Studying Ancient Egyptian Substratum of Egyptian Arabic: Limitations and Prospects

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Abstract

After more than three millennia of Ancient Egyptian language continuity and change, language contact between Ancient Egyptian and Arabic resulted in a language shift from the Ancient Egyptian, in its Coptic stage, into Arabic. Despite the shift, Coptic continued to be used as a liturgical language by the Christians in Egypt. Moreover, traces of the Ancient Egyptian linguistic features influenced Egyptian Arabic, the Arabic variety used in Egypt since the shift. This contribution aims to outline several theoretical and practical challenges, which face a systematic study of the Ancient Egyptian interference through shift (substratum interference) into Egyptian Arabic. It also discusses the importance of studying Ancient Egyptian traces in Egyptian Arabic, as an additional source to the abandoned Ancient Egyptian language, for a better understanding of the Ancient Egyptian language and culture. Following an introduction and emphasis on the difference between Egyptian Arabic and standard Arabic, the paper discusses several examples of lexical survivals as well as Coptic substratum syntactic, and morphological features of Egyptian Arabic. Finally, the paper presents an example of substratum Ancient Egyptian cultural concepts, which is represented in contemporary Egyptian Arabic.

1. Introduction

Language contact occurs when speakers of different languages interact closely with each other, resulting from various forms of social interaction including migration, cultural exchange, and trade among others.[1] Such contact may lead to an exchange of linguistic features between languages in contact. The result of a language contact situation depends on several social and linguistic factors including contact intensity and social motivations. Languages may loan words and influence the phonological and grammatical structures of other languages in contact. Ultimately, language contact can result in the development of new linguistic varieties or lead to changes in the languages involved. Studying language contact helps scholars understand language change and development.

The field of language contact is a multidisciplinary area of study incorporating linguistic, sociolinguistic, and psycholinguistic approaches. Weinreich (1953) was the first to propose a systematized and integrated framework for the study of languages in contact.[2] While sociolinguists study synchronic languages in contact and analyze the process responsible for language change, historical linguists apply such mechanisms to explain historical language changes and the factors that affected such changes in the past. Before the end of the last century, Sandra Thomason and Terrence Kaufman (1988) studied several scenarios of language contact for a better understanding of the nature of contact and mechanisms responsible for linguistic changes resulting from language contact.[3] Thomason and Kaufman differentiated between two 'very different kinds of contact situation that can lead to the emergence of mixed languages' namely, 'borrowing' and 'substratum' interference, which differ sharply in their linguistic results, especially in less extreme cases'.[4] Borrowing is the process of incorporating features from a foreign language into a group's native language by speakers of the native language. Speakers of a native language, in a language contact situation, begin by 'borrowing' vocabulary from another more prestigious language into their native one. Depending on contact intensity and other social factors, native speakers might continue to borrow other linguistic features into their native language from the prestigious one, including syntactic, morphological, and phonological features.

On the other hand, substratum interference represents 'the opposite of a prestige borrowing' process. While speakers of a native language shift to another prestigious language, an imperfect language-shifting process can lead to the emergence of a new version of the desired language, which retains some traces (interference) from the old native language. Such traces will probably contain syntactic, and morphological features from the old native language rather than native vocabulary.

The Ancient Egyptian language, as one of the longest-attested languages in human history, encountered several situations of language contact.[5] For example, language contact between Ancient Egyptian and ancient Greek languages, which represents an example of the 'borrowing' language-contact situation, resulted in considerable vocabulary borrowing from ancient Greek to Coptic.[6] On the other hand, language contact between Ancient Egyptian, during its Coptic stage, and Arabic lead to a gradual shift to Arabic after centuries of Coptic-Arabic bilingualism in Egypt.[7] Language contact between Ancient Egyptian and Arabic represents an example of the 'substratum' interference process, through which Egyptians shifted

their language to Arabic with the result of a new variety of Arabic, namely Egyptian Arabic, which includes some traces of the native Ancient Egyptian one.

2. Egyptian Arabic is [not] Standard Arabic

The native spoken language in Egypt is Egyptian Arabic, one among several Arabic dialects found across the Arab world. Charles Ferguson (1959) identified two coexisting varieties of the Arabic language:[8] the first being Modern Standard Arabic (MSA), serving as the official variety used in written literature and mass media; the second is the native spoken variety used for daily communication, known as Egyptian Colloquial Arabic (ECA) in Egypt. While Modern Standard Arabic (MSA) is universally understood across the Arab world, each Arabic country possesses its native spoken variety. Some Arabic colloquial dialects, such as Moroccan Arabic in Iraq, may be non-comprehensible for speakers from other Arab regions.

Reem Bassiouney (2009) demonstrated that the linguistic differences among Arabic vernacular varieties are similar to those linguistic differences observed among Germanic languages.[9] Although the Egyptians shifted their language into Arabic, substratum interference/imposition, including phonological, morphological, grammatical, lexical, and idiomatic traces of the Ancient Egyptian language, in its later stage of Coptic, can still be observed in the modern spoken Egyptian Colloquial Arabic (ECA).

