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About *šekam* and *šotor*: The Development of the Initial Vs/*š*C- in Middle and New Persian*

Salman Aliyari Babolghani
University of Hamburg

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Abstract: The purpose of this paper is to survey the phonological evolution of the initial sequence Vs/*š*C- in Persian as reflected, for instance, in Middle Persian *iškamb* > New Persian *šekam* 'belly', and to explore philological issues associated with this evolution.

Keywords: Middle Persian, Early New Persian, Southwestern Iranian, Lori, Shirazi-Erahistani, Larestani, Kirmani, Tustari, Caucasian Tati, prothesis, consonant cluster, initial cluster

Salman Aliyari Babolghani
E-mail: aliyari.ba.s@gmail.com

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1. Introduction

In this paper, I aim to examine the phonological evolution of the initial sequence Vs/*š*C- in Persian (Prs.)[1] from the Middle Iranian (MIr.) period onwards. The phonetic context of the development under investigation (formulized here as Vs/*š*C-) is restricted to initial short vowels followed by a cluster comprising sibilants *s* and *š*[2] along with plosive or nasal consonants.

* I am deeply thankful to Prof. Paul and my friends Dr. Pejman Firoozbakhsh and Dr. Meysam Mohammadi for their valuable comments that improved the manuscript, though they may not agree with all of the interpretations and conclusions presented in this paper. I also appreciate the reviewers for their insightful comments, which highlighted points I had not previously discussed.

[1] For abbreviations, see the end of the paper.

[2] Theoretically, the phonetic context of this development could also involve the sibilants *z* and *ž*. However, due to 'Southwestern Iranian' languages (SWIr.) characteristic developments, such as the reduction of *zb* to *z*, the sequence Vz/*ž*C-

It is to be noted in advance that the initial vowel in V*s*/*š*C- can be of two types: (1) a prothetic palatal added to the earlier initial consonant clusters **st*-, **sk*-, **šm*- (< **xšm*-), etc. (here, it is referred to as type a); (2) an inherited original short vowel, or a short vowel derived from earlier initial syllables (such as **abi*-, etc.) or long vowels (here, they are all referred to as type b)[3]. However, since MIr. onwards, both types have converged in a similar phonetic context. Thus, irrespective of their origin, they undergo a shared development from then on[4].

The sequence V*s*/*š*C- eventually yields *s*/*š*VC- in NP, as seen, for instance, in MP ***ušt****ar* 'camel' becoming ***šot****or* in NP. Nonetheless, as will be observed, the treatment of MP and Early NP (ENP), along with the process resulting in the aforementioned transition leads to some ambiguities and discrepancies. These complexities give rise to several debated issues that pose challenges for explanation from the historical linguistics perspective. In the following, first, I will overview the treatment of SWIr. other than Persian regarding the preservation or alteration of this sequence. Afterward, I will return to discussions on the development of this sequence in Persian and the associated issues.

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may either not exist or occur very rarely in a certain SWIr. One instance of this kind is the word for 'tongue', which appears as *ezbū* in Larestani; *zabân* in (Modern) New Persian (NP) (both < 'Northwestern Iranian' (NWIr.)) vs. *zōn* in Lori (as the true SWIr.). This word could be considered a proper instance for the development in question in Larestani assuming *ezbū* derived from **i****zb****ān*. I am not sure if the same applies to the NP equivalent *zabân* being derived from Middle Persian (MP) *i*/*u****zw****ān* with a different phonetic context. However, one example of this kind in Persian that can be included in our analysis is NP *zomorrod* 'emerald' (cf. § 3.2.1).

For the same reason, i.e. SWIr. characteristic developments, certain clusters of the type in question may hardly ever take place (such as **sk* being changed to *šk*) or be limited to NWIr. loans (such as **sp* being reduced to *s*, cf. below, fn. 4).

[3] The two types of the V*s*/*š*C- have usually been argued in conjunction with the other MIr. (V)CC- such as *fr*-, *dr*-, *afs*/*š*-, etc. (cf. Horn 1898-1901: 39-40; Lazard 1963: 175-176; Ṣâdeqī 1380/2001, esp. 13-16, 20-22; Pisowicz 1985: 127-128; Lenepveu-Hotz 2011), and sometimes, overlooking the fact that either in Persian or other SWIr., they do not show similar treatments and cannot be explained collectively. For instance, unlike the structure under investigation, the obliteration of the Old Iranian (OIr.) initial cluster **dr*- does not occur by adding a prothetic vowel; it is always the insertion of an anaptyctic vowel that breaks the cluster, cf., e.g. NP *dorūγ* (< NWIr.); Lori *dorū* 'lie', etc. A sporadic inconsistent case, however, might be the form <ʾdrm> 'drachm', which Maqdesi reported as existing in the 'language of Bukhara' (see Ṣâdeqī 1380/2001: 14). Nonetheless, the form frequently attested elsewhere in ENP is *dir*(*h*)*am* (cf. also MP *drahm*; NP *der*(*h*)*am*).

[4] Accordingly, NWIr. loans such as MP *ispiš* 'louse' (> NP *šepeš* 'id.' vs. Lori *šeš* 'id.', as a true SWIr. form; cf. Avestan (Av.) *spiš*- 'id.') belong here, being borrowed early enough to be involved in the development.

2. 'Southwestern Iranian' Languages other than Persian[5]

The sequence remains unchanged in all SWIr. other than Persian. In some dialect groups, in particular in Lori, this preservation is highly consistent, whereas in others, some discrepancies arise (discussed after the examples).

Notably, in most of these dialects, MIr. **i*s/šC- yields *e*s/šC-. Moreover, in some cases, the initial short vowel may be lengthened—typically through regressive assimilation affected by a long vowel in the following syllable (cf. below, e.g. ***â***s*âra* 'star'). Nonetheless, the focus here is on the historical significance of preserving the sequence in question or changing it; so, such marginal changes are not under consideration.

Lori[6]

Type (a):

'tent pole' Baxtīârī SL *estīn*; Bâlâgerīva NL *hossīn*, Sagvand NL *hūəs*(*s*)*ī* (< **ustūn* < **istūn*)[7]. Cf. 'column' NP *sotūn*; MP^{Z} <stwn'> read as *stūn*, MP^{M}, Prt^{M} *istūn*; OP <st^{u}una> *stūnā-*; Av. *stūnā-*;

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[5] This paper is part of a larger research project 'Towards a Historical Dialectology of Lori (Southwest Iran) (DFG-SPP 2176)', initiated in August 2021 under the supervision of Prof. Dr. Ludwig Paul at the University of Hamburg. Through this research, I aim to propose a preliminary classification of SWIr., a hitherto relatively overlooked subject in Iranian philology. Such classification is also reflected in the present paper without detailed argumentations.

[6] Linguistic materials are taken from the sources which are listed here to avoid cluttering the paper with repetitive references. Hereafter, they will be specified only in case of necessity: Achaemenid Elamite (AE) and Achaemenid Babylonian (AB) of the Achaemenid inscriptions from DARIOSH-Louvre Project (in progress); AE of the Persepolis Fortification (PF) from Hallock 1969; Av. from Bartholomae 1904 and Kellens 1995; Old Persian (OP) from Schmitt 2014; Manichaean MP and Parthian (MP^{M} and Prt^{M}, respectively) from Durkin-Meisterernst 2004; Zoroastrian MP (MP^{Z}) from MacKenzie 1990; Inscriptional MP and Parthian (MP^{I} and Prt^{I}, respectively) from Gignoux 1972; ENP from Lazard 1963, Ḥasandūst 1393/2014, and Anvarī 1382/2003; NP examples are from the official NP of Iran; Baxtīārī and Boyeraḥmadi (Beyramey) Southern Lori (SL) from Ṭâherī 1389/2010; 1395/2016, respectively; Sagvand and Dare-J̌owzâni Northern Lori (NL) from Aliyari Babolghani 1396/2017; Shirazi-Erahistani of Fars Province from Salâmī 1383/2004; 1384/2005; 1385/2006; Kumzâri and Lâraki from Anonby and Yousefian 2011, and Lâraki from Aṣγarī 1401/2022; Larestani from Salâmī 1386/2007; 1388/2009; Kirmani of the southern half of Kerman Province, including J̌īroft, Kahnūǰ, Rūdbâr, etc., referred to here as Halīlrūdi, from Nīknafas Dehqânī 1377/1998 and Borjian 2016; Mīnâbi from Barbera 2005; Qešmi from Anonby 2015; Juhuri Caucasian Tati from Authier 2012 and Caucasian Tati of Shirvan (here Širvâni) from Suleymanov 2020. The rest are from the unpublished linguistic materials collected by the present author.

