at the end of the text, in a statement otherwise construed with a finite form [pari-š] “they went.” The form is labeled a Conjugation I infinitive in Hallock 1965; a Participle I in Khačikjan 1998:41. Stems with animate personal markers are agent nouns: Achaemenid Elamite [lipte kuti-r-a] “bow carrier”; called Conjugation I participle in Hallock 1965. Stems with suffixed *-k* and *-n*, that is, the bases of Conjugations II and III, are passive-intransitive perfective (sometimes past) participles and active imperfective (non-past) participles, respectively. Participles in *-k* also form substantives or adjectives: [katu-k-r-a] “living”; [halpi-k-r-a] “dead”; [hutta-k hali-k] “(what is) made with effort(?)”. The stem with *-n* or *-na* is also a non-past or imperfective infinitive: for example, Middle Elamite *kukkunum pittena* “[the god commanded me] to make an enclosure of (?) the *k*”; Achaemenid [tuppi talli-ma-n-a] “[I ordered] an inscription to be written.” Such constructions are termed Conjugation III infinitive in Hallock 1965; verbal noun or supine in Khačikjan 1998:42. Compare, however, Achaemenid [šaparakumme hutta-ma-n-r-a] “[he came] to do battle,” with a Conjugation III third-person form translating an Old Persian infinitive.

4.5.4 Other verbal morphemes

Additional suffixes can be appended to verbal forms.

4.5.4.1 The suffix *-a*

This suffix attaches to verbal forms of all conjugations in all periods. It is usually the final morpheme of the form (but note Achaemenid Elamite [kuši-š-t-a-p(e)] “women who have given birth” and similar forms; see §5.6). In Middle Elamite it also attaches to some nominal

forms, including nominalized clauses, either replacing or following markers of gender and person: [DN GN-r-a] “DN [the god] of GN”; [siyan . . . in-me (written *imme*) kuši-hš(i)-me-a (written *kušihšima*)] “the temple which they did not build.” Divergent characterizations of the function of *-a* include the following:

1. Suffixed *-a* is determinative and subordinating. It first marked determining attributes of nouns and nominal predicates of subordinate clauses, then also marked verbal predicates of subordinate clauses. In Achaemenid Elamite *-a* appears mostly on subordinate verbs. In all periods, clauses introduced with relative pronouns or conjunctions may also omit *-a* (Grillot 1970, 1973; Grillot-Susini and Roche 1987:25, 40; Steiner 1990:144, 153). In an extreme form of this interpretation, Achaemenid Elamite forms in *-a* are subordinate and only subordinate, usually with temporal implication, but also with causal and other nuances: [hutta-k-a] “which is done,” hence “which has [previously] been done” (see, among others, Giovinazzo 1989; Vallat 1994:272).
2. Alternatively, *-a* is connective. It does not express subordination but coordination: thus, Achaemenid Elamite [marri-š-a (written *maurišša*) appin halpi-š] “he seized and killed them”; [marri-k-a u-ikki tengik] “he was seized and brought to me” – both corresponding to Old Persian main clauses; Middle Elamite [pepši-h-a kuši-h] “I restored and built” (see Hallock 1959:5–6, 11–12, 1973:150–151; and cf. Steiner 1990:144, comparing Elamite relative *-a* to the use of the Akkadian enclitic conjunction *-ma* in paratactic syntax to express subordination).
3. With less precision, *-a* is a semantic auxiliary expressing “non-finiteness and semantic connection . . . primarily looking forward to the finite verb.” See McAlpin 1981:80 (cf. 71); in general, Khačikjan 1998:50–51.

It is probable that *-a* is determinative-relative through Middle Elamite and probably later. That *-a* is always subordinating and only subordinating in Achaemenid is less well grounded. Counterexamples for all proposals occur, notably many Achaemenid Elamite administrative texts in which all verbs are marked with *-a* (see also Tucker 1998:165, n. 2, noting Achaemenid Elamite leveling in the distribution of *-a*).

4.5.4.2 The suffix *-ti* ~ *-ta*

Disagreement also prevails over the characterization of a suffix *-ti* (and *-t(i) + -a > -ta*) found on verbs of all periods. It appears mostly on third-person forms of Conjugation I (Middle Elamite [kuši-š-t-a], Achaemenid Elamite [hutta-š-t-a]), rarely on other forms (Achaemenid Elamite Conjugation II second person [huttu-k-t-a]). In Middle Elamite, forms with *-ti* ~ *-ta* often occur in subordinate clauses; in Achaemenid royal inscriptions, they occur only in subordinate clauses; in Achaemenid administrative texts they often occur at the ends of texts.

The suffix *-ti* ~ *-ta* is characterized by some as marking finality or completeness (Hallock 1959:6–7; McAlpin 1981:71); by others as marking past time, translatable with perfect or pluperfect tenses (Hinz and Koch 1987 *passim*), most often distant past time, anteriority with respect to another verb (Grillot-Susini and Roche 1987:33; Vallat 1994:272). Most passages can be plausibly translated with past tenses that indicate anteriority: Middle Elamite [akka kukši-š-t-a imma durna-h] “I do not know [the former kings] who had built it [the temple]”; Achaemenid Elamite [akka Makuš šari-š-t-a] “[I rebuilt the temples] which the Magian had destroyed.” Khačikjan 1998:53 suggests historical development in the function of *-ti* ~ *-ta* from a nominalizing clitic (after Labat 1951:38 and Paper 1955:49), made obsolete as the system of marking nouns for gender and person became less articulated, to a completive and/or pluperfect marker.

4.6 Adverbs

Some Achaemenid phrasal adverbs are formed with nouns and postpositions (see §5.1.1): *da'e* “other” > [daʔe-ikki] “differently”; *irša-* “big” > [irše-ikki] “much, many”; *šit-* “night,” *na-* “day” > [šit-ma-na na-ma-na] “by night, by day,” /nan-na/ “daily”; [hi-ma] “here,” [hupe-ma] “there,” [hupe-ma-mar] “from there.” Dimensional elements provide the heads of other derived adverbs: Neo-Elamite [ukku-mi-na] “above”; [pat-mi-na] “below”; Achaemenid Elamite [me-ni] ~ [me-mi] “then”; [me-ša, mešši-n, me-šamerašae] “afterward.” Others with a derivational suffix *-ta* have doublets without *-ta*: Achaemenid Elamite [ha-me-r ~ ha-me-r-ta] “then, after that”; [hupi-me-r ~ hupi-me-r-ta] “then, after that”; [am ~ am-ta] “now”; [šašša ~ šašša-ta] “formerly.” Others are derived from nouns with various formants (Middle Elamite [šut-ki-me šat-ki-me] “by night, by day”; Achaemenid Elamite [na-zirna, na-randa] “daily”), or from participles (Achaemenid Elamite [kappa-k-a] “together”; [zilla-k-a] or [šilla-k-a] “greatly, much”). Others are simply bare stems: Achaemenid Elamite *yani* “afterwards”; *zila* “thus,” but usually phrasal *hi zila* “thus.”