2.1 Spoken vs Written

The main writing language in Egypt is Modern Standard Arabic (MSA), the prestigious language of the 'educated', rather than the native spoken vernacular one. An educated Egyptian is more likely to write in Modern Standard Arabic and speak in Egyptian Colloquial Arabic (ECA).[10] Elsaid El-Badawi (1973) pointed out that traces of the Ancient Egyptian language are more likely to be observed in Egyptian Colloquial Arabic rather than Modern Standard Arabic since Egyptian Colloquial Arabic is the living language that evolves within the Egyptian society and reflects their culture and beliefs, while MSA is an instituted language, which is taught in schools and performed through mass media.[11]

There currently exists no comprehensive dictionary that systematically compiles the vocabulary and phraseology of spoken Egyptian Colloquial Arabic (ECA), a language that may contain traces from Ancient Egyptian. Noteworthy efforts by scholars, such as Martin Hinds and Elsaid El-Badawi (1986), focused on collecting the vocabulary of the Cairene ECA dialect, accompanied by illustrative examples in ECA sentences.[12] Hinds and Badawi described the challenges they faced in conducting the Coptic etymological studies as:

> 'The task of dealing with survivals from Coptic is accompanied by particular complications, not only because of the antiquity of that language and the shortage of published studies on its relation with Egyptian Arabic but also because Coptic terms vary in the different Coptic dialects and there are in any case difficulties in knowing how they were pronounced'.[13]

As a part of the Tübingen Atlas of the Near East, Behnstedt and Woidich (1985–1999)[14] undertook an extensive study of the Egyptian Arabic dialects, encompassing six volumes. This comprehensive research

dealt with different Arabic dialects in Egypt, including Upper Egyptian, Delta, Oasis, and others. The study focused on elucidating the phonological, and morphological differences among these dialects, and their relations to other Arabic dialects outside Egypt. The study included lexical items for each dialect that demonstrate the differences between them. However, the study did not include a comprehensive collection of Egyptian Arabic vocabulary. Furthermore, it lacked phraseological examples for each lexical item.

Within Egyptology, recent studies investigating the Arabic language used in Egypt and its potential connection to the Ancient Egyptian language rely on the accessible written resources of Arabic in Egypt.[15] The primary reference for such studies is the documented Modern Standard Arabic (MSA), such as the *Dictionary of Modern Written Arabic* by Wehr (1976).[16] Wehr explicitly states in the introduction that his dictionary 'presents the vocabulary and phraseology of modern written Arabic […] found in the prose of books, newspapers, periodicals, and letters',[17] which is Modern Standard Arabic (MSA), not Egyptian Colloquial Arabic (ECA).

3. Lost among Disciplines

Etymological research of Egyptian Arabic lexical items typically falls within the discipline of Arabic and Semitic language studies, which does not include the Ancient Egyptian language. Until recently, Arabic studies within the Arab world regarded Classical Arabic (CA) as the primary source of all Arabic dialects.[18] Any linguistic elements that are not borrowed from Persian, Turkish, or European languages are typically considered changes stemming from Classical Arabic. For instance, in his book entitled *Overcoming the Sin of Egyptian Arabic', al-maġribī* (1968, derived from the original work at 1606),[19] conducted an etymological dictionary of some Egyptian Arabic lexical items relating them to their Classical Arabic equivalents, an effort to 'assist' Egyptians in speaking the 'correct' Arabic language. Consequently, many Egyptian Arabic words were attributed to Classical Arabic origin, primarily because the Ancient Egyptian language had not yet been fully deciphered. Even after two centuries since its decipherment, a comprehensive dictionary of the Ancient Egyptian language in Arabic remains absent.

A systematic study of the lexical survivals in Egyptian Arabic faces two primary obstacles. First, the absence of comprehensive Ancient Egyptian lexicographical tools written in Arabic. Scholars engaged in the dialectology of the Arabic language are only subjected to dated Arabic etymologies for some Egyptian Arabic lexemes. A comprehensive etymological exploration of Egyptian Arabic lexemes, particularly those of Ancient Egyptian origin, is notably lacking. A scholar cannot relate a contemporary Egyptian term to an Ancient Egyptian one without profound knowledge of the Ancient Egyptian language.

The second challenge lies in the shortage of extensive lexicographical tools that document spoken Egyptian Arabic in European languages. Consequently, the process of identifying and verifying the usage of a word, expression, or phrase in contemporary Egypt, and their relation to Ancient Egyptian language, remains not achievable without detailed documentation of Egyptian Arabic. The following example aims to demonstrate the serious effect on research within both fields of Egyptology and Arabic studies, even for very basic vocabulary.

3.1 Man and Woman

Two of the basic words of any language are those for 'man' and 'woman'.[20] Ancient Egyptian words for a man and a woman are 𓊃𓏤 *z(i)/s(i)* and 𓊃𓏏𓏤 *z(i).t/s(i).t* respectively. Ancient Egyptian 𓊃𓏤 *z(i)/s(i)* 'man' was attested more than a thousand times, since the Old Kingdom onwards, in hieroglyphics, hieratic, demotic, and Coptic writings.[21] For example, the Middle Kingdom stele of Intef, son of Ka, from Thebes (BM EA 1203) describes his good deeds. Intef, son of Ka, negated acquiring things, which belong to (another) man.[22]

𓈖𓍿𓈖𓏤𓄿𓐍𓏏𓊃𓀀

n(i)ṯi =(i) i ḫ.t z(i)

I did not seize a thing of 'a man' (TLA[23])

𓊃𓏤 *z(i)/s(i)* have experienced subsequent changes through time. The sign ⎯ initially had the phonetic value of /z/ but appears to have merged with the sign 𓊃 /s/ early in the Middle Kingdom. The two signs were used interchangeably from the Middle Kingdom onward.[24] Accordingly, 𓊃𓏤 /z(i)/ (Old Kingdom) > /s(i)/ from the Middle Kingdom onwards.

s(i) was also attested more than a hundred times in demotic scripts:

Louvre 2377 Vso dated from the second century CE,

[2] *sḏm ḫrw s nb gm =k pȝ nti nȝ-nfr =f r ḏd s*

Höre die Stimme von jedermann, daß du herausfindest, was gut ist, um es zu sagen. (TLA[25])

Listen to everyman's voice, you will find what is good to say.