[7] The word in its general meaning, i.e. 'column', takes the form *setīn* (influenced by NP or borrowed from ENP) in most Lori dialects. The true Lori form is, as seen above, preserved in a specific example of 'column', namely, 'tent pole'.

'to break' (pst.) Baxtīârī SL *eška*(*he*)*st-* (int.); Bahmeʾī SL *ešše̊nâ*(*δ*)- (trns.); NL *eškenâ-* (trns.), *eškes-* (int.). Cf. NP *šekast-*, *šekând-*; MP^{Z} <TBLWN-t-> read as *škast-*, MP^{M} *išk̊ast-*; Av. √*sciṇd-* 'to split';

'you' (pl.) SL *īšâ,* Baxtīârī SL *īsâ*. Cf. NP *šomâ*; MP^{M}, Prt^{M} *išmāh*; Av. *xšmākəm*;

Type (b):

'camel' Baxtīârī SL *oštor*, Mamasanī SL *ošter*, also *šotor*; Bâlâgerīva NL *šüter* (< Prs.)[8]. Cf. NP *šotor*; MP^{Z} *uštar* (< NWIr.); OP *ušabāra-* 'camel-borne'; Av. *uštra-*;

'to count' (pst.) SL, NL *ešmārd-*; Sagvand NL *ešmard-*. Cf. NP *šemord-*; MP^{Z} <ʾwšmwlt-> *ōšmurd-* (< **abi-*√*šmar-*); already with a short vowel in MP^{M} *ušmār-* (prs.); *išmīr-* (prs.) (< **ušmīr-*< **abi-*√*šmṛya-*) 'to be reckoned, accounted'[9]; Prt^{M} *išmār* 'number';

'to entrust, consign, etc.' (pst.) Baxtīârī SL and Dare-J̌owzâni NL *espârd-*. Cf. NP *sepord-*; ENP *ispurd-* (apparently via **ō/uspurd-*); MP^{Z} *abespurd-*, *abespārd-*; Prt^{M} *abespurd-*;

Shirazi-Erahistani[10]

Type (a):

'star' Kumzâri *stârg*, but Lâraki *e/istârg*, Behbahâni *âsâra*, etc. Cf. Lori *âsâra*, etc.; NP *setâre*; MP^{Z} <stʾlk'> read as *stārag*, MP^{M} *istārag*; Av. *star-*;

'cave' Davâni *eškat*, Mâsarmi *eškaft*. Cf. NP *šekaft*; MP^{Z} <škpt'> read as *škaft*; MP^{M} *išk̊āft-* 'to split' (pst.);

[8] It should be noted that camels are not commonly raised as domestic animals in Lori-speaking areas, primarily due to the mountainous terrain.

[9] For MP^{M} examples, which do not adhere to Durkin-Meisterernst's (2004: 57, 93) transcription herein, as well as the proposed derivation, see Henning 1933: 193/100, 206/113. Probably also the MP^{Z} equivalent should be read as ***u***šmurdan, ***u***šmār-.

[10] By this term, coined by Dr. P. Firoozbakhsh and me for convenience, I intend the dialect group including the survivals of the former vernacular of the cities Shiraz, Neyrīz, and Kâzerūn, alongside the homogeneous dialects spoken in Fars (usually called 'Tâǰīk(ī)' and more widely 'Fars Dialects') and Bushehr Provinces, as well as Behbahâni and Kumzâri-Lâraki. For details, see Aliyari Babolghani, fort.: appendix.

'belly' former dialect of Shiraz[11], Behbahâni, etc. *ešk*am; Bardestâni *kom* (< **išk*amb, with the omission of the first syllable); Kumzâri *šk*om, but Lâraki *ešk*om[12]. Cf. Lori *ešk*am[13]; NP *šek*am; MP^{M} *išk*amb[14];

consider also Davâni, Bardestâni, etc. *ešk*a:s-, Behbahâni *ešk*ess- 'to break' (pst., int.); several dialects *šūmū* or *šomâ*, but Kumzâri *šmâ* and Lâraki *ešmâ* 'you' (pl.).

Type (b): Several dialects *šotor*, but Dūsīrâni *oštor* 'camel'; Davâni *ešmord-*, Mehbūdi *ešmârd-*; Lâraki *ešma:rd-*, Kumzâri (*e*)*šmârd-* 'to count' (pst.); Dūsīrâni, Davâni, etc. *espord-* 'to entrust, etc.' (pst.).

Larestani[15]

Type (a): Evazi, Gerâši, etc. *ešk*at 'cave'; Evazi *aškom*, Xonǰi *oškom*; Asīri, Aheli *kom* (< **išk*amb) 'belly'; Xonǰi *ešk*ehes- (int.), Asīri *ešk*ahond- (trns.), *ešk*at- (int.) 'to break' (pst.), etc.; Xonǰi *essara*, Fīšvari, Evazi *estara*, etc. 'star'; several dialects *šomâ*, but Gerâši *īšnīâ* 'you' (pl.).

Type (b): Aheli, Xonǰi, etc. *ezbū* 'tongue' (cf. NP *zabân* 'id.'; MP^{Z} *uzwān*, *zuwān*, MP^{M} *izwān* 'id.' (< NWIr.)[16]; Prt^{M} *izβān* 'id.'; OP *hizānam* 'id.'; Av. *hizuuā-* 'id.'); Aheli, Xonǰi, etc. *oštor* 'camel';

Kirmani[17]

Type (a): North Baškardi (NB), Halīlrūdi *estâl*, Qešmi *estâla* 'star'; Halīlrūdi *ešk*am, Mīnâbi *e/oškom*, Qešmi *ešk*om 'belly'[18]; Mīnâbi *ešk*aht- 'to break'

[11] See Firoozbakhsh 2019: 181, 183, ghazal 44, line 4.

[12] Lâraki *ešk*om, *e/istârg*, and *ešma:rd-* quoted in this section are derived from a personal interview with a Lâraki informant.

[13] The words generally used for 'belly; stomach' in Lori include *kom* (Baxtīârī SL also *ešk*am) in SL and *gīa*, *gada*, etc. in NL (also Baxtīârī SL *gaδe* 'stomach'). The form *ešk*am (cf. *kom*) is used with slightly different meanings or in specific contexts, such as NL *ešk*am-*eš poř bī* 'she was pregnant (lit. her belly/ womb was full') or Bâlâgerīva NL *mīn-ešk*am 'abdominal organs'.

[14] The etymology of the word may be a subject of debate, but there is no dispute regarding the inclusion of an earlier **s/šk-* in its root, cf., e.g. Korn 2005: 349; Cheung 2007: 344-345, and derivations quoted in Ḥasandūst 1393/2014: 1886-1888.

[15] Also known as 'Ačomī' (< Larestani *a-č-om* 'I go'), spoken in Lârestân County, in south Fars Province, as well as the western half of Hormozgan Province. For details, see Aliyari Babolghani, fort.: appendix.

[16] Whereas Lori *zō*(*n*), *zõw*, etc. should go back to the true SWIr. **hizān*(*a*)-. Cf. also fn. 2.

[17] By the term Kirmani, I intend Baškardi and the homogenous dialects in other regions of Hormoz Province as well as the southern half of Kerman Province.

[18] NB has *lâv/w* (cf. Balochi *lâp*) with a distinct origin.