Achaemenid Elamite distributive constructions are formed with nouns or numerals, usually paired, marked with the postposition or derivational suffix *-na*: [10 ruhip-na ak 10 ruhip-na] “[1 sheep to be received] by each group of ten”; ^dITI^{MEŠ}-na ^dITI^{MEŠ}-na “[one unit of wine to be received] monthly,” compare [kurtaš hupipe-na unra-na ^dITI^{MEŠ}-na x duš-t-a] “136 of their workers received x [barley] each per month.” The suffix is usual but optional: *ruh-ra ruh-ra* ^dITI^{MEŠ}-na ^dITI^{MEŠ}-na “each man, per month”; *5-ip ak 5-ip... 5-ip ak 5-ip-na... 5-ip-na ak 5-ip-na... 5-ip-na* (all in a single text).

4.7 Interjections

A vocative interjection *e* appears in pre-Achaemenid Elamite: for example, *e DN* “o, DN!.” In Achaemenid inscriptions, Old Persian vocative cases have no corresponding formant in the Elamite version: *ruhirra*, corresponding to the Old Persian vocative *martiyā* “o, man,” though perhaps *malla e*, corresponding to the Old Persian vocative *marikā* “o, subject.”

4.8 Compounds

Compound nouns are of several constructions: (i) noun plus noun (*kik-murun* “sky-earth” > “world”); (ii) participle plus participle (*huttak-halik* “done-perfected” > “handiwork, accomplishment”); (iii) infinitive plus agent noun (*paha-hutip* “protect-doers” > “protective gods”); (iv) infinitive plus infinitive (*hutta-hali* “handiwork, accomplishment”). Compound verbs consist of a noun plus verb: *mur-ta-* “place-put” > “establish”; *kur-ma-* “hand-intend(?)” > “entrust” (see Grillot 1984:190 n. 25).

4.9 Numerals

Cardinal numerals may take nominal suffixes: [ki-r] “one,” 1-*ir*, 2-*ip*, 3-*ip*, and so forth; [bel ki-ma] “in one year”; [ki-r x duš] “one (man) received x (grain)”; [1-ir šalu-r] “one gentleman,” but *samidakurra ki* “one *samida*-maker” (all examples from Achaemenid Elamite).

In Achaemenid Elamite, ordinal numbers are usually followed by *-ummema* ~ *-ummena* ~ *-ummemana*, probably to be analyzed as including the nominal suffix *-me* and the postpositions *-ma* and *-na* (Hallock 1969:76). Less frequent variant forms are *-umme*, *-mema*, *-mena*, and *-memana*.

In Achaemenid Elamite, fractions are formed with a suffix *-irmaki* ~ *-kurmaki* (Cameron 1948:38f; Hallock 1969:73).

5. SYNTAX

5.1 Word order and typology

The subject of attention usually occurs in sentence-initial position. In Middle and Neo-Elamite, the verbal predicate is normally at the end, indirect objects precede direct objects, attributes and clauses follow the nouns they modify, resumptive pronouns and adverbs precede verbs, so the common sentence order is:

- (12) Subject (+ modifier) – Indirect object (+ modifier) – Direct object (+ modifier)
– Resumptive pronoun(s) – Adverb – Verb

As partially illustrated in the following example: [sian DN-me sunki-p uri-p-u-p(e) GN in-me kuši-hš(i)-me-a u GN kuši-h] “the temple of DN which kings who were before me did not build in Susa I built (at) the acropolis.”

In Achaemenid Elamite the verb is often but not always final. Free and irregular word order does not always reflect translation from Old Persian: thus, [meni sunki-me hupi-r(ri) GN-(i)p-na hutta-š] “then the kingship he of the Elamites exercised” corresponds to Old Persian *haw xšāya θiya abava Ūjai* “he became king in Elam”; [ap dunu-k-a ^{SAL}MUNUS^{MEŠ} appa GN hami-ma-n-p(i) gal-ma] “[grain] to them was given, women who in GN were grinding(?), as rations.”

Khačikjan 1993, 1998:63–66 reviews the discussion of ergativity in Elamite (Kammenhuber 1974:204; Steiner 1979, 1990: 151, 159; Wilhelm 1978, 1982; Diakonoff 1981), concluding that Elamite was “an early nominative language [i.e., based on a fundamental opposition of subject vs. object] that had retained some features typical of ergative [i.e., based on a fundamental opposition of agent vs. patient] languages.”

5.1.1 Postpositions

Elamite is chiefly postpositional, though prepositions occur as well. In Achaemenid Elamite, spatial and temporal relationships are expressed with postpositions, either enclitic (*-ma* “in, on”; *-ikki* “to”; *-mar* ~ *-ikki-mar* “from”; *-lakka* “across”) or separable ([hi da-k-a] > *idaka* “with”; [hat-i-ma] > *hatima* ~ *hatuma* “within, throughout”; *tubaka* “concerning”; *tibba* “before(?)”). A preposition *kuš* “to(ward), until” occurs both in Middle Elamite and in Achaemenid Elamite: [kuš Purattu ir pari-h] “I went toward the Euphrates.” (see §5.5.)

In pre-Achaemenid Elamite, postpositions per se are less numerous and less frequent. Locative *-ma* “in” and possessive *-na* “of” are common in Middle Elamite. Other postpositions are occasional in Neo-Elamite: *-ikki* “to” and perhaps *-tibba* “before” (perhaps adverbial; see Grillett-Susini and Roche 1987:29). Most spatial and temporal relationships in pre-Achaemenid Elamite are indicated by “directional words” combined with pronouns in postpositional constructions. The directional words originate either as nouns (*ukku* “head” > “on”; *pat* “foot, base” > “under”; *si* “face(?)” > “before”; *me* “(?)” > “after”), or as verbs (*li* “give” > *lina* “for”; *tuk* “(?)” > *tikka* “for the sake of”). Two types of postpositional constructions occur, subject to different interpretations.