In Coptic, ⲥⲁ 'man' was also used as a part of the expression of ⲥⲁ + ⲛ 'man of' for professions and moral qualities such as ⲥⲁⲛϣⲁϫⲉ 'man of speech'.[26]

ⲉⲧⲣⲉⲥⲙⲉϣⲧⲡⲥⲁ ⲛⲟⲩϣⲏⲣⲉ ϣⲏⲙ ⲛϣⲙⲙⲟ

Her eyes never rested with pleasure upon the beauty of a strange young man, or searched it out.[27]

Allen's (2013) proposal for the 'Common Coptic' dialect refers to the synchronic assumed common dialect of Coptic, as opposed to the diachronic 'Paleo-Coptic', which assumes older and lost common dialect.[28] According to Allen's framework, different known Coptic dialects can be derived from 'Common Coptic' through distinctive phonological features. For example, 'In Bohairic and Saidic, both *a and *A is rounded (to ⲟ/ⲱ) and *e and *i both become ⲁ'.[29] Sidarus (2016) confirmed the inflection ⲉ > ⲁ based on medieval Copto-Arabic grammar books (*muqaddimāt* مُقَدِّمات).[30] Consequently, the term ⲥⲁ for 'man' in Bohairic and Saidic Coptic can be traced to the 'Common Coptic' pronunciation of /si/.

Egyptians continued to use the word /si/ for 'man' in Egyptian Arabic سي (*sī*).[31] Contemporary Egyptian سي (*sī*) is also employed as a prefix in compound words preceding professions and proper names. An illustrative example of this usage can be found in the 1941 comedy film, starring the famous actor *Nagib al-riḥānī*, entitled '*Sī 'umar*' (سي عُمَر),[32] where *sī* is used as a prefix for a male proper name for honorification.

The correlation between Ancient Egyptian 𓊃 *z(i)/s(i)* and its counterpart in Egyptian Arabic سي (*sī*) presented a challenge for scholars of both fields of Egyptology and Arabic studies. In Egyptology, scholars, lacking comprehensive Egyptian Arabic lexicographical tools, attempted to establish the connection between the Ancient Egyptian 𓊃 *si* and its Arabic cognate. Aaron Ember (1917), for instance, included *z(i)/s(i)* 'man' to his Egyptian-Semitic cognates, suggesting its link to Arabic *Dhū* ذو 'of', which is used to prefix professions.[33] Conversely, Arabists, who were less familiar with the Ancient Egyptian *z(i)/s(i)*, attributed Egyptian Arabic *sī* سي as a 'corrupt version' of the closest Classical Arabic words *sayid* سَيِّد for 'man'.[34] Even with the knowledge of Coptic ⲥⲁ 'man', Arabists, followed by Egyptologists, were hesitant to accept the Ancient Egyptian etymology of the Egyptian Arabic *sī* سي since it 'can' be derived from internal developments inside the Arabic language itself and it is already used in other North African Arabic dialects, also as a prefix for male honorifics.[35]

Fig. 1. *Sī 'umar'* سي عُمَر film poster, 1941, IMDb.

However, as we will discuss in detail later in this paper, the possibility for internal development within a language should not rule out external influences. Moreover, the presence of *sī* سي in other North African dialects of Arabic might indeed indicate similar substratum interference of Arabic in North Africa. This hypothesis becomes even more compelling when considering the relationship between the Ancient Egyptian word *si* and several cognates in the Chadic branches of the Afro-Asiatic language family.[36]

The Ancient Egyptian 𓊃 'man' experienced continuity and change over time. It changed from /*z*/ to /*s*/ early in the Middle Kingdom. It was also used as a prefix during the demotic and Coptic stages of the language. It continued to be used in modern Egyptian Arabic. However, it probably acquired a sense of honorability from contact with Arabic in Egypt and North Africa. Studying the continuity and change of 𓊃 *si* can contribute to our Egyptological research by raising several phonological questions. Did Allen's hypothesized mainstream 'Common Coptic' continue as a spoken language rather than a written one? Does the Egyptian Arabic *si* سي promote Allen's 'Common Coptic' theory over the 'Paleo-Coptic' one,[37] which assumes that the lost old common Coptic language is replaced by known written Coptic dialects? Moreover, can the 'honorific' use of the modern Egyptian prefix of *si* سي be traced backward into Ancient Egyptian? The current study focuses on the importance of studying continuity and change in Egypt. A future separate study for 𓊃 *si* may be dedicated to answering such questions, among others.

Similarly, the Ancient Egyptian word 𓊃𓏏 *z.t/s.t* 'woman/female person' was also used in Egypt since the Old Kingdom (WB 3, 406.13-407.8) onwards.[38]

𓂝𓅓𓏌𓊃𓏏𓁐

'm jn z.t

Es werde von der Frau geschluckt.

Swallowed by a woman.

The word continued to be attested during the demotic stage of the Ancient Egyptian language as a prefix as in *st-ḥmt* 'woman, wife'.[39] For example, in papyrus Berlin 13538 from the Hellenistic period, line 22:

> *mn sḥm.t (n) pꜣỉ =k.wỉ*
>
> *In deinem Haus gibt es kein Frau!* [40]
>
> There is no woman/wife in your house.

The compound word *st-ḥmt* continued to be attested in Coptic scripts as ⲥϩⲓⲙⲉ 'woman, wife'.