(pst.) (cf. also Halīlrūdi *ešk*a*nd* 'a break or outflow point in a stream'); NB *ešk*o*wt* 'cave'; NB *espīr* 'white' (cf. NP *sefīd* 'id.'; MP^{M}, Prt^{M} *ispēd* 'id.'); Halīlrūdi *espore* 'shovel footpad' (cf. Dare-J̌owzâni NL *espâra* 'id.'; MP^{Z} *ōspurdan*[19] 'to tread, trample').

Type (b): South and NB *ešter*, Mīnâbi *e/oštor*, Qešmi *eštor* 'camel'; NB *ešmârt-*, Mīnâbi, Qešmi *ešmord-* 'to count' (pst.).

Tustari[20]

Type (a):

'to take' (pst.) Šūš. *esad-*, Dez. *osond-*. Cf. SL *es*[*t*]*ey*(*δ*)-, NL *ēsa-*, etc.; NP *setând-*; MP^{Z} <YNSBWN-t-> read as *stad-*, MP^{M}, Prt^{M} *istad-*, from *√*stan-* 'to take (away)'[21];

'ember' Dez. *ežgel*. Cf. Baxtīârī SL *azgel*; NL *ezgel*, *ežgel*; NP *zoγâl* 'coal'; ENP *zugāl*, *sukār*, *sikār*(*a*), *aškar*, *uškār*[22]; Sogdian <sqʾr>, <ʾskʾr> 'coal'[23]; Khotanese *skara-* 'id'[24];

consider also *eška:s-* 'to break' (pst.); *âsâra* 'star'; *eškam* 'belly'.

Type (b): *eštow* 'haste, acceleration' (cf. Baxtīârī SL *eštaw* 'id.'; NP *šetâb* 'id.'; ENP *šitāb*, *i/uštāb* 'id.'; MP$^{M, Z}$ *awištāb* 'oppression' < *awištāb-* 'to oppress; hasten'); Šūš. *ešmârd-* 'to count' (pst.).

Caucasian Tati

Apart from some inconsistent paradigms (see below) such as Juhuri *šumorde* 'to count' (the sole example of type b that I could find in materials at my disposal) the same treatment is seen in the Caucasian Tati as well:

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[19] Or rather *uspurdan*, cf. below, § 3.2.1.

[20] By this term, I refer to the dialects spoken in the cities of Šūštar (Šūš.) and Dezfūl (Dez.) in Khuzestan Province.

[21] See Henning 1933: 189/96.

[22] For the latter three forms, see Ravâqī 1381/2002: 25, 227. It seems, according to derivations cited in Ḥasandūst (1393/2014: 1567, 1746), that *sikār*(*a*), etc. and *zuγâl* had not been connected before.

[23] Gharib 1995: 61a, 354a.

[24] Bailey 1979: 429. The word's derivation is obscure (for some of the propositions, see Ḥasandūst 1393/2014: 1567, 1746) and consequently, its attribution to neither of types (a) and (b) is certain. It is hypothetically classified here, considering that Bailey (ibid.) links Khotanese *skara-* to Av. *ātrəm skairyaṯ hačā* 'fire from charcoals', etc., and Morgenstierne (2003: 74) derives the Pashto equivalent *skor* 'coal' from **skāra-*. It is also uncertain whether the word is genuine or borrowed in Persian, Tustari, and Lori. Consider that some SL have a distinct word for 'ember', cf., e.g. Boyeraḥmadi and Mamasanī SL *xərong* (cf. MP^{Z} *x^{w}arg*). Nonetheless, the word is an example of the sound change (cf. fn. 2 and 4).

Type (a): Širvâni *ustoran* 'to get; buy'; *ɨškam* (also *šɨqam*) 'belly'; *ispiɦ* (also *sibiɦ*) 'white'; *ɨškɨn* (also *šɨqɨn*) 'landslide' (cf. NP *šekan-* 'to break' (prs.)); Juhuri *išmū*, Širvâni *išmun* 'you' (pl.); Juhuri *astare* 'star'.

Most of the discrepant paradigms occurring in these dialect groups align with the Persian structure of the sequence. Cases such as *setâra/e* 'star', *šotor* 'camel', or even *šomâ/šūmū* 'you' (pl.) in several Shirazi-Erahistani and Larestani dialects, and *sotūn* 'column', *šekâl/r* 'prey', and possibly even *šomah*, *šemâ*, etc. 'you' (pl.) in Kirmani, as well as *šemâ/ō* or *šomâ*(*n*) in NL, fall into this category, likely under the influence of Persian. This should also apply to some similar paradigms in Caucasian Tati such as Širvâni *sibiɦ*, Juhuri *sipi* 'white' (cf. ENP *sipēd* 'id.') and Širvâni *sūtūn* 'column' (besides ENP *sutūn*, cf. Azerbaijani Turkish *sütun* < Prs.). However, in the case of Caucasian Tati, the influence of Turkish might also be considered.

A second type of discrepancy is forms with *s/š*C- frequently observed in Kumzâri. This should be understood as the outcome of a secondary and relatively recent change, namely the apheresis of V*s/š*C-, rather than, for example, the preservation of OIr. **s/š*C-, as one might speculate. This becomes particularly evident when comparing these forms to the equivalents with V*s/š*C- in Lâraki, the more conservative variety of the same idiom.

3. Persian

3.1. Challenges and Current Explanations

In Persian, we observe a markedly different treatment compared to other SWIr. What is clear is the eventual contrast between Persian *š**e**kam*, *š**o**tor* vs. ***e**škam* and ***o**štor*, and so on in other SWIr. However, there are still several ambiguous and disputable aspects regarding this development in Persian that warrant further discussion, as outlined below:

(1) the starting date and the process of such development in Persian;

(2) the issue of the distinct spellings in MP^{M} and MP^{Z}, viz. the fact that the continuations of the OP words with the initial consonant clusters *s/š*C- (type a) are written with a prothetic vowel *i-* (represented by the letter ayin <ʿ->, and less frequently alif <ʾ->) in MP^{M} and without it in MP^{Z} (e.g. MP^{M} <ʿstʾrg> vs. MP^{Z} <stʾlk'> 'star');

(3) the presence of 'dual spellings', i.e. written with and without a word-initial alif, for both lexicons type (a) and (b) in ENP (e.g. <ʾstʾrh> ~ <stʾrh> 'star'; <ʾštr> ~ <štr> 'camel').

Whether explicitly stated or not, the second issue is presently understood as a dialectal variation in MP. Specifically, OP *s/šC-* is preserved as such in MP^{Z} whereas taking a prothetic palatal vowel and changing into *is/šC-* in MP^{M}[25]. However, this distinction disappears in the Early New Iranian (NIr.) period, when Persian is, alongside the Manichaean script, written in two new scripts: Arabo-Persian and Hebrew. ENP texts—irrespective of the script, thus including Manichaean ENP (ENP^{M}) and Early Judaeo-Persian (ENP^{J}) too—surprisingly feature forms both with prothetic and anaptyctic *i*; evidence of such forms can be found even simultaneously in the same text and even in the same manuscript[26]. In Lazard's words: "les deux types de formes alternent dans nos textes, sans qu'il soit possible de trouver un principe à la répartition"[27]. Eventually, in NP, forms with anaptyctic *i* (later > *e*) become dominant in type (a) words, and similarly, forms with an anaptyctic vowel in type (b) words, as seen in the following examples:

Type (a): ENP *istaδ- ~ sitaδ-* (cf. NP *setând-*) 'to take' (pst.); *istāra ~ sitāra* (> NP *setâre*) 'star'; *išk*am *~ šikam* (> NP *šekam*) 'belly'; *išk*ast- *~ šikast-* (> NP *šekast-*) 'to break' (pst.);

type (b): ENP *ušmār ~ šumār* (> NP *šomâr*) 'calculation'; *uštur ~ šutur* (> NP *šoto*r) 'camel'; *ispurda ~ sipurda* (> NP *seporde*) 'delivered' (cf. MP^{Z} *abespurd-*, cited above).