One analysis distinguishes postpositional constructions as governing internally and governing externally, or as long and short constructions. The long construction, governing internally, consists of (i) the *governing* noun or an anaphoric pronoun referring to the governing noun; (ii) the directional element with a nominal suffix (see §4.2.1) referring to the governing noun; (iii) a pronoun referring to the *governed* noun plus a nominal suffix again referring to the *governing* noun:

- (13) A. [i-r pat-r u-r ta-t-ni]
 him-ANIM. SG. under-ANIM. SG. me-ANIM. SG. place-2ND PER.-OPT.
 “May you place him under me”
 B. [RN ukku-r i-r murta-n]
 RN over-ANIM. SG. it-ANIM. SG. put in place-IMPERF.
 “Establishing RN over it”

The short construction, governing externally, consists of (i) the governed noun, (ii) an anaphoric pronoun referring to the *governing* noun with a nominal suffix marking concord with the *governed* noun, and (iii) the dimensional element with a nominal suffix again referring to the *governing* noun, and usually with determinative or subordinating *-a* (see Grillot 1983; Grillot-Susini and Roche 1987:27–28):

- (14) [DN i-r šara-r-a ani uzzu-n]
 DN he-ANIM. SG. beneath-ANIM. SG.-SUBORD. NEG. WISH go about-IMPERF.
 “May he not go about(?) beneath the Sun God”

Another analysis distinguishes constructions in which the governed word is a *substantive* from constructions in which the governed word is a *pronoun*. In the first (corresponding to the short, external construction), (i) the relationship between the governing element and the governed substantive is unmarked, and (ii) the governed noun (*napi-r*) is followed by a resumptive pronoun referring to the governing element (*i* = *zalmu*) and by (iii) a dimensional element with nominal suffix referring to the governing element:

- (15) [zalmu ... DN napi-r u-r(i) i sima-Ø ta-h]
 statue DN god-ANIM. SG. me-ANIM. SG. it before-INAN. place-1ST PER.
 “The statue, I placed it before my god, DN”

In the second (corresponding to the long, internal construction), (i) the governing noun or an anaphoric pronoun referring to it is followed by (ii) the directional element with a nominal suffix referring to the governing noun and (iii) a personal pronoun indicating the governed noun (Khačikjan 1998:45–47):

- (16) [peti-p pat-p u p-rabba-k-na]
 be hostile-ANIM. PL. under-ANIM. PL. me ANIM. PL.-bind-PERFV.-OPT.
 “May enemies be bound beneath me”

These same constructions sometimes appear in Achaemenid Elamite:

- (17) A. [sunki-r murun hi ukku-r(i)]
 king-ANIM. SG. earth this on-ANIM. SG.
 “King on this earth”
- B. [PN... me-r(i) i-r ta-k-a sa-k]
 PN after-ANIM. SG. he-ANIM. SG. put-PERF.-REL./CONNEC. go-PERF.
 “He got under way(?) after PN”

Note the phrasal adverb [i-n tukki-me], a long construction corresponding to the Middle Elamite short construction [i-n-tikka], both “for the sake of it, therefore.”

5.2 Agreement

A distinctive feature of Elamite syntax is “bracketing” (Bork 1933–1934), in which nominal suffixes that identify gender and person mark the constituents of possessive and attributive constructions and subordinate clauses (see §4.2.1).

In possessive and attributive constructions, the suffixes appropriate to the possessor or the determined substantive are added to the possessed or attribute; consider the following Middle Elamite examples:

- (18) A. [u PN šak PN₂-k(i) sunki-k GN-GN₂-k-a]
 “I, PN, son of PN₂, king of GN (and) GN₂”
 with first-person suffixes throughout
- B. [PN meni-r GN-r ak GN₂-r(i) šak-Ø hanik-Ø PN₂-r(i) ak PN₃-r(i)]
 “He, PN, ruler(?) of GN and GN₂ beloved son of PN₂ and PN₃”
 with third-person suffixes throughout

The last noun in a sequence is always marked, but not all elements in the series are necessarily marked (in [18B] [hani-k], Conjugation II participle, not *[hani-k-r]). The suffix on the final element is sometimes doubled, without apparent change of meaning: [u PN šak PN₂-**ki-k** liba-k hanik-Ø DN-**ki-k**]; see Grilhot 1978:6, suggesting that the final *-k* marks the end of the clause, Grilhot-Susini and Roche 1987:24, suggesting that the first suffix marks agreement and the second marks determinacy.

A single noun may govern more than one possessor: thus, [puhu kuši-k u-p(e) ak PN-p(e)] “children born of me and PN.”

5.2.1 Other possessive and attributive constructions

For kinship terms in possessive and attributive constructions see §4.2.3. In Neo-Elamite and Achaemenid Elamite, kinship expressions sometimes invert the word order that is usual in Middle Elamite inscriptions: [^fPN PN₂ riti-r(i)], “^fPN, PN₂’s wife”; [PN PN₂ šak-r(i)], “PN, PN₂’s son.” Since the inverted construction is already occasional in Middle Elamite ([lika-me riša-r(i)] “enlarger of the realm”), its later use is probably not a calque on Old Persian. The construction may reflect the syncopation of a resumptive pronoun: [šak (i)-r], [riti (i)-r] (Hallock 1962:54, Grilhot-Susini and Roche 1987:23).

In Neo-Elamite, descent is also expressed PN šak PN₂-*na*. The postposition *-na* (probably to be analyzed as the neutral inanimate *-n* + *-a*), sometimes expresses possession or other qualification in Middle Elamite: *erentum-na* ~ *erentum-ma* ~ *erentum-ia* “[made] of baked brick.” In Achaemenid Elamite most possession and some attributive relationships

are expressed by the (so-called) genitive *-na*: Neo-Elamite *zalmu PN-na* “image of PN”; Achaemenid Elamite *halmi PN-na* “seal[ed document] of PN.” Occasional inversion of the word order in Achaemenid Elamite is probably a calque on Old Iranian: *PN-na miyatukka* “viaticum of (= issued by) PN”; *[hupirri-na gal-ma]* “as his rations.”

5.3 Resumptive pronoun-verb constructions

Verbs of Conjugation I are often preceded by one, two, or three resumptive pronouns that refer to the arguments of the verb. In Middle Elamite, pronouns that refer to logical indirect object, subject, and/or direct object of the clause regularly appear in that order; they may be contracted in writing, and some or all pronouns may be omitted: *[ap u in (written a-pu-un) duni-h]* “to them I gave it,” with variant *[ap u (written a-pu ú) duni-h]* “to them I gave” (see Grillett 1978:31; Grillett-Susini and Roche 1987:18, 39). In Achaemenid Elamite, pairs or groups of resumptive pronouns do not occur before Conjugation I verbs. Single resumptive pronouns refer to subjects or objects: *PN... sunkime hupirri marriš* “PN, he seized the kingship”; *u PN... ir halpi* “I, PN, him I killed”; *u DN un nuškišni* “I–may DN protect me.”