> ⲉⲓⲧⲉ ϩⲟⲟⲩⲧ ⲉⲓⲧⲉ ⲥϩⲓⲙⲉ
>
> *whether husband or wife*[41]

Egyptians continued to use *sit* سِت to refer to 'woman' in Egyptian Arabic (Hinds and Badawi 1986, 398a).[42]

> *Sit ilbyt* سِت البيت
>
> *Lady of the house.*[43]

Arabists related the meaning of Egyptian Arabic *sit* (سِت) to Classical Arabic *Sayyidah* (سيدة) but not the etymology.[44] Ahmed 'Īsá (1939) emphasized that Egyptian Arabic *sit* (سِت) does not belong to Classical Arabic. 'Īsá expressed this by stating: *Hādhā muwallad wa-lā yuqāl sitt illā fī al-'adad* 'هذا مُوَلَّد ولا يقال ست إلا في العدد' (It is generated and *sit* سِت is only said for number (referring to the Classical Arabic number six; *sit* سِت).[45] Accordingly, AbdelHalim Noureldin (2011) included the Ancient Egyptian word 𓊃𓏏𓏥 *z.t/s.t* in their list of lexical survivals, without including 𓊃 *z(ỉ)/s(ỉ)* in the same list.[46]
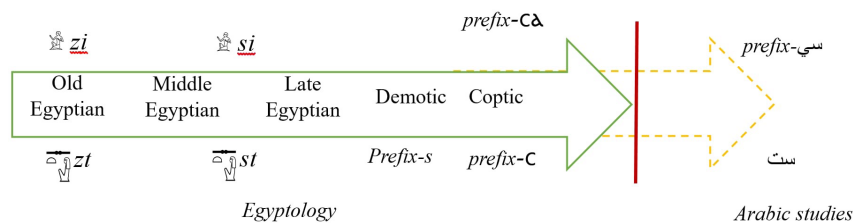

Fig. 2. Continuity and change of *si* and *st*.

However, the evolution and change of *z.t/s.t* was not thoroughly examined. Similar to *z(ỉ)/s(ỉ)*, the word was changed with the merge of /z/ to /s/ early in the Middle Kingdom. *s.t* lost its final *t* when combined with *ḥm.t* 'wife' during the demotic and Coptic stages of the language to form *sḥm.t* and ⲥϩⲓⲙⲉ. Note that a list of proper names including *sit* سِت in Coptic script during the twelfth and thirteenth centuries as ⲥⲉⲑ in ⲥⲉⲑ ⲁⲗⲡⲁⲥⲁ, *Sitt al-Bah'* سِت البهاء and as ⲥⲏⲧ in ⲥⲏⲧ ⲁⲗⲟⲩⲁⲣⲧ, *Sitt al-Ward* سِت الورد.[47] If *s.t* survived into Egyptian Arabic *sit* (سِت), the question arises as to why it retained its final '*t*'. Did the loss of the final '*t*' affect the word only when it was combined into compound words (where '*t*' did not become the final '*t*' in *s.t ḥm.t => sḥm.t*)? Or did Arabic in Egypt borrow the word ⲥⲁ 'woman' from Coptic and apply Arabic phonological rules on it as a foreign word?

The examples presented above highlight the research opportunities that arise from studying linguistic continuity and change in Egypt. Meaning can be examined across all stages of the Ancient Egyptian language,[48] including survivals in Egyptian Arabic, rather than suggesting a meaning to each stage in isolation. Moreover, examples of lexical survivals provide living counterparts from Egyptian Arabic. This approach provides means to specify precisely the meaning of Ancient Egyptian lexical items. These examples also offer the opportunity to investigate several theories for Ancient Egyptian phonological changes through oral survival in Egypt. They enable the testing of several Ancient Egyptian, including Coptic, Phonological assumptions. For instance, one of the assumptions for late Demotic and Coptic phonology is the loss of glottal and laryngeal stops (ʔ and ʕ). This assumption is based on the absence of any Coptic alphabetical letters to render such sounds.

3.2 Lost in Assumptions

Vittmann (1991) rejected any Coptic etymology of Egyptian Arabic words with the ʿ *Ayin* sound since the Coptic alphabet did not contain any letter to represent the voiced pharyngeal fricative ʿ/ʕ/.[49] Accordingly, all Egyptian Arabic words, suggested by Hinds and Badawi (1986) to have Coptic etymology and contain ʿ *Ayin* sound, were rejected.

However, Ancient Egyptian words contained /ʕ/ ʿ *Ayin* continued to be used in the Coptic stage of the language. Rodolphe Kasser (1991) stated that 'ʿ *Ayin* nonetheless plays an important role in Coptic phonology'.[50] The Old Coptic letter ⳉ was used to represent ʿ *Ayin* sound.[51] ʿ*Ayin* continued to be rendered in Coptic using double vowels such as ⲁⲁ.[52] Schenkel (2002), following Leo Depuydt, presented evidence for the existence of the Coptic sound /ʕ/ ʿ.[53] Leo Depuydt, as noted by Schenkel, observed that in Coptic manuscripts, the digraphs *ou* and *ei* are not separated when the scribe changes the line. However, the double vowels as *oo* can be separated into *o-o* when changing the line. This indicates that the double vowels do not represent one phonemic value of a long vowel but represent two phonemes of a vowel followed by the sound /ʕ/ ʿ.[54]

The Arabic word عين ʿ *Ayin*, which is the name of the Arabic letter ع ʿ*Ayin* and also a word that refers to a general sense of 'beauty' and a narrow sense of 'eye', is one of the Ancient Egyptian lexical survivals. It was used in ancient Egypt as ʿn 'schön sein; freundlich sein' since the Middle Kingdom.[55] For example, Sarenput I (Qubbet el-Hawa 36) wrote on his tomb façade, as part of his biography, presenting himself as:

ʿn n nswt mrị.y qnb.t =f

One beautiful to the king, beloved of his council[56]

Ancient Egyptian word ʿn was also attested in demotic 'to be beautiful'.[57]

tw =f ịn =w n =j špe n ḫḏ nb šs-n-nsw ịw nꜣ.w-ʿn =w m-šs

Er ließ mir sehr schöne Geschenke aus Silber, Gold und Byssos bringen.[58]

He brought me a very beautiful gift of silver, gold and royal linen.