Both spellings are already found in the **earliest attestations of ENP** as well:

(1) *ušnuhil* 'gratitude' (cf. MP^{M} *išnōhr* 'id.'; Av. *xšnaoθra-* 'satisfaction'), found in a translation of *Fātiḥa* (the opening Surah of the Qur'an), probably from the early 9th century or before[28];

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[25] Cf., for instance, Ṣâdeqī 1380/2001, esp. 15-18; Paul 2013: 53; Rezai Baghbidi 2017: esp. 88; and above all, MacKenzie's (1990) transcription system for MP^{Z}, which is widely accepted by scholars.

[26] For ENP and ENP^{J} examples, see Lazard 1963: 175-176 and Paul 2013: 53-54, respectively. Regarding ENP^{M}, cf. <šnʾsydˀ> ~ <ʿšnʾsyd> 'he recognizes' in the same text (see Sundermann 2003: 256: b16, 257: c3). Given that the scribes of the ENP^{M} texts were generally inclined towards maintaining historical (i.e. MP) spellings (see Henning 1962: 89-90; Sundermann 2003: 245; de Blois 2006: 93-96, and cf., e.g. <ʿstʾr**g**> 'star', as a clear instance belonging here), one might read cases such as ENP^{M} <ʿšnʾsyd> (mentioned above), <ʿspʾḫ> 'army', <ʿstbryḫ> 'harshness', etc. exclusively with the anaptyctic *i*, i.e. *šināsaδ*, *sipāh* and *sitabrī* (as in de Blois 2006: 100). However, compared to the same dual spellings attested elsewhere in the ENP text, the variant forms with prothetic *i-* should have, at least for some words, existed too.

[27] Lazard 1963: 175.

[28] First published by Zadeh (2015, see esp. pp. 402-403). This translation is attributed to Salmān al-Fārisī, the Iranian companion of the Prophet Muhammad. However, the text is documented in the 11th century and its attribution to Salman is questioned. Nonetheless, it is undoubtedly the oldest translation of the Qur'an,

(2) *ispās* 'gratitude' (cf. MP^{M} *ispās* 'id.'; NP *sepâs* 'thanks', and esp. ENP^{J} ***s*ipās**, mentioned below) following the quoted translation in the very text for explaining *ušnuhil*;

(3) *iškam*, *iškamb* ~ *šikanb* 'belly' in Persian quotations from the era of Muhammad attested in Arabic texts from the 9th century[29];

(4) <šmr> *šumār* 'reckoning'[30] as well as <sbʾs> *sipās* 'service, thanks'[31] (cf. *ispās*, quoted above), attested in two letters written in Judaeo-Persian, known as Dandān-Uiliq letters no. 1 and 2, dated to the mid-8th and the early 9th century, respectively[32].

(5) <ʾṣṭxr> *Iṣṭaxr* '(the mint of) Istakhr' on Umayyad (661-750 CE) *dirham*s[33], cf. MP^{I} <stḥly, stʾḥly>, MP^{Z} <stʾhl> read as *Staxr*[34], presumably from OP **staxra-* 'strong(hold)'[35]. However, this evidence involves a proper name occurring not in a Persian but in an Arabic text. Therefore, one might consider it inconsistent with other instances mentioned here, interpreting the prothesis as an Arabic adaptation (i.e. *Staxr* pronounced as *Iṣṭaxr* in Arabic) rather than as a reflection of *Istaxr* in its Persian origin. On the contrary, I believe this pronunciation was already present during that period of ENP. Notably, the same form <ʾṣṭxr> *Iṣṭaxr* is frequently attested in later ENP texts, alongside the less common forms <ṣ/sṭxr> *Sitaxr* and <sṭrx> *Sitarx*, found, for instance, in Ferdowsi's *Shahname*[36].

Consider also the fact that already in Ferdowsi's *Shahname* (written in the late 10th century), as an instance, the forms with the anaptyxis, such as *sipahbad* 'general' (with hundreds of attestations. Cf. MP^{M} *ispāh* 'army'), occur with significantly higher frequency than those with the prothesis, such as *ispahbad* 'id.' (with 12 attestations)[37]. However, the latter forms seem to persist until the end of the ENP.

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dating to around 200 Hijri (ca. the early 9th century) or earlier, and probably originating in Basrah (see Firoozbakhsh 2024).

[29] See Ṣâdeqī 1357/1978: 61, 64.

[30] In Du^{1} 21 and Du^{2} 19 (see Utas 1968: 128-130; Zhang and Shi 2008: 83-86, 94, respectively).

[31] In Du^{2} 25 (see Zhang and Shi 2008: 83-86) Notably, readings *šmar* and *spās* for <šmr> and <sbʾs> (Zhang 2023: 109-111, 113-115, 127, 129) are not acceptable. Cf. MP forms of <šmr> (such as MP^{M} *ušmār-*, with an original initial vowel), cited above in § 2.

[32] Cf. Paul 2013: 10 and references.

[33] See Walker 1956: lxxii.

[34] For instance, in *Ardā Wirāz Nāmag* 1: 5 (see Gignoux 1984: 36, 37, 265).

[35] See Bivar and Boyce 1998.

[36] See Xâleqī-Moṭlaq 1398/2019: 80.

[37] Cf. Xâleqī-Moṭlaq 1398/2019: 154, 237-238. For some further instances, see ibid. 32, 55, 79-80, 152-155, 237-238, 262-265, 267, 270-274, 302, 342-344, 350-353, 430-432, 503-504.

The dual spellings uncategorizably attested in ENP raise the question of what happened to the supposed dialectal variation and how the simultaneous occurrences of these two spellings can be explained. In the case of words like *uštur*, etc. (categorized here as type b), Ṣâdeqī posits that the development into the form *šutur*, etc. did not take place through the shift of the prothetic vowel to an anaptyctic one. He asserts that in the first place, the initial vowel dropped (or changed into *ə*), and then the resulting consonant cluster split by inserting an anaptyctic *ə* which would later change into *a*/*i*/*u* depending on the phonetic context. Given that his argument primarily relies on MP^{Z} forms, it seems that he also considers the insertion of an anaptyctic *ə* applicable to the type (a)[38]. Thus, he regards contrasting paradigms such as *sipōxtan*, *šikōfa* as "exceptions"[39]. This would paradoxically imply that Persian tended to reproduce new initial consonant clusters during the period when it actively avoided them[40]—a point that the author himself alludes to[41].

3.2. A Proposal

I believe we are facing obstacles in reaching a reasonable and commonly acceptable explanation for such forms in ENP because our current arguments are based on an incorrect supposition regarding the prior development of examples of type (a) (cf. issue no. 2, mentioned in § 3.1). I suppose *s*/*š*C- > *is*/*š*C- occurred in early times (at the latest in Early MP (EMP)) and served as a universal, rather than dialectal, sound change in Persian, although in MP^{Z}, it was veiled beneath the cover of the Pahlavi script. In other words, MP^{Z} underwent the same development, thus inherited the same forms as attested in MP^{M}, and featured, e.g. *istārag* and *išk*a*st* rather than *stārag* and *šk*a*st*.