Verb forms of Conjugation II and Conjugation III are often but not always preceded by resumptive pronouns: *(V)n* for the first and second persons, *(V)r* and *(V)p* for third-person animates. The same pronominal forms that mark the objects of transitive Conjugation I verbs thus mark the agents of Conjugation II and III forms (in a typically ergative fashion): Neo-Elamite *[anu i n (written in) kuti-n-k(i)]* “I will truly not support(?) him”; Middle Elamite *[nu u n (written un) tahha-n-t-a]* “[O DN] you command(?) me”; *[u r (written ur) tahha-n-r-a]* “he [DN] commands(?) me”; Neo-Elamite *[u ip tahha-n-p-a]* “they [DN and DN₂] command(?) me”; Achaemenid Elamite *[GN-ikki ir pari-k]* “he arrived at GN,” but *[anu u ir (not *ip) turna-n-p(i)]* “lest they(!) know me”; *[hi zila ap (i)r titu-k-a]* “thus he lied to them,” but *[hi zila titu-k-a]* “thus he lied” (see Khačikjan 1998:35 and 65, Grillett-Susini and Roche 1987:35; cf. Malbran-Labat 1990 and Grillett 1978:19, 25. Grillett (1978:20–21), however, demurs, taking *(V)r-* and *(V)p-* as vestigial elements referring to the agent, but *(V)n* as marking the logical object).

In Achaemenid Elamite, indirect objects of verbs of all conjugations are regularly expressed with resumptive pronouns (Haddock 1969:9).

5.4 Coordination

The conjunction *ak* (usually spelled *a-ak*, sometimes *a-gi*, *ia-ak*), meaning both “and” and “or,” connects (i) words or (ii) clauses. Consider the following Middle Elamite examples:

- (19) A. *[siyan DN ak DN₂-me]*
 “Temple of DN and DN₂”
 B. *[sunki-r peti-r ak tari-r akka melka-n-r-a... ak lansit-e du-n-r-a ak hiš RN sukuš a-ak (written su-ku-ša-ak) i-m-e-ni aha-r ta-n-r-a]*
 “A king, enemy or ally, who destroys [the temple] or takes its gold or erases the name of RN and puts his own there”

In Achaemenid Elamite inscriptions, it also introduces a new paragraph: *[ak RN sunki-r na-n-r]* “and RN the king declares,” where the Old Persian and Akkadian versions have no conjunction.

Another conjunction, *kudda* “and” occurs in Achaemenid Elamite, sometimes coupled with *ak*: *kudda Paršip ak kudda Madabe ak kudda dayauš appa dae* “Persia and Media and the other countries.” A possible Neo-Elamite occurrence of *kudda* raises doubt about the

suggestion that *kudda* is not an Elamite word but a graphic device meant to indicate that “and,” written in Elamite as *ak*, was to be read out in Old Persian as *utā* (Gershevitch 1979:132; Zadok 1995:243). In one inscription Elamite *utta* transcribes Old Persian *utā* “and.”

Coordinate clauses are thus connected with *ak*; in Achaemenid Elamite also with *kudda*; or asyndetically. In pairs of closely coordinated verbs, suffixes on the second verb may apply to both verbs (without a conjunction): thus, Middle Elamite [e DN hutta-t u-n duni-t-ni] “O, DN, may you do [and] give me”; and so with participles, [hutta-k hali-k-u-me] “what I made and finished(?)”.

5.5 Subordination

Achaemenid Elamite uses subordinating conjunctions, including (i) simple conjunctions (*anka* “if, when”; *kuš* “until” (also prepositional “to(ward)”; *sap* “as, when”); (ii) phrasal conjunctions (*sap innu* “as long as”; *meni sap anka* “after”); and (iii) phrasal conjunctions with the relative *appa*, perhaps calques on Old Persian conjunctions compounded with relative *taya* (*appa anka* “as”; *sap appa* “when”). In pre-Achaemenid Elamite, *anka* appears once at the head of a clause ([anka ruri-n-a ak miši-ma-n-a] “if [the temple] . . . -s and becomes dilapidated”), and *kuš* appears only as a preposition.

Most subordinate clauses precede the verb of the main clause. In Achaemenid Elamite, purpose clauses governed by *šera*, “order,” are formed with infinitives of Conjugation III with auxiliary *-ma-* and follow the governing verb: *meni u šera DUB^{MES} tallimana* “then I ordered an inscription to be written” (Grillot 1973:155–162; Grillot and Vallat 1975:215; Grillot-Susini and Roche 1987:41).

Since Achaemenid Elamite verb forms marked with *-ta* are often final, a correlate of the view that *-ta* marks anteriority is the supposition that temporal clauses referring to anterior action often follow the clauses that refer to prior action: [du-š-a . . . hutta-š-t-a] “(barley) which he received, because he had previously done . . .” (see Vallat 1994:272–273).

5.6 Relative clauses

Elamite relative clauses may be introduced by the relative pronouns *akka* “who” or *appa* “which.” The clause may follow its antecedent (e.g., Middle Elamite [sunki-r akka ta-š-t-a] [lit. “king-ANIM. SG. who he-has put”] “the king who set up [the stele]”), or the relative clause may occur without an expressed antecedent (e.g., Middle Elamite [akka ulhi i melka-n-r-a] [lit. “who house this he-destroys”] “he who destroys this house”).

There is another way, predominant in Middle Elamite, in which Elamite forms relative clauses. Attributive relative clauses may also be marked like other attributes, by adding nominal suffixes to the verb at the end of the clause. In Middle Elamite *-a* is often attached to the nominal suffix ([sian . . . in-me kuši-hš(i)-me-a] “the temple that they had not built”), but the presence of *-a* is optional ([lika-me i-r hani-š-r(i)] “whose realm DN loves,” Grillot 1978:11). In Neo- and Achaemenid Elamite examples, *-a* attaches to the verb form before the nominal suffix: Neo-Elamite [6-(i)p ANŠE.KUR.RA^{MEŠ} tukka-š-t-a-p(e)] “six people who fed(?) horses”; Achaemenid Elamite [6 MUNUS^{MEŠ}-na kuši-š-t-a-p(e)] “six [women] who gave birth to girls”). In Middle Elamite, a relative pronoun can optionally (pleonastically) occur at the head of such clauses ([sian appa (variant omits *appa*) kuši-h-me-a] “the temple that I built”); no Neo-Elamite or Achaemenid Elamite examples combine this construction with a relative pronoun. See Grillot 1978:8–15; Grillot-Susini and Roche 1987:24, 41; Khačikjan 1998:59–60; Hallock 1969:37, 1978:115, 1973:149 (the last-mentioned demurs on Middle Elamite examples).

The occurrence of these two types of relative constructions varies over time. In Achaemenid Elamite, use of the relative pronoun is regular, but it is uncommon in Middle Elamite. Conversely, the nominal construction of relative clauses (with *-a*) is common in Middle Elamite but rare in Achaemenid (and Neo-) Elamite.