The word continued to be used in Coptic as ⲁⲛⲁⲓ 'be pleasant; beauty'.[59]

ⲟⲩⲣⲱⲙⲉ ⲉϥⲑⲃⲃⲓⲏⲩ ⲙⲛϭⲓ ⲙⲡⲉϥⲁⲛⲁⲓ.

and there is no measure to his beauty.

Letter of pseudo-Ephrem MERC.AT 126–134 (urn:cts:copticLit:psephrem.letter.budge:1–9)[60]

ʿ *Ayin* was also found in Egyptian Arabic عين 'epitome, essence'.[61]

ʿAyn Aʿyān al-Ṣaʿīd عين أعيان الصعيد

The most notable of the notables of Upper Egypt.

However, عين ʿ *Ayin* was also used in Classical Arabic:[62]

W'ʿyān al-Qawm ashrāfhm wāfāḍlhm ʿalá al-mathal bshrf al-ʿAyn alḥāsh

وأعيان القوم أشرافهم وأفاضلهم على المثل بشرف العين الحاسة

The notables of the people are their noblest and most distinguished, as the notable human eye.

The presence of the word ʿ *Ayin* in the Classical Arabic lexicon does not necessarily confirm its Semitic etymology. Gábor Takács (1999) included the Ancient Egyptian word *ʿn* within the list of words that have isolated parallels in African Chadic languages.[63] Consequently, it is plausible that Ancient Egyptian *ʿn* was loaned from Ancient Egyptian to Classical Arabic rather than the other way round. Therefore, Ancient Egyptian lexical survivals as 👁 > *ʿn* > ⲁⲛⲁⲓ > عين as well as other lexical survivals should not be excluded from research of Ancient Egyptian substratum interference into Egyptian Arabic.[64] Examining the continuity and evolution of lexical survivals from Ancient Egyptian offers valuable insights into the phonological and semantic characteristics evident in their oral descendants, particularly within Egyptian Arabic. This research methodology contributes significantly to the reconstruction of the historical development of these words and their associated meanings.

4. Language Contact: Borrowing vs. Interference through Shift

In addition to various practical, and linguistic assumptions, the research on the Ancient Egyptian substratum of Egyptian Arabic faces significant theoretical misconceptions concerning language contact between Ancient Egyptian and Arabic in Egypt. This section discusses some examples and their impact on our research in this field.

4.1 More Loanwords [do not] indicate More Intensive Language Contact

One common misconception is the belief that more loanwords indicate more intensive language contact. It was historically assumed that Ancient Egyptian civilization, along with its language and religion, was lost as Egyptians transitioned from Christianity to Islam, and from the Ancient Egyptian language to Arabic. Therefore, it was not expected that the Ancient Egyptian language, particularly its last stage of Coptic, would leave many traces in spoken and written Arabic in Egypt. Bishai (1960, 1964) remarked on the scarcity of Coptic lexical survivals in Egyptian Arabic, which were primarily related to agricultural tools

and activities, as well as religious terms associated with Christianity. Bishai pointed out that there were more Turkish loanwords in Egyptian Arabic than Coptic loanwords: 'It might be mentioned here that Turkish, which was never a vernacular of Egypt, left more lexical items in Egyptian Arabic than Coptic'.[65] At the end of his article, Bishai concluded that:

'The limited influence of Coptic on Egyptian Arabic can only be explained as lack of widespread bilingualism in Egypt during the transition from Coptic to Arabic. This leads to the conclusion that the Copts who were converted to Islam at any one time must have been a minor segment of the population. To judge from linguistic criteria alone, the Muslim Egyptians of today are perhaps right in claiming predominantly Arab ancestry'.[66]

Bishai's remarks, which reflected a nationalistic perspective during his time, are now considered outdated from a scientific standpoint. Bishai's comparison of Turkish loanwords in Egyptian Arabic, which result from a process of lexical borrowing, with Coptic lexical survivals in Egyptian Arabic, stemming from a different process of shift-induced interference (imposition), was based on an oversimplified view of language contact.

Thomason and Kaufman (1988) differentiated between Borrowing and Interference through Shift processes of language contact.[67] Borrowing is the process of incorporating features from a foreign language into a group's native language by speakers of that language. In a borrowing language contact situation, as in the cases of Turkish into Arabic and Greek into Coptic, words are typically the initial foreign elements to be incorporated from the 'prestigious' source language into the native receiving language. Native speakers, who favor another foreign language, will learn as many words as possible during the first stage of a borrowing situation. If language contact and social pressure persist, syntactic and morphological structures may also be borrowed over time.

In contrast, the language contact process of 'language shift' involves a community transition from its native language to another 'prestigious' language. Interference through shift represents 'the opposite of a prestige borrowing' process. In many instances, an imperfect language shift process can lead to the emergence of a new version of the desired language, which retains some traces (interference) from the old native language. Interference through shift, often referred to as substratum interference, primarily affects language structures, rather than the imposition of native words into the new target language.

'If the speakers' goal is to give up their native language and speak some other language instead, vocabulary is the first part of the Target Language (TL) they will need, so it is the first part they will learn... They will probably keep their own native language words only for things the TL has no words for: foods and other cultural items, and (if the TL speakers are invaders from elsewhere) names for local animals, plants, and so forth. Attitudinal factors may interfere with this prediction, but for substrata, at least in light to moderate interference, we expect the prediction to hold'.[68]
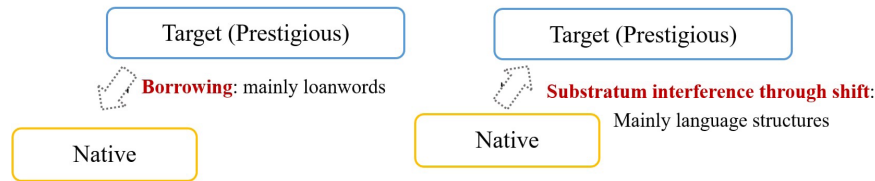
Fig. 3. Borrowing vs Substratum interference through shift.