This is a common development in all SWIr. (cf. above) up to this phase. Hereafter, Persian commits the innovation of shifting the vowel of the structure V*s*/*š*C- (in both types a and b) from the beginning into the middle of the cluster. Then, naturally, this vowel could later undergo secondary changes depending on the phonetic environment, especially the quality of the vowel of the following syllable. In many cases, either before or after the vowel shift, vowels *u* and *a* were probably inclined to turn into *i*, due to analogy with the high number of paradigms featuring *is*/*š*C in ENP and *s*/*ši*C- in (E)NP, cf., e.g. ENP *s**i**tān* 'laying on the back' < MP^{Z} ***u**stān*˚ '[with] outspread/outstretched [hands (in prayer)]'; NP *s**e**tordan* 'to erase, shave' < ENP

[38] The position that the author takes here is not precisely clear to me.
[39] Ṣâdeqī 1380/2001, esp. 15-18. Cf. also Pisowicz 1985: 127-128, 146-147.
[40] Cf. also Lenepveu-Hotz 2011: 84-86.
[41] Ṣâdeqī 1380/2001: 22.

u*sturdan* 'id.'; NP *šetâb* 'haste' < ENP *ištāb* < *uštāb* < MP *awištāb* 'oppression'. From ENP onwards, the older forms (in my view) with V*s*/*š*C- gradually fade away in favor of those with *s*/*š*VC-, until eventually in NP, the latter forms become quite dominant. The reasons and pieces of evidence that led me to such an assumption are as follows:

(1) The addition of a prothetic *i*- (> *e*-) to the initial consonant clusters under investigation (i.e. type a) is a universal treatment in SWIr. which is widely observed also in NWIr., with Middle Prt. being attested earlier (cf. the Prt^{M} equivalents such as *istūn* 'column', *išmār* 'number', etc., cited so far). This fact would per se indicate the antiquity of the evolution. On the other hand, MP^{M} clearly shows that Persian had also undergone the same change, so it would be surprising if MP^{Z} had exceptionally resisted such a common and relatively old development.

(2) Generally, MP^{M} attests to more conservative forms, while MP^{Z} contains more innovative ones. It would be unexpected for MP^{Z} here to conservatively preserve the earlier *s*/*š*C-.

(3) The development occurring in consonant clusters of type (b), as in MP *uštar* > (E)NP *šutur*, suggests that type (a) should have undergone a similar process—i.e. the shift of the prothetic vowel to an anaptyctic one, e.g. MP *istārag* > (E)NP *sitāra*. It is not accidental that the dominant anaptyctic vowel here in type (a) is *i* (> *e*). Hence, unlike what Ṣâdeqī[42] suggests, cases like (E)NP *šikōfa* are not "exceptional", but according to the rule.

(4) If such a dialectal distinction ever existed in MP, the same distinction should have been reflected in some ENP texts, whereas we consistently encounter a mixture of the two spellings in all ENP texts. My interpretation is that MP^{M}-type forms with the prothetic *i*- are continued up to ENP. However, being in the course of development, these forms are attested simultaneously and closely associated with the innovative forms featuring the anaptyctic *i* (e.g. ***i****stāra* ~ *s****i****tāra*, etc.) until eventually in NP, the latter forms (i.e. *s****i****tāra* > *s****e****târe*, etc.) become dominant. The sequence of this development, i.e. MP *is*/*š*C- > ENP *is*/*š*C-/ *s*/*ši*C- > NP *s*/*ši*C-/ *s*/*še*C-, per se contradicts the assumption of the preservation of OP *s*/*š*C- in any MP dialect.

(5) The main obstacle against my supposition is that such pronunciation is not reflected in the Pahlavi script. An adequate explanation can be obtained only through a separate investigation. However, as far as our subject is concerned, it can be asserted that even though the earlier **s*/*š*C- is written with <s/šC-> sign sequences (without the prothetic vowel, as claimed here) in the Pahlavi script, under certain conditions, evidence of the

[42] Ṣâdeqī 1380/2001: 18.

prothesis in question can be found in this script too, which is discussed in the successive section.

3.2.1. Reflection of the Prothetic Vowel in the Pahlavi Script

Middle Persian *is/šC-* (< OIr. **s/šC-*) > MP^{Z} *as/šC-*, *us/šC-*

The first condition leading to the emergence of the prothetic vowel of the <*s/šC*-> words in the Pahlavi script arises when the prothetic *i*- in *is/šC*- (type a), through a secondary change, had the chance to transform into other short vowels, resulting in *us/šC*- or *as/šC*-:

(1) MP^{Z} <ʾškmb'> *aškamb* 'belly, womb', via regressive assimilation, from *iškamb*, the earlier form that is attested in both MP^{M} and Prt^{M}, cf. also ENP *iškam* and the equivalents in other SWIr. mentioned earlier;

(2) MP^{Z} <spwlt-n', spl-> read as *spurdan*, *spar*-; <ʾwspl-tn'> read as *ōspurdan*, *ōspar*-; <wspwl-tn'> read as *wispurdan*, **wispar*-, all conveying the same meaning of 'to tread, trample'. However, I propose that these variations are likely only graphic, all essentially representing *uspurdan*, *uspar*-[43] which later gives ENP *ispurdan*, *sipurdan*;

(3) MP^{Z} <ʾwšnwk'> *ušnūg* beside the spelling <šnwk'> read as *šnūg* 'knee'. Cf. MP^{M} <ʿšnwg> *išnūg*; Av. (*x*)*šnu*-;

(4) MP^{Z} <ʾspnc> *aspiǰ* 'hospitality; inn' beside the spelling <spncʾnkyh> read as *spinǰānagīh* 'hospitality'. Cf. ENP (*sarā i*) *sipanǰ* 'inn'; MP^{M}, Prt^{M} <ʿspync/j> *ispenj* 'id.'[44];

(5) MP^{Z} *ašmā*, to the best of my knowledge, is exclusively written in the *huzwāreš* <LKWM>. However, if we accept the current reading, it could serve as indirect evidence relevant to this section. Cf. MP^{M}, Prt^{M} *išmāh*[45]; Av. *xšmākəm*;

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[43] Consider that /*u*-/ in the Pahlavi script can be represented by <ʾw->, as seen in, e.g., <ʾwštl> *uštar* 'camel' and <ʾwspwlyk'> *uspurrīg* 'complete'.

[44] This word could belong here, but it is uncertain due to the ambiguity in its derivation (some of them quoted in Ḥasandūst 1393/2014: 1676). Henning states that *aspiǰ* "may be a derivative of MPers. *asp*- (Man. *hasp*-) 'to rest', *aspīn* (Man. *hspyn*) sbst. 'rest' […], so that *sipanǰ* would mean 'rest-house' even by etymology" (Henning 1965: 244/619: fn. 11). If this is the case, this example should be disregarded here. However, the mentioned derivation encounters some phonological obstacles which are left unexplained. Indeed, the Pahlavi spelling with <spˀ> corresponding to that of the MP^{M} and Prt^{M} with <ʿspˀ> would probably suggest that its OIr. origin started with **sp*-.

[45] Prt^{M} <ʿšmʾ(ḥ), ʾšmʾḥ> read as ***i****šmāh*, wherease MP^{M} <ʾšmʾ(ḥ/h), ʿšmʾ(ḥ), etc.> as ***a****šmāh* by Durkin-Meisterernst (2004: 56, 92). Not only in MP^{M}, but probably also in MP^{Z} the pronunciation should likely have been *išmā*(*h*) (as in Prt^{M}) rather than *ašmā*(*h*). This is also supported by the spellings in ENP^{J} <yšmʾ> *išmā* (in Du^{2} 7, see Zhang and Shi 2008: 82-83, 85-86; cf. Paul 2013: 95-96, 100) and ENP <ʾšmʾ> ~ <ʾyšmʾ> *išmā* (in *Tafsīr-i Sūrābādī*, see Ravâqī 1381/2002: 25, 38).

(6) MP^{Z} <ʾwzmbwlt'> read as *uzumburd* 'emerald', borrowed from Greek *smáragdos* 'id.'. This word can also be included here as an example of the similar phonetic context *z*C- (cf. fn. 2 and 4), specifically *zm-* < *sm-*, where *s* became voiced before *m*. Cf. also Armn. *zmrouxt* 'id.' (< Iranian)[46]; NP *zomorrod* 'id.'.

Middle Persian privative prefix *an-*

Another context in which the prothetic vowel appears is in the combination of <*s*/*š*C-> Pahlavi words with the MP privative prefix where the prefix is occasionally written in its prevocalic variant, namely <ʾn-> *an-*[47], cf., e.g. (1) <ʾnspʾs> *an-ispās* (beside <ʾspʾs> read as *a-spās*) 'ungrateful' and <ʾnspʾsyh> *an-ispāsīh*[48] 'ingratitude'; (2) <ʾnšnʾsk'> *an-išnāsag* 'unknown, unidentifiable'; (3) <ʾnšnwhlyh'> *an-išnōhrīhā* 'having no gratitude (to gods)'[49].