5.7 Direct discourse

The close of a quoted statement is indicated by a form of *ma-*, probably identical with the verbal auxiliary *ma-*, with suffixes in agreement with the speaker: *manka* (Conjugation III first-person singular), *mara* ~ *mar* and *mapa* (animate singular and plural agent nouns) and *maka* (passive participle, impersonal).

In Achaemenid Elamite, a verb that indicates speaking (*turu-* ~ *tiri-* “tell, speak”; *na-* “say”) usually introduces the quoted statement:

- (20) A. [hi zila ap tiriya mite-š . . . halpi-š ma-n-k-a]
 “I told them thus, ‘Go, defeat (the enemy)’”
 B. [na-n-ri PN šera-š ma-r-a]
 “He said ‘PN gave the order’”

In Neo-Elamite, verbs of speaking sometimes follow the quoted statement plus *ma-*:

- (21) A. [ir unsa-h-a mara tiri-n-r-a]
 “[PN] who says ‘I made an exchange(?) with him’”
 B. [akka zalmu . . . in-k(i) in-dunu-n-k(u) mar turu-n-r-a]
 “He who says ‘I will not give the statue’”

The verb of speaking in such constructions may, however, be omitted.

Neo-Elamite and Achaemenid Elamite letters begin with verbs of speaking, introducing the body of the letter as quoted matter to be spoken to the addressee:

- (22) [PN turu-š PN₂ na-n turu-š]
 “Tell PN [the addressee], PN₂ [the sender] speaks, saying”

Mara and *mapa* are not added at the end of the letter, where the end of direct speech is self-identifying (but cf. *u nun turriya nanki . . . hupirri mušin huttanra manka* “I spoke to you, saying ‘ . . . He will do the accounting,’” apparently quoting from a previous letter).

6. LEXICON

Without a body of bilingual texts, an indigenous scholarly tradition, or a well-known language that is closely related to Elamite, few pre-Achaemenid Elamite words can be translated with precision and many can be translated only with guesses. The geographical and chronological distribution of the lexicon has not yet been analyzed. A comprehensive collection of parsed forms, useful for problems in Elamite grammar, has not been made (Zadok 1995:243).

Elamite words in Akkadian texts from southwestern Iran, where Elamite was also spoken and where it was often the language of the rulers, include titles of officials, names of professions, and words for realia (in legal and administrative texts), and architectural terms and titles or kinship terms (in dedicatory inscriptions). Elamite words in Akkadian texts from Mesopotamia include titles and terms describing people in or from Elam and a small number of common nouns that may be actual loanwords. A few other Elamite nouns are identified and glossed in Mesopotamian lexical texts (Zadok 1995:244–245; Vallat 1998; Stolper 1978). Elamite words appear in personal names, often of people identified as Elamites, in Sumerian

and Akkadian texts of many periods (Zadok 1984, 1991). *Kam/bnaskires*, the name or sobriquet of rulers in Parthian Elymais, is probably the survival of an Elamite title, *kapnuškir*, “treasurer” (Alram 1986:139–153, Stolper 2000:287).

Akkadian words in pre-Achaemenid Elamite building inscriptions are mostly proper nouns, including names of places and buildings (*alumelu* ~ *alimeli* “acropolis,” *abul mišari* “gate of justice”), epithets of gods and rulers (*melki ilani* “king(s) of the gods”), and names of votive objects (*nur kibirati* “light of the world”). Possible Sumerian or Akkadian words for materials or objects in administrative texts may be *Kulturwörter* or Akkadograms (written as Akkadian but read as Elamite): Middle or Neo-Elamite *zabar* “copper or bronze,” *anaku* “tin,” *kušuru* “beam,” Achaemenid Elamite *paru* “mule,” *basbas* “duck” (Stolper 1984:21–22).

Achaemenid Elamite inscriptions contain transcriptions of Old Iranian words, not always representing forms identical to those used in the corresponding Old Persian texts: for example, Elamite *miššadanašpena*, transcribing Old Persian **visadanānām*, where the Old Persian text has the non-Persian form *vispazanānām*, “of all kinds” (genitive plural). Transcribed Iranian words include terms with specific cultural nuance (*irdama* corresponding to Old Persian *artāvā* “blessed [in death]”), and occasional common words and particles (enclitic *-aham*, *-me* corresponding to Old Persian *āham* “I was,” *-mai* “my”). Achaemenid Elamite administrative texts include transcriptions of hundreds of Iranian words, many unattested in Old Iranian (e.g., *miyatukka* < Iranian **viyātika* “authorization, viaticum”), some also found as loanwords in Achaemenid texts in other languages (*kan-zabarra* < Iranian **ganzabara* “treasurer,” Akkadian *ganzabaru*, Aramaic *gzbr* and *gnzbr*, etc.; see Hinz 1975b). The Elamite transcriptions represent both Persian and non-Persian Iranian forms (*misapušša*, *miššaputra* corresponding to Persian **viṭapuça*-, non-Persian **visapuṭra*-, “prince”). For those who hold that Achaemenid Elamite texts are not translations, but Elamographic transcriptions of texts that are dictated in Iranian and read out in Iranian, these forms are not foreign words or loanwords but explicit writings of the underlying text (Gershevitch 1979).

7. READING LIST

Hinz and Koch 1987:133–168 offers comprehensive bibliography of works on Elamite texts, language, and history published between 1711 and 1986, arranged chronologically. Later items are listed in the journals *Abstracta Iranica*, *Archiv für Orientforschung*, and *Orientalia*.

Potts 1999 surveys current knowledge of the archeology and history of Elam from prehistory to the Islamic conquest. A short current survey of Elamite history is Vallat 1997a (but many contemporary historians of the ancient Near East will hesitate over the geographical framework). An encyclopedic survey of Susa in Elamite and Iranian history is Steve *et al.* 2002. Longer surveys, including Cameron 1936, Hinz 1965, 1972–1973, and Carter and Stolper 1984, are out of date.

A current survey of Elamite grammar is Khačikjan 1998. Among earlier surveys, Labat 1951, Reiner 1969, and Grillot-Susini and Roche 1987 represent successive generations of a school that gives greatest prominence to Middle Elamite evidence; Paper 1955 and Hallock 1959, 1965, 1969:8–10 are explicitly confined to Achaemenid Elamite; McAlpin 1981:63–83 includes separate parallel treatments of Achaemenid and Middle Elamite as a basis for systematic comparison with Proto-Dravidian.

The lexicon Hinz and Koch 1987 covers texts of all periods, including proper names and Elamite words in non-Elamite texts, and includes a survey of published treatments of many entries. Hallock 1969:664–776 is a nearly complete glossary of Achaemenid Elamite. Elamite personal names are collected in Zadok 1984, Elamite place names in Vallat 1993.