Accordingly, comparing the number of Ancient Egyptian or Coptic lexical survivals in Egyptian Arabic to the number of Greek loanwords in Coptic or Turkish loanwords in Egyptian Arabic is not relevant. The earlier is the result of an 'interference through shift' process and is expected to have the minimum number of words, while the latter (*s*) is the result of borrowing processes, through which learning target language vocabulary into the native language is the main output.

4.2 Marking Cultural Identity through Lexical Interference from the Native Language

Thomason and Kaufman (1992) stressed that while both processes are affected by the intensity and the duration of language contact, two different reasons might cause the imperfect learning of the target language in a shift situation.[69] The first is the unavailability of the target language for many members of the community. In this case, the target language is learned through second-language learners rather than native speakers. In Egypt, after the Arab conquest, many Egyptians specifically in the rural areas did not have access to the Arabic language spoken by Arabs. Arabic was then taught through Egyptians, who spoke Arabic imperfectly as their second language, rather than Arabs.

The second reason for the imperfect shift to the target language is the community's attitude to mark their collective identity. Egyptians, while shifting to Arabic as the *lingua franca* of the Islamic caliphate, imprinted their identity on the target spoken Arabic with traces from their native language. This practice is not unique to Egypt and can be observed in other communities across the Arab world.

Several striking examples of contact-induced changes that must be explained by speakers' attitudes come from situations in which a speech community wishes to distinguish its language, or more likely its dialect, more sharply from its neighbors' speech.[70]

While both of these reasons are applicable in the context of language shift, further research is necessary to determine the extent to which each factor influenced the case of Egyptian case of language shift into Egyptian Arabic. As demonstrated by Osman (2021), the presence of Ancient Egyptian words in contemporary Egyptian Arabic extends beyond the expected semantic fields of agriculture and food, indicating a more complex pattern of linguistic continuity and change.[71] This highlights the need for in-depth analysis to understand the interplay of these factors and their impact on the development of Egyptian Arabic as a distinct linguistic variety.

4.3 Language Internal Development [does not] Rule out External Influence

Besides the possible lexical influence on Egyptian Arabic, some studies have also researched the structural influence of Coptic on Egyptian Arabic including the phonological, morphological, and syntactic features.[72] However, some of the previous studies also faced theoretical, as well as technical challenges, which significantly affected their results and conclusions.

Language change can be ascribed to two main reasons.[73] The first is internal developments, which involve changes that occur naturally due to individual innovations and simplifications. Internal developments have traditionally been considered the primary driver of language change and were, at one point, believed to be the sole reason for language change by some scholars. The second reason for language change is external influence, which arises from language contact between the native language and another language in a bilingual community.

A significant theoretical misconception, which is now considered outdated, was the belief that internal developments and external influence are mutually exclusive, meaning that these two reasons could not simultaneously contribute to the same change within a language. Traditionally, this seemed very logical, and the result was the exclusion of external influences from any research on language change if an internal development applies to that specific change. Accordingly, external influence from other languages in contact were only studied if, and only if, it can be proved that internal development is not the reason for such change. However, contemporary linguistic research recognizes that both internal developments and external influences can play roles in language change simultaneously. In other words, they are not mutually exclusive factors. This has expanded the scope of research into language change and has allowed for a more nuanced understanding of how languages evolve.

Earlier research on the influence of the Ancient Egyptian language on Egyptian Arabic excluded many suggested lexical, phonological, morphological, and syntactical cases of language change if these changes could be explained as internal developments within the Arabic language itself.[74] The prevailing view was that if an internal development within Arabic could account for a particular linguistic change, then the influence of Ancient Egyptian including Coptic was dismissed. Heikki Palva (1969) began the summary of the study of two cases of alleged Coptic morphological influence on Egyptian Arabic by noting that:

> 'In both cases of the alleged Coptic morphological influence on Egyptian Arabic the development can justifiably be explained as an internal development of Arabic. Besides, neither of the two peculiarities is unparalleled in other Arabic dialects. However, it would be too daring to maintain that Coptic had nothing to do with these features; nothing can prove this'.[75]

Tetsuo Nishio (2009) studied the change in word order of interrogative sentences in Egyptian and Arabic. Nishio concluded that it is not possible to assume a natural diachronic syntactic change from Classical Arabic to modern Egyptian Arabic. A more consistent explanation, according to Nishio, considers the influence of the Coptic language on Egyptian Arabic.[76]

Christopher Lucas and Elliot Lash (2010) examined the influence of Coptic on Arabic in North Africa. They discussed the Coptic influence not only in transferring its linguistic features into Arabic but also in preferring and dominating an Arabic feature, which agrees with Coptic rules, over another. Lucas and Lash also concluded that:

> 'From this perspective, the a *priori* preference for internal accounts of a given change appears no longer to be justified, particularly when such accounts cannot explain why factors which were sufficient to trigger a change in one (variety of a) language are insufficient in another'.[77]

The investigation of both internal and external factors in the context of language variation and change is crucial for a comprehensive understanding of how languages evolve. Therefore, when examining the influence of Ancient Egyptian language on Egyptian Arabic, it is essential to reconsider cases that were previously dismissed based on their potential applicability to internal developments within the Arabic language or their existence in other Arabic dialects. This approach allows for a more thorough assessment of the intricate processes underlying linguistic change.

Furthermore, the study of Ancient Egyptian culture and language within the field of Egyptology serves a vital purpose. The systematic exploration of ancient traces in modern Egypt aids in the reconstruction of a more precise and scientifically grounded depiction of ancient Egypt.