Pahlavi <s/šC-> rendering original Vs/*š*C-

Furthermore, a handful of words of type (b) may, in a distinct manner, indicate a similar orthographical behavior. In the following examples, we encounter Vs/*š*C- with an original initial vowel, which remains unrepresented in the Pahlavi script:

(1) MP^{Z} <spwlyk'> read as *spurrīg*, beside <ʾwspwlyk'> *uspurrīg* 'complete', derived from **us-√parH-* 'to fill'[50]. Cf. MP^{M}, Prt^{M} <ʿspwr> *ispurr* and <ʿspwryg> *ispurrīg* 'id.'; (E)NP *siparī* 'complete, ended, etc.'. Additionally, consider MP^{Z} <ʾ**n**wspwlyk'> and <ʾ**n**spwl>[51] 'imperfect', which could respectively represent *an-uspurrīg* and *an-ispurr* (cf. below), the latter reflecting the more recent pronunciation.

(2) MP^{Z} <stwb'> read as *stō* 'distressed, defeated', derived from **us-√tav-* 'to be able'[52]. Cf. ENP *u*/*istōh*, *sutōh*; MP^{M} <ʿstwy-> *istōy-* 'to defeat'; <ʿstwyqwn> *istōy-kun* 'conqueror'; Prt^{M} <ʿstwb-> *istōβ-* 'to defeat'; <ʿstwb> *istōβ* 'defeated'.

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[46] See Schmitt and Bailey 1986.
[47] I am grateful to my friend Dr. Yusef Saadat for bringing this to my attention.
[48] MacKenzie (1990: 10) reads them as *an-espās* and *an-espāsīh*, respectively.
[49] The two latter attested in *Dēnkard V* 15: 5 and 24: 21, respectively (see Amouzgar and Tafazzoli 2000: 54, 55, 94, 95, 130). Amouzgar and Tafazzoli (ibid.) read them as *ana-šnāsag* and *ana-šnōhrīhā*, respectively.
[50] See Cheung 2007: 295-296 and references.
[51] In *Dādestān ī Dēnīg* 36: 2 (see Jaafari-Dehaghi 1998: 108, 242).
[52] See Ghilain 1939: 67. Cheung (2007: 367) criticizes this derivation, and proposes a new one assuming the root **√staup-* 'to overcome, defeat', based solely on the abovementioned cases.

One might simply explain these spellings by assuming the deletion of the initial vowel. However, the presence of the initial *i-* in the MP^{M}, Prt^{M}, and ENP equivalents contradicts such an assumption. Instead, it suggests that MP^{Z} <spwlyk'> and <stwb'> were likely pronounced with *is*C- (< *us*C, as occurs in the MP^{M}), i.e. *ispurrīg* and *istō*, respectively. If so, they would, from another perspective, lend support to the previously mentioned assumption suggesting that the Pahlavi script may avoid reflecting the first vowel of V*s*/*š*C-, when that vowel is *i-*.

3.2.2. Reflection of the Anaptyctic Vowel in Pahlavi

ENP forms with anaptyctic *i* (such as *š**i**kanb*, cf. § 3.1) are already attested in the early centuries after Islam. Thus, it can be theoretically assumed that the forward shift of the prothetic vowel (e.g. ***i**stāra* > *s**i**tāra*), might have begun before that time, namely, in the Late MIr. period. There is at least one instance that supports this assumption.

In a paronomasia found in the Pahlavi text *Andarz ī Pōryōtkēšān*, the word <spʾsdʾl> 'grateful' is interpreted through folk etymology as *sē*/*i-pās-dār* 'one who keeps three watches'[53]. This example documents the pronunciation *sipās-dār*, suggesting that the vowel shift had already commenced during the Late MIr. period. It also indicates that, in late Pahlavi texts, some words of type (a) (written with <s/šC->) may have already been pronounced with an anaptyctic vowel.

3.2.3. Old Persian Initial <s/šC-> in Achaemenid Elamite Garb

As previously mentioned, I posit that the addition of the prothetic *i-* likely occurred by EMP. However, it can be hypothesized that this phenomenon dates back to earlier periods, possibly to that of Old Persian (OP). In Achaemenid Elamite (AE) renderings of OP words, the clusters under investigation are consistently represented by the *iš*-CV—more specifically *iš*-CV(C)—sign sequences. The same pattern, although it is less regular, is observed in Achaemenid Babylonian (AB) cuneiform. Consider the examples:

[53] The text reads: *mardōm kē-š ēn sē*/*i pās ī-m guft abar tan ī x^{w}ēš bē pāyīd…, ēg sipās-dār*/*se-pās-dār būd, ud pad sipās-dārīh*/*se-pās-dārīh ēn tuwān kardan kū ruwān ō dušox nē rasēd* 'people who keep these three watches, which I mentioned, on their own body… they shall become 'grateful' ('one who keeps the three watches'), and through 'gratitude' ('keeping the three watches'), one shall be able <to avoid> reaching hell' (for details, see Qâʾemmaqâmī 1401/2022: 402-405, esp. 404: fn. 1). The transcription and translation of the passage are based on Qâʾemmaqâmī's reading rather than being a direct quotation.

(1) OP <sk^{u}udr> 'Thracia; Thracian': AE ^{DIŠ}*iš-ku-ud-ra*, AB $^{KUR/LÚ}$*is-ku-du-ru*(-$^{\cdot}$)[54];

(2) OP <sprd>[55] 'Lydia': AE $^{DIŠ/AŠ}$*iš-pár-da*, but AB ^{KUR}*sa-par-da*/ ^{KUR}*sa-pa-ar-da*[56];

(3) OP [<st^{u}una>] 'column': AE ^{AŠ}*iš-du-na-um*[57];

(4) OP <stanm> 'place': AE ^{AŠ}*iš-da-na*[58];

(5) OP <sk^{u}ux> personal name: AE ^{DIŠ}*iš-ku-in-ka*$_{4}$[59].

The OP cuneiform itself never reflects *is*/*šC*- < **s*/*šC*-, making us believe that it is merely an orthographical convention in AE cuneiform for rendering OP *s*/*šC*-; so *i*- here is only graphic. However, this matter may not be established so straightforwardly. If AE *iš*-CV, as a VC_1-C_2V cuneiform sign sequence type, was employed for rendering OP *s*/*šC*-, theoretically, other sign sequences of this type should have had an equal chance of being utilized for the same purpose. We are aware that *uš*-CV was impractical since the sign *uš* was already out of use in AE but *áš*-CV was expected to be regularly documented, resulting in spellings like AE ^{*DIŠ}*áš-pár-da* as a variant of ^{DIŠ}*iš-pár-da* ~ OP <sprd>, and so on. However, such variant spellings do not occur in AE.

Furthermore, employing the AE VC_1-C_2V type of sign sequence—one example of which is *iš*-CV—is not the habitual method of Elamite scribes for representing OP initial consonant clusters, cf. e.g. AE *pír-r*V, of the type C_1VC_2-C_2V, representing OP *fr*- and *br*-, for instance in ^{DIŠ}*pír-ra-da* ~ OP <frad> *Frāda* and AE *pír-ra-iz-man-nu-ia* ~ OP <brzmniy> *brazmaniya*[60]. AE *iš*-CV, in fact, echoes AE *ir*-CV(C) sign sequences systematically used for rendering OP *ṛ*C-, as seen in, e.g. AE ^{DIŠ}*ir-tak-ik-šá-áš-šá* ~ OP <artxšça> *Ṛtaxšaça*-[61].