Useful transcriptions and editions of most pre-Achaemenid Elamite royal inscriptions are in König 1965. Other collections of Elamite inscriptions are Steve 1967 (Middle Elamite texts from Chogha Zanbil), 1987 (pre-Achaemenid and Achaemenid inscriptions from Susa), and Malbran-Labat 1995 (pre-Achaemenid building inscriptions from Susa).

The synoptic edition of Achaemenid Elamite multilingual texts of Weissbach 1911 is dated but not replaced. A recent edition of the longest Achaemenid Elamite royal inscription, at the monument of Darius I at Bisitun, is Grillot-Susini, Herrenschmidt, and Malbran-Labat 1993. A compendium of the Elamite versions of the Achaemenid inscriptions is to appear in the *Corpus Inscriptionum Iranicarum*. Editions of Achaemenid Elamite administrative texts from Persepolis are Cameron 1948 and Hallock 1969, 1978. All translations of Elamite texts merit reading with some reservation.

Bibliography

- Afram, M. 1986. *Nomina Propria Iranica in Nummis*. Iranisches Personennamenbuch, IV. Vienna: Österreichische Akademie der Wissenschaften.
- André, B. and M. Salvini. 1989. "Réflexions sur Puzur-Šušinak." *Iranica Antiqua* 24:53–72.
- Baššāš-e Kanzaq, R. 1997. "Šarḥ-e čahār mōred az katībehā-ye manqūr bar ašiyā-ye ġār-e Kalmākare." In *Yād-nāme-ye gerdehamā'ē-ye bāstān-šenāsī-Šūš*, vol. I, pp. 13–22. Tehran: Sāzmān-e Mirāš-e Farhangī-ye Kešvar (National Organization of Cultural Heritage).
- Bleibtreu, E. 1999. "Ein vergoldeter Silberbecher Assurbanipals (668–627)." In W. Seipel (ed.), *Schätze des Orients. Meisterwerke aus dem Miho Museum. Kunsthistorisches Museum Wien, 22 Juni–31 Okt. 1999*, pp. 21–30, 54–56. Vienna(?): SKIRA.
- Bork, F. 1925. "Elam, B. Sprache." In M. Ebert (ed.), *Reallexikon der Vorgeschichte*, vol. III, pp. 70–83. Berlin: Walter de Gruyter.
- . 1933–1934. "Die elamische Klammer." *Archiv für Orientforschung* 9:292–300.
- Brice, W. 1962–1963. "The writing system of the Proto-Elamite account tablets of Susa." *Bulletin of the John Rylands Library* 45:15–39.
- Cameron, G. 1936. *History of Early Iran*. Chicago: University of Chicago Press.
- . 1948. *Persepolis Treasury Tablets*. Oriental Institute Publications 65. Chicago: University of Chicago Press.
- Carter, E. and M. Stolper. 1984. *Elam: Surveys of Political History and Archaeology*. Near Eastern Studies 25. Berkeley/Los Angeles: University of California Press.
- Caubet, A. 1995. "Acquisitions: Moyen orient ancien, Musée du Louvre, Département des Antiquités Orientales, 1: Gobelet." *Revue du Louvre* 4:81.
- Civil, M. 1985. "Sur les 'livres d'écolier' à l'époque paléo-babylonienne." In J.-M. Durand and J.-R. Kupper (eds.), *Miscellanea babylonica, mélanges offerts à Maurice Birot*, pp. 67–78. Paris: Editions Recherche sur les Civilisations.
- Damerow, P. and R. Englund. 1989. *The Proto-Elamite Texts from Tepe Yahya*. American School of Prehistoric Research, Bulletin 39. Cambridge, MA: Peabody Museum of Archaeology and Ethnology.
- De Maaijer, R. 1996. "Recently acquired cuneiform texts." *Oudheidkundige Mededelingen uit het Rijksmuseum van Oudheden te Leiden* 76:69–84.
- Diakonoff, I. 1973. "Bemerkungen zu einer neuen Darstellung altkleinasiatischer Sprachen." *Orientalistische Literaturzeitung* 68:14–16.
- . 1981. "Ist das Elamische eine Ergativsprache?" *Archäologische Mitteilungen aus Iran* NS 14:7–8.
- Dijk, J. van, A. Goetze, and M. Hussey. 1985. *Early Mesopotamian Incantations and Rituals*. Yale Oriental Series, Babylonian Texts 11. New Haven/London: Yale University Press.
- Donbaz, V. 1996. "A median (?) votive inscription on silver vessel." *Nouvelles Assyriologiques Brèves et Utilitaires* 1996, no. 43.
- Englund, R. 1996. "The Proto-Elamite script." In P. Daniels and W. Bright (eds.), *The World's Writing Systems*, pp. 160–164. Oxford and New York: Oxford University Press.
- . 1998. "Elam, iii. Proto-Elamite." In *Encyclopaedia Iranica*, vol. VIII, fascicle 3, pp. 325–330. Costa Mesa, CA: Mazda.