5. Understanding Ancient Egyptian Culture through Its Traces

The study of Ancient Egyptian culture, following Champollion's groundbreaking decipherment of hieroglyphics, has significantly advanced our understanding of various aspects of this ancient civilization. Over the past two centuries, Egyptologists have delved into the realms of Ancient Egyptian history, art, religion, medicine, astronomy, language, and philology. Within the linguistic domain, Egyptologists have developed successive lexicographical tools, grammatical models, and phonological analyses to enhance our comprehension of the Ancient Egyptian language.

Through internal diachronic analyses of different stages of the Ancient Egyptian language and comparative linguistic research involving other ancient languages connected to Ancient Egyptian culture, such as Akkadian and ancient Greek, significant progress has been made in deciphering the written records of ancient Egypt.[78] Nevertheless, despite these efforts spanning two centuries, we still face several challenges in fully grasping the Ancient Egyptian language.

At the phonological level, where we have yet to achieve a definitive scholarly-approved phonological reconstruction of Ancient Egyptian. To illustrate this issue, James Allen (2020) aptly compared our knowledge of the Ancient Egyptian phonological system before Coptic to the skeletal remains of dinosaurs, emphasizing the ongoing work needed to reconstruct this crucial aspect of the language:

> 'Attempts to understand the living language is like the efforts of paleontologists to understand dinosaurs by rearticulating their skeletons and studying whatever clues are left of their behavior'.[79]

At the semantic level, despite the considerable progress made in the creation of Ancient Egyptian lexicographical tools, including dictionaries and corpora, Ancient Egyptian lexicography still lacks the tools to differentiate nuances of a lexeme.[80]

Studying the linguistic traces in Egyptian Arabic brings new insights and raises new questions within Egyptological research. Much like the study of Coptic, traces in Egyptian Arabic offer a valuable avenue to refine our understanding of Ancient Egyptian semantics, morphology, and grammatical structures. The orality of Egyptian Arabic can contribute to the advancement of our phonological knowledge concerning the Ancient Egyptian language.

5.1 Egyptian Cultural Continuity and Change as Reflected in Language

Despite their language change, Egyptian cultural concepts are reflected in their new language of Egyptian Arabic. Several idioms and expressions in contemporary Egyptian Arabic, although formulated using Arabic vocabulary, convey parallel cognitive concepts to those expressed in the Ancient Egyptian language. This paper's focus is not on cultural continuity and change in a general sense but specifically on the cultural concepts mirrored in language.

Perhaps the simplest way to illustrate cultural continuity in Egypt, as reflected in language, is to represent the Egyptian worldview. While Ancient Egyptians were aware of and utilized the four cardinal directions, their 'worldview' was not oriented toward the north, as we do today. Instead, Ancient Egyptians oriented their world according to the Nile, following the direction of its source.[81] This orientation is evident from the Ancient Egyptian language constructions. For instance, Ancient Egyptians used the word *ḫnt* 'front, forward'[82] to refer to sailing upstream in the Nile.[83] This perspective is also confirmed by the oldest discovered Ancient Egyptian map of *Wadi el Hammamat*, which was oriented according to the Nile facing its source.[84] A hypothetical reconstruction of what might be developed from the Ancient Egyptian worldview is the map above, which 'faces' the water flow from the Nile from south to north. Ancient Egyptians also used the noun *mḥty* derived from the verb *mḥ* 'to fill'[85] to refer to the north (filled/being filled direction of the Nile).

Fig. 4. Showing location of Egypt facing the Nile flowing water. Google Earth, earth.google.com/web/.

Modern Egyptians continue to use the Nile as a spatial reference facing the flowing water from the south. Contemporary Egyptians, especially in Upper Egypt, use the word *migabbil*[86] مِجَبِّل from the Classical Arabic word *qabl* قبل 'front'.[87] The cultural concept of 'facing the flowing water of the Nile' continued from ancient Egypt to the contemporary one despite the language change from Ancient Egyptian to Arabic. Egyptians keep 'looking forward' to what is coming through the Nile as their lives depend on it. Even after shifting to Arabic, Egyptians continued to represent their ancient conceptual orientation through Arabic vocabulary.

6. Ancient Egyptian Cultural Concepts

Cognitive linguistics is a relatively recent approach that studies languages in connection with human cognition, which relies on perceptual and imagery sensory-motor and emotional systems. Cognitive linguistics developed during the second half of the twentieth century, largely influenced by the concepts of embodiment and cognitive grammar.[88] One of the key ideas in cognitive linguistics is the notion of conceptual metaphors, which are cognitive structures that represent one conceptual domain in terms of another.

By the end of the twentieth century, cognitive linguistics extended to accommodate additional concepts that influence human cognition. The idea of the extended mind argues that cognition is not individual but rather 'is a distributed sociotechnical system':[89]

'Culture is […] a human cognitive process that takes place both inside and outside the minds of people […]. Culture is an adaptive process that accumulates partial solutions to frequently encountered problems'.[90]

Logan (2007) argues that verbal language extends the brain into a mind capable of conceptualization and hence that mind = brain + language. Language is the quintessence of distributed cognition.[91] 'Cultural cognition embraces the cultural knowledge that emerges from the interactions between members of a cultural group across time and space'.[92] In cognitive linguistics, meaning involves conceptualization and encompasses both dictionary and encyclopaedic information. Meaning is created by speakers engaged in social interaction rather than in isolation. The field of 'cultural linguistics' or the more commonly used term 'ethnolinguistics' explores the relationship between language and cultural conceptualizations.[93]

Conceptual metaphors related to culture are extracted and summarized as conceptional relations. For example, the conceptional metaphor of *Relation is Journey* maps the abstract idea of human relationships to physical journeys, leading to common expressions like 'Look how far we have come!' or 'Our relationship came to an end' in some cultures. Many conceptual metaphors are related to the representation of the abstract concept of time. Through the Western metaphor of '*TIME IS COMMODITY*', time can be 'saved', 'spent', or 'invested'. Another common cultural metaphor of time is '*TIME IS SPACE*', which is reflected in many languages, where expressions like 'long time' and 'short time' are used.[94] While isolated human cognition relies on her/his perceptual system, the collective extended cognition is associated with cultural concepts and beliefs, which are usually reflected in language.