Accordingly, I suppose *i*- in the AE *iš*-CV should indicate a linguistic fact rather than being purely graphic. Two possibilities could be hypothesized: (1) it reflects the Elamite phonological adaptation of OP initial clusters of this kind. For instance, Elamite-speakers may have pronounced OP *stānam* as

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[54] In DNa^{OP} 29/ DNa^{AE} 23-24/ DNa^{AB} 17; A^{3}Pb^{OP} 25/ A^{3}Pb^{AE} 25 (here ^{DIŠ}*iš-ku-ra*)/ A^{3}Pb^{AB} 25. Also in PF, e.g. AE ^{DIŠ}*iš-ku-tur-raš* (PF 1820: 4-5; PF 1823: 4-5), AE ^{DIŠ}*iš-ku-ud-ra-ip* (PF 1056: 3; PF 1085: 3).

[55] From Lydian *Śfarda*-.

[56] In DNa^{OP} 28/ DNa^{AE} 22/ DNa^{AB} 16; DHa^{OP} 6/ DHa^{AE} 5-6/ DHa^{AB} 6; XPh^{OP} 22/ XPh^{AE} 18/ XPh^{AB} 18). Also in PF, e.g. AE ^{AŠ}*iš-pár-da* (PF 1321: 8-9; PF 1404: 7-8, etc.).

[57] In DSz^{OP} y+5/ DSz^{AE} 42.

[58] In XVa^{OP} 20-21/ XVa^{AE} 20-21.

[59] In DBk^{OP} 1-2/ DBk^{AE} 1.

[60] For further examples, see Mayrhofer 1973: 41-42, 64, 67.

[61] For further examples, see Mayrhofer (1973: 25), and cf. R. Schmitt's transcription system for OP.

**is/štanam* or the like, and so on; (2) it testifies a phonological aspect of OP, i.e. earlier **s/š*C- > *is/š*C- or *əs/š*C-, not reflected in the OP script itself[62].

However, unlike the latter assumption, the comparable OP word *ištiš* 'brick' (cf. Av. *ištiia-* 'id.') is spelled as <ištiš> with *i-*. One hypothetical explanation might be that the words under discussion were pronounced differently, viz. as *əs/š*C- rather than *is/š*C-. Alternatively, the presence of *i-* in <ištiš> might be due to its pronunciation as **hištiš*, with the prothetic *h-* dating back to OP (cf. Prt^{M} *hištīg* 'id.' and MP^{Z} ***x****išt* < **hišt* 'id.', already with *x-*), comparable to cases such as OP <u-> 'good' (cf. Av. *hu-*, MP *hu-* 'id.') and <ušk> 'dry; mainland' (cf. Av. *huška-* 'dry', MP *hušk* 'id.')[63].

A more challenging question arises if we accept the proposed hypothesis (i.e. AE *iš*-CV representing OP *is/š*C- or *əs/š*C- < **s/š*C-): why is the assumed prothetic *i-* not consistently reflected in the Pahlavi script as a historical spelling? This remains an open question that can only be addressed through a detailed investigation dedicated to this matter. However, if this interpretation proves to be accurate, it then implies that the development in question traces back to OP. This aligns more closely with the fact that this innovation spread widely beyond Persian.

3.2.4. Other Sources

The following section presents brief observations drawn from additional sources, including Iranian words in Armenian and Syriac, as well as relevant discussions by Islamic linguists from earlier centuries.

While these sources provide valuable insights, their integration into our discussion presents certain challenges. In particular, Iranian words in Armenian and discussions by Islamic linguists pose significant difficulties and cannot be readily incorporated into our arguments without detailed analysis—an endeavor that lies beyond the scope of this paper. A more efficient approach might be to have specialists in the relevant fields examine the information provided by these sources through the lens proposed here,

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[62] Such a phenomenon is not improbable. We are already aware of some deficiencies (or particular orthographical conventions) of the OP script, wherein certain phonemes were deprived of being written in given conditions. For instance, nasals are not written before certain consonants, cf., e.g. <gdar> *Ga**n**dāra-* in Schmitt's transcription system (see Schmitt 2008: 79-80; 2014: 180). A relevant matter to be noted is that the OP script did not encompass a comprehensive set of signs for all phonemes of the language (cf. Aliyari Babolghani 2024, regarding the dual phonetic value of the OP sign <θ>).

[63] A known orthographical convention to render *hi*C- in the OP script is <hC->, however, this is not fully systematic (see Schmitt 2008: 80).

particularly the idea that the pronunciation of type (a) words with prothesis was universal in MP, rather than confined to MP^{M}.

Armenian: Iranian words of type (a) in Armenian are predominantly recorded with the initial consonant cluster (e.g. Armn. *šnorh* 'grace, gratitude', cf. Prt^{M}, MP^{M} *išnōhr* 'id.'; *spitak* 'white', cf. Prt^{M}, MP^{M} *ispēd* 'id.'), and only occasionally with prothesis (e.g. Armn. *aspar* 'shield', cf. Prt^{M}, MP^{M} *ispar*). The chronology and precise source of these borrowings cannot be determined in many cases. However, it is known that they are primarily borrowed not from Persian but from Parthian and some other non-Persian language(s). For the cases pertinent to our discussion, those with Persian provenance (whether authentic or borrowed) are difficult to distinguish. Furthermore, I am uncertain whether all forms with the initial consonant cluster, regardless of their provenance, reflect the presence of the cluster in the Iranian language from which they were borrowed, or alternative interpretations, such as Armenian adaptation, should be considered, cf. the omission of the original initial vowel in Armn. *štr* (besides *ištr*) 'camel' (cf. Av. *uštra-* 'id.')[64].

Syriac: Similar challenges may be encountered when analyzing Iranian words in Syriac. However, the situation is less complex here, as most of these words are borrowed or quoted from MP[65]. In contrast to Armenian, Iranian words of type (a) in Syriac are predominantly written with prothesis and only rarely with the initial consonant cluster, e.g. Syr. <ʾsph> 'army' (cf. MP^{M} *ispāh* 'id.'); Syr. <ʾsphbyd> and <sphbyd> 'general, commander' (cf. MP^{Z} <spʾhpt'> 'id.'); Syr. <ʾsprmkʾ>, <ʾsprmqʾ>, and <sprmqʾ> 'basil' (MP^{M} *isprahmag* 'flower'); Syr. <ʾspydpqʾ> 'white broth' (cf. MP^{Z} <spyt'pʾk'> 'curd soup', and MP^{M} *ispēd* 'white'); and Syr. <ʾsṭbrgʾ> 'silk dress'[66] (cf. MP^{Z} <stplk'> 'shot silk', and also Arabic *istabraq* 'silk, brocade'[67]).

An especially noteworthy case is Syr. <ʾsṭwnʾ> 'column', which was inherited from and already attested in Official Aramaic, so it was borrowed not from MP *istūn* but from OP <st^{u}una>[68] (cf. § 3.2.3, esp. AE ^{AŠ}*iš-du-na-um*).

Islamic linguists: In their discussions of the initial consonant cluster in Arabic, Islamic linguists have, in some cases, also commented on the same

[64] For the cited Armenian words and discussions relevant to the Iranian loanwords in Armenian, see Schmitt and Bailey 1986.
[65] See Ciancaglini 2008: 11, 14, 37-42.
[66] For the cited Syriac words, see Ciancaglini 2008: 41, 73, 86-87, 110-112.
[67] See Cheung (2016: 3-4, 20-22, 24, 26). He (ibid.) states that Arabic *istabraq* is probably a direct borrowing from EMP *stabrak* 'shot silk' rather than via Syriac.
[68] See Ciancaglini 2008: 30, 70, 110.

issue in Persian[69]. These accounts, however, do not offer a clear or consistent understanding of the issue. Moreover, some of these interpretations appear to be affected by the presumption that initial consonant clusters are universally impossible in any language. Nonetheless, a few discussions that are more pertinent to our subject are as follows—though it should be noted that these discussions are fairly general and not specifically confined to the phonetic context under our consideration.