- Friberg, J. 1978–1979. *The Third Millennium Roots of Babylonian Mathematics, I. A Method for the Decipherment, through Mathematical and Metrological Analysis, of Proto-Sumerian and Proto-Elamite Semi-Pictographic Inscriptions*. Göteborg, Sweden: Chalmers University of Technology and University of Göteborg.
- Gadd, C., L. Legrain, S. Smith, et al. 1928. *Royal Inscriptions*. Ur Excavations, Texts, 1. Publications of the Joint Expedition of the British Museum and of the Museum of the University of Pennsylvania to Mesopotamia. London: British Museum.
- Garrison, M. 1996. “A Persepolis Fortification seal on the tablet MDP 11 308 (Louvre Sb 13078).” *Journal of Near Eastern Studies* 55:15–35.
- Garrison, M. and M. Root. 2001. *Seals on the Persepolis Fortification Tablets, I: Images of Heroic Encounter*. Oriental Institute Publications 117. Chicago: Oriental Institute.
- Gershevitch, I. 1979. “The alloglottography of Old Persian.” *Transactions of the Philological Society of London*, pp. 114–190.
- Giovinazzo, G. 1989. “L’expression ‘*ha duš ha duka*’ dans les textes de Persépolis.” *Akkadica* 63:12–26.
- Grillot, F. 1970. “A propos de la notion de subordination dans la syntaxe élamite.” *Journal Asiatique* 258:213–241.
- . 1973. “La postposition génitive *-na* en élamite.” *Cahiers de la Délégation Archéologique Française en Iran* 3:113–169.
- . 1974. “A propos du verbe moyen élamite.” *Journal Asiatique* 262:31–35.
- . 1978. “Les affixes nominaux et les pronoms indépendants de la langue élamite.” *Journal Asiatique* 266:1–35.
- . 1983. “Le mécanisme des groupes nominaux en élamite.” *Journal Asiatique* 271:207–218.
- . 1984. “Trinôme de la royauté en Élam.” *Studia Iranica* 13:185–191.
- Grillot, F. and F. Vallat. 1975. “Le semi-auxiliaire *ma-* en élamite.” *Journal Asiatique* 263:211–217.
- Grillot-Susini (= Grillot), F. 1994. “Une nouvelle approche de la morphologie élamite: racines, bases et familles de mots.” *Journal Asiatique* 282:1–18.
- . 1998. “Elam, v. Elamite language.” In *Encyclopaedia Iranica*, vol. VIII, fascicle 3, pp. 332–335. Costa Mesa, CA: Mazda.
- Grillot-Susini, F. and C. Roche. 1987. *Éléments de grammaire élamite*. Paris: Editions Recherche sur les Civilisations.
- Grillot-Susini, F., C. Herrenschildt, and F. Malbran-Labat. 1993. “La version élamite de la trilingue de Behistun: une nouvelle lecture.” *Journal Asiatique* 281:19–59.
- Hallock, R. 1958. “Notes on Achaemenid Elamite.” *Journal of Near Eastern Studies* 17:256–262.
- . 1959. “The finite verb in Achaemenid Elamite.” *Journal of Near Eastern Studies* 18:1–19.
- . 1962. “The pronominal suffixes in Achaemenid Elamite.” *Journal of Near Eastern Studies* 21:53–56.
- . 1965. “The verbal nouns in Achaemenid Elamite.” In *Studies in Honor of Benno Landsberger on his Seventy-Fifth Birthday, April 21, 1965*, pp. 121–125. Assyriological Studies 16. Chicago: University of Chicago Press.
- . 1969. *Persepolis Fortification Tablets*. Oriental Institute Publications 92. Chicago: University of Chicago Press.
- . 1973. “On the Middle Elamite verb.” *Journal of Near Eastern Studies* 32:148–151.
- . 1978. “Selected fortification texts.” *Cahiers de la Délégation Archéologique Française en Iran* 8:109–136.
- Helms, S. 1982. “Excavations at ‘The city and the famous fortress of Kandahar, the foremost place in all of Asia’.” *Afghan Studies* 3–4:1–24.
- . 1997. *Excavations at Old Kandahar in Afghanistan 1976–1978*. Society for South Asian Studies Monograph 2. BAR International Series 686. Oxford: Archaeopress.
- Henkelman, W. Forthcoming. “Persians, Medes and Elamites, Acculturation in the Neo-Elamite Period.” In G. Lanfranchi (ed.), *Continuity of Empire: Assyria, Media, Persia*.
- Hinz, W. 1965. *Das Reich Elam*. Stuttgart: Kohlhammer.
- . 1969. *Altiranische Funde und Forschungen*. Berlin: Walter de Gruyter.
- . 1972–1973. *The Lost World of Elam*. Translated by Jennifer Barnes. London: Sidgwick and Jackson, 1972; New York: New York University Press, 1973 (= translation of Hinz 1965).
- . 1975a. “Problems of Linear Elamite.” *Journal of the Royal Asiatic Society* 2:105–115.
- . 1975b. *Altiranisches Sprachgut der Nebenüberlieferungen*. Göttinger Orientforschung, III. Reihe (Iranica) 3. Wiesbaden: Otto Harrassowitz.

- Hinz, W. and H. Koch. 1987. *Elamisches Wörterbuch*. Archäologische Mitteilungen aus Iran, Ergänzungsband 17. Berlin: Dietrich Reimer.
- Justeson, J. and L. Stephens. 1994. "Variation and change in symbol systems: case studies in Elamite cuneiform." In C. Renfrew and E. Zubrow (eds.), *The Ancient Mind, Elements of Cognitive Archaeology*, pp. 167–175. Cambridge: Cambridge University Press.
- Kammenhuber, A. 1974. "Historisch-geographische Nachrichten aus der althurrischen Überlieferung, dem Altelamischen und den Inschriften der Königen von Akkad für die Zeit vor dem Einfall der Gutäer (ca. 2200/2136)." *Acta Antiqua Academiae Scientiarum Hungaricae* 22:157–248.
- Khačikjan, M. 1993. "To the typological characteristics of the Elamite language." In J. Zablocka and S. Zawadski (eds.), *Šulmu IV: Everyday Life in the Ancient Near East*, pp. 143–150. Adam Mickiewicz University, Seria Historia 182. Poznań.
- . 1995. "Notes on the Elamite phonology." *Studi micenei ed egeo-anatolici* 35:105–109.
- . 1998. *The Elamite Language*. Documenta Asiana 4. Rome: Istituto per gli studi micenei ed egeo-anatolici.
- König, F. 1965. *Die elamischen Königsinschriften*. Archiv für Orientforschung Beiheft 16. Graz.
- Labat, R. 1951. "Structure de la langue élamite (état présent de la question)." *Conférences de l'Institut de Linguistique de Paris* 9:23–42.
- Lackebacher, S. 1998. "Elam, vii. Non-Elamite Texts in Elam." In *Encyclopaedia Iranica*, vol. VIII, fascicle 4, pp. 342–344. Costa Mesa, CA: Mazda.
- Malbran-Labat, F. 1986. "Le «semi-auxiliaire» élamite -ma. Une nouvelle approche: essai de définition d'un champ sémantique." *Bulletin de la Société de Linguistique de Paris* 81:253–273.
- . 1990. "Système pronominal et système verbal en élamite achéménide." *Bulletin de la Société de Linguistique de Paris* 85:61–90.
- . 1995. *Les inscriptions royales de Suse*. Paris: Editions de la Réunion des musées nationaux.
- Mayrhofer, M. 1973. *Onomastica Persepolitana. Das altiranische Namengut der Persepolis-Täfelchen*. Vienna: Österreichische Akademie der Wissenschaften.
- McAlpin, D. 1981. *Proto-Elamo-Dravidian: The Evidence and its Implications* (= *Transactions of the American Philosophical Society* 71, part 3).
- Meriggi, P. 1971–1974. *La scrittura proto-elamica* (I: *La scrittura e il contenuto dei testi*, 1971. II: *Catalogo dei segni*, 1974. III: *Testi*, 1974). Rome: Accademia Nazionale dei Lincei.
- Paper, H. 1955. *The Phonology and Morphology of Royal Achaemenid Elamite*. Ann Arbor, MI: University of Michigan Press.
- Potts, D. 1999. *The Archaeology of Elam: Formation and Transformation of an Ancient Iranian State*. Cambridge World Archaeology. Cambridge: Cambridge University Press.
- Reiner, E. 1960. "Calques sur le vieux-perse en élamite." *Bulletin de la Société de Linguistique de Paris* 55:222–227.
- . 1969. "The Elamite language." In B. Spuler (ed.), *Altkleinasiatische Sprache*, pp. 54–118. Handbuch der Orientalistik, Leiden/Köln: E. J. Brill.
- . 1992. "Elamite." In W. Bright (ed.), *International Encyclopedia of Linguistics*, pp. 406–409. Oxford: Oxford University Press.
- Salvini, M. 1998. "Elam, iv. Linear Elamite." In *Encyclopaedia Iranica*, vol. VIII, fascicle 3, pp. 330–332. Costa Mesa, CA: Mazda.
- Sayce, A. 1874. "The languages of the cuneiform inscriptions of Elam and Media." *Transactions of the Society of Biblical Archaeology* 3:465–485.
- Scheil, V. 1939. *Mélanges épigraphiques. Mémoires de la mission archéologique de Perse*, 28. Paris: Ernest Leroux.
- Steiner, G. 1979. "The intransitive-passival conception of the verb in the languages of the ancient Near East." In F. Plank (ed.), *Ergativity: Towards a Theory of Grammatical Relations*, pp. 185–216. London: Academic Press.
- . 1990. "Sumerisch und Elamisch: typologische parallelen." *Acta Sumerologica* 12:143–176.
- Steve, M.-J. 1967. *Textes élamites et accadiens de Tchoga Zanbil*. Tchoga Zanbil, III. Mémoires de la Délégation Archéologique en Iran 41. Paris: Paul Geuthner.
- . 1987. *Nouveaux mélanges épigraphiques, inscriptions royales de Suse et de la Susiane*. Ville Royale de Suse 7. Mémoires de la Délégation Archéologique en Iran 53. Nice: Editions Serre.
- . 1992. *Syllabaire élamite: histoire et paléographie*. Civilisations du Proche-Orient, Série II: Philologie, 1. Paris/Neuchâtel: Recherches et Publications.