The author of *Yawāqīt al-ʿUlūm wa-Darārī al-Nujūm* (6th Hijri, 12th century) quotes from a certain Xālidī Naxjawānī, who asserts that contrary to common conception ("mardum pindārand"), the Persian ("Pārsī") words <škm> 'belly' and <štr> 'camel' feature an initial consonant cluster ("awwališān sākin ast"). However, the author strongly disagrees with this statement. He cites Sībūya (2nd Hijri, 8th century), who argued that the initial consonant cluster is beyond human linguistic capabilities. The author further discusses that Xālidī Naxjawānī's misperception stems from the fact that *š* is a fricative(?) ("tanaffusī") consonant, preceded by an implied alif ("alif-ē dar awwal-i ān muqaddar ast"), which occasionally surfaces, resulting in the pronunciations <ʾškm> and <ʾštr>. When the alif is not explicitly manifested, *š* is pronounced after an implied alif ("bar taqdīr-i alif, šīn bigūyad"), leading to the impression of a consonant cluster with *š* ("gumān barand ki šīn sākin gufta ast")[70].

Similarly, Šams-i Qays (6th-7th Hijri, 13th century) asserts that the general consensus among linguists is that initial consonant clusters ("ibtidā ba sākin") are universally impossible in any language. He further notes that Ibn-i Durustūya (3rd-4th Hijri, 9th-10th century) incorrectly held the contrary view, merely based on the observation of certain words pronounced *rubūda* by Iranians ("ʿAjam"), viz. the first consonant in these words is pronounced with an implicit vowel sound between *fatḥa* and *kasra*, as found in *f* in <fɣʾn>, *d* in <drm>, *s* in <srʾy>, and *š* in <šmʾr>—only the latter, meaning 'count', is relevant to our discussion[71].

4. Date of Occurrence

The addition of the prothetic vowel to **s/šC-* (type a), as a general development in several Western Iranian languages, should have commenced in the Early MIr. period (if not earlier, cf. § 3.2.3).

Persian also undergoes a secondary innovation, namely *Vs/šC-* (both types a and b) > *s/šVC-*, which makes it diverge from the other SWIr. The

[69] For a summary, see Ṣâdeqī 1380/2001: 11-13.
[70] *Yawāqīt al-ʿUlūm wa-Darārī al-Nujūm*: 172.
[71] *Al-Muʿjam fī Maʿâyīr-i Ašʿâr al-ʿAjam*: 60-61, fn. 4.

presence of numerous paradigms already spelled without the initial vowel in ENP would tell us that this development, i.e. the forward shift of the prothetic vowel and breaking of the consonant cluster in Persian, might have commenced in the first century after Islam or even before, in the Late MIr. period. Indeed, the form *s**i**pās-dār* 'grateful' (see § 3.2.2), as attested in the Pahlavi text *Andarz ī Pōryōtkēšān*, supports this earlier dating[72].

5. Conclusion

My analysis of the sound change in question can be summarized as follows:

OP *s/šC-* (type a) turns into *is/šC-* in EMP (if not earlier), representing a universal development in MP rather than being restricted to MP^{M}. This development is not unique to Persian; it denotes a broader phonological evolution that likely occurred across various West Iranian languages, probably including all SWIr.

Based on the arguments presented, I suggest that words of type (a) should be transcribed with the prothetic *i-* (e.g. *istārag* as in MP^{M} rather than *stārag*) in Pahlavi (MP^{Z} and MP^{I}) as well. However, in late Pahlavi texts, some words of type (a) may have already been pronounced with an anaptyctic vowel (cf. *s**i**pās-dār* in § 3.2.2). Additionally, the transcription of certain Pahlavi words of type (b) may also require revision (cf. § 3.2.1).

Since MIr. onwards, the sequence *is/šC-* < *s/šC-* (i.e. type (a), e.g. MP *iškamb* 'belly') converges with the other type of initial sequence V*s/šC-* (i.e. type (b), inherited from the earlier period, e.g. MP *uštar* 'camel'), in a similar phonetic context. Thus, from this point onward, they undergo a shared development irrespective of their origin. SWIr. other than Persian generally maintain the structure of this sequence. In contrast, Persian undergoes a secondary change by shifting the prothetic vowel of V*s/šC-* forward, resulting in *s/šVC-*. This development may have begun in Late MIr., continuing into the Early NIr. Accordingly, the presence of 'dual spellings' in ENP (as seen in *iškam ~ šikam*), does not represent dialectal variation; instead, it reflects an ongoing development that ultimately results in NP *s/šVC-* (e.g. *šikam* > *šekam*).

[72] MP^{Z} *zuwān* 'tongue' (in *Ardā Wirāz Nāmag* 57: 1, 63: 3, etc., see Gignoux 1984: 277), the more recent form of *uzwān* (cf. MP^{M} *izwān*; Prt^{M} *izβān*), as well as MP$^{I, M, Z}$ *ruwān* 'soul', the more recent form of MP^{M} *arwān* (cf. Prt^{M} *ruwān* < Prt$^{I, M}$ *arwān* 'id.'; Av. *uruuan-* 'id.'), do not belong here. However, they may indirectly indicate the pre-Islamic age of this type of sound change.

However, monosyllabic words appear to be exceptions to the rule, as seen in examples like NP *ast* 'is' (MP *id.*) and *asp/b* 'horse' (< MP *asp* 'id.'). Moreover, certain words, mostly those starting with the syllables *a/ust-*, have occasionally resisted the development, cf. NP *ostoxân* 'bone' (< MP *astuxān* 'id.'); NP *astar* (sporadically, also ENP *satar*) 'mule' (< MP *astar* 'id.'[73]); NP *ost(o)vâr* (sporadically, also ENP *sotwār*) 'firm' (< MP *awestwār* 'id.'). However, there are also instances of this kind adhering to the rule, such as NP *setordan* 'to erase, shave' (ENP *usturdan* 'id.') and ENP *sitān* 'laying on the back, starfish (sleeping position)' (cf. Av. *ustāna-zasta-*, *ustānāiš... zastāiš* 'with outspread/outstretched hands (in prayer)' translated into MP^{Z} *ustān-dastīh* 'id.'[74]).

The treatment of *s/šC-* in later loanwords, such as those from Western languages, warrants brief mention here. For instance, in the NP of Tehran, such words consistently take a prothetic *e-*, as in English 'standard' > ***e****stândârd* and 'sport' > ***e****sport*. Similarly, in the NP of Kabul, forms like ***e****standard* appear with a prothetic *e-*, although *s****i****port* also occurs. These examples indicate recent and independent developments of initial consonant clusters *s/šC-*. They evidently cannot be conflated with the final phase of the Persian sound change under discussion, specifically V*s/šC-* (both types a and b) > *s/š*VC-, which occurred centuries earlier and in a distinct context.

ABBREVIATIONS

Armn. : Armenian
AB : Achaemenid Babylonian
AE : Achaemenid Elamite
Av. : Avestan (Gathic or Young)
Dez. : Dezfūl
EMP : Early Middle Persian
ENP : Early New Persian
ENP^{J} : Early Judaeo-Persian
ENP^{M} : Manichaean ENP
MIr. : Middle Iranian (period)
MP : Middle Persian
MP^{I} : Inscriptional Middle Persian
MP^{M} : Manichaean Middle Persian
MP^{Z} : Zoroastrian Middle Persian
NB : North Baškardi
NIr. : New Iranian (period)
NL : Northern Lori
(Modern) NP : New Persian
NWIr. : 'Northwestern Iranian'
OIr. : Old Iranian (period)
OP : Old Persian
PF : Elamite Persepolis Fortification
Prs. : Persian in general
Prt^{I} : Inscriptional Parthian
Prt^{M} : Manichaean Parthian
SL : Southern Lori
SWIr. : 'Southwestern Iranian'
Syr. : Syriac
Šūš. : Šūštar

[73] In *Wizīdagīhā ī Zādspram* 3: 58 (see Gignoux and Tafazzoli 1993: 50, 51, 358).
[74] In *Yasna* 29: 5 (see Malandra and Ichaporia 2013: 29, 187, 208).

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