- Steve, M.-J. F. Vallat, and H. Gasche. 2002. "Suse." *Supplément au Dictionnaire de la Bible*. Paris: Letouzey & Aré. Fasc. 78: 359–511.
- Stolper, M. 1978. "Šarnuppu." *Zeitschrift für Assyriologie* 68: 261–269.
- . 1984. *Texts from Tall-i Malyan 1: Elamite Administrative Texts (1972–1974)*. Occasional Publications of the Babylonian Fund 6. Philadelphia: University Museum.
- . 2000. "Ganzabara." *Encyclopaedia Iranica* vol X, fasc. 3, pp. 286–288. Costa Mesa, CA: Mazda.
- Tavernier, J. 2002. "Iranica in de Achaemenidische Periode." Ph.D. dissertation, Katholieke Universiteit Leuven, Dept. Oosterse en Slavische Studies.
- Tucker, E. 1998. "The 'nominal conjugations' in Achaemenid Elamite." In M. Brosius and A. Kuhrt (eds.), *Studies in Persian History: Essays in Memory of David M. Lewis*, pp. 165–194. Achaemenid History 11. Leiden: Nederlands Instituut voor het Nabije Oosten.
- Vallat, F. 1986. "The most ancient scripts of Iran: the current situation." *World Archaeology* 17:335–347.
- . 1987a. "L'expression *da-ma da-ak* en élamite." *Nouvelles Assyriologiques Brèves et Utilitaires* 1987, no. 6.
- . 1987b. "Le pseudo pronom personnel **kaš* en élamite achéménide." *Nouvelles Assyriologiques Brèves et Utilitaires* 1987, no. 114.
- . 1989. "Les compléments phonétiques ou graphiques en élamite achéménide." *Annali (Istituto Universitario Orientale di Napoli)* 49:219–222.
- . 1990. "Deux inscriptions royales en élamite de l'époque des Épartides (sukkalmaḥ)." *Nouvelles Assyriologiques Brèves et Utilitaires* 1990, no. 137.
- . 1993. *Les noms géographiques des sources suso-élamites*. Répertoire Géographique des Textes Cunéiformes, 11. Beiheft zum Tübinger Atlas des Vorderen Orients, Reihe B, Nr. 7/11. Wiesbaden: Dr. Ludwig Reichert.
- . 1994. "Deux tablettes élamites de l'Université de Fribourg." *Journal of Near Eastern Studies* 53:263–274.
- . 1996a. "Nouvelle analyse des inscriptions néo-élamites." In H. Gasche and B. Hrouda (eds.), *Collectanea orientalia: histoire, arts de l'espace et industrie de la terre, études offertes en hommage à Agnès Spycket*, pp. 385–395.
- . 1996b. "Le royaume élamite de SAMATI." *Nouvelles Assyriologiques Brèves et Utilitaires* 1996, no. 31.
- . 1996c. "L'Élam à l'époque paléo-babylonienne et ses relations avec la Mésopotamie." In *Amurru, 1: Mari, Ebla et les Hourrites*, pp. 297–319. Paris: Editions Recherche sur les Civilisations.
- . 1997a. "Elam, I. The History of Elam." In *Encyclopaedia Iranica*, vol. VIII, fascicle 3, pp. 301–312. Costa Mesa, CA: Mazda.
- . 1997b. "La lettre élamite d'Arménie." *Zeitschrift für Assyriologie* 87:258–270.
- . 1998. "*hašša* et *kiparu*, deux termes élamites dans les textes accadiens de Suse." *Nouvelles Assyriologiques Brèves et Utilitaires* 1998, no. 127.
- Van Soldt, W. 1982. "The cuneiform texts in the Rijksmuseum van Oudheden, Leiden (I)." *Ouheidkundige Mededelingen uit het Rijksmuseum van Oudheden te Leiden* 63:43–59.
- . 1991. *Studies in the Akkadian of Ugarit: Dating and Grammar*. Alter Orient und Altes Testament 40. Kevelaer: Butzon and Bercker; Neukirchen-Vluyn: Neukirchener Verlag.
- Weissbach, F. 1911. *Die Keilinschriften der Achämeniden*. Vorderasiatische Bibliothek 3. Leipzig: Hinrichs.
- Wilhelm, G. 1978. "Ist das Elamische eine Ergativsprache?" *Archäologische Mitteilungen aus Iran* NS 11:7–12.
- . 1982. "Noch einmal zur behaupteten Ergativität des Elamischen." *Archäologische Mitteilungen aus Iran* NS 15: 7–8.
- Zadok, R. 1984. *The Elamite Onomasticon* = Suppl. 40 to *Annali (Istituto Universitario Orientale di Napoli)* 44.
- . 1991. "Elamite onomastics." *Studi epigrafici e linguistici sul vicino oriente antico* 8:225–237.
- . 1995. "On the current state of Elamite lexicography." In *The Lexicography of the Ancient Near Eastern Languages* = *Studi epigrafici e linguistici sul vicino oriente antico* 12:241–252.