6.1 Short Time… Long Time

Ancient Egyptian language also reflected the Ancient Egyptian conceptual metaphors (Steinbach-Eicke 2022; Hsu 2021; Nyord 2012, among others). For instance, Di Biase-Dyson and Chantrain (2022) discussed the metaphors of sensory experiences as taste and smell through Ancient Egyptian texts. As for the abstract concept of time, Ancient Egyptians, as reflected in their texts, also utilized the metaphor '*TIME IS SPACE*'. The Ancient Egyptian expression 𓂝 ___ 𓏲 *ḥr-ʿ* means 'upon arm' or 'upon length'[95] is an expression to indicate time.[96] For example, in the *Tale of the Eloquent Peasant* (pBerlin 10499, recto), the corrupt official asked to get a mat (or a piece of linen) to block the public road against the traveling peasant. The narrator tells us that when the official asked for the mat, it was brought to him *ḥr-ʿ* (immediately).

> *ḏd.jn nmti-nḫt.(w) pn n šmsw.f j.zi*
>
> *jn n.j jfd m prw.j jn.jn.t(w).f ḥr ʿ*
>
> So, that Nemtinakht said to his follower,
>
> 'Go, get me a sheet from my household stores,'
>
> and it was fetched immediately.[97]

Modern Egyptians also used the same concepional expression, translated literally into Arabic words. The modern Egyptian Arabic term *ʿalá tūl*[98] على طول is the literal translation of the ancient term and is used also to indicate time, from *ʿalá* 'upon' and *tūl* 'length' (upon + length). Note that the Egyptian Arabic expression *ʿalá tūl* على طول is not a Classical Arabic one. The expression is used in the spoken language in Egypt, Egyptian Colloquial Arabic (ECA), but not in the formal written language, Modern Standard Arabic (MSA). Interestingly, contemporary Egyptians use the term *ʿalá tūl* على طول to indicate two contrasting meanings related to time. Depending on the context, *ʿalá tūl* على طول can be used to mean 'immediately' as in the following example:

> هعمل اللى انت قولته على طول
>
> *Hʿml illī inta ūltuh ʿalá Ṭūl*[99]
>
> I will do what you have said immediately.

This first contemporary meaning coincides with the Ancient Egyptian meaning of *hr-a* 'immediately'. However, contemporary Egyptians have an additional nearly opposite meaning for the term *ʿalá tūl* على طول which indicates very long or infinite time. The same Egyptian Arabic example above can be understood differently, depending on the context, as:

> هعمل اللى انت قولته على طول
>
> *Hʿml illī inta ūltuh ʿalá Ṭūl*
>
> I will keep doing what you said forever (for a long time).

While the same expression, in the second example, provides a contrasting meaning 'forever' from the meaning of the first example 'immediate', contemporary Egyptians do not seem to have a problem differentiating between the two according to the context and the body language of the speaker. Both

conceptual metaphors, ancient and modern, map time into distance. However, contemporary Egyptians seem to qualify the time mapped into short time and long time. However, did Ancient Egyptians also differentiate between short time and long time mapped into distance? Analyzing the use of the compound word or expression ḥr-ꜥ in different texts may indicate so. The hieratic writing of the expression ḥr-ꜥ in the early attested passage from the *Tale of the Eloquent Peasant* is finalized by a single stroke which indicates the number one in Ancient Egyptian language. Therefore, the literal reading of the expression is 'upon length-one', i.e., a very short time. In some attestations of ḥr-ꜥ in papyrus Ebers,[100] the writing of the compound was followed by three strokes instead of one, which indicates the Ancient Egyptian plural or many. Papyrus Ebers presents several remedies for healing several human diseases. Therefore, we can read this metaphoric expression as 'upon length-some/many', i.e., some/long time.

𓂝𓄿𓏏𓍱𓊖𓏤𓏛𓈖𓏌𓂝𓍖𓈖𓀁𓏛𓈖𓏌𓄿𓏥 (Eb 591 [75,18])[101]

wt mꜣs.t ḥr =s r snb =s ḥr-ꜥ.wj

Das Knie werde darüber verbunden, so dass es sofort gesund wird

Ancient Egyptian passage from the text above can be understood as 'bandage it for four days and it will heal forever' instead of 'immediately' as previously translated. The traditional translation did not explain why the word immediately is used for an action that will come in four days. However, understanding the expression ḥr-ꜥ (with multiple strokes) as 'much' time fits the context of healing.
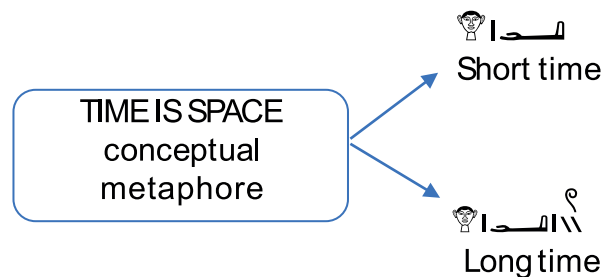

Fig. 5. TIME IS SPACE – Short time … Long time.

The contemporary use of the conceptual metaphor '*TIME IS SPACE*' helps us understand and specify the usage of a similar metaphor in ancient Egypt. The above example illustrates how the analysis of modern Egyptian conceptual metaphors can provide insights into the usage of such metaphors in ancient Egypt. Ancient Egyptian conceptual traces in contemporary Egypt can be used to refine our understanding of Ancient Egyptian conceptual metaphors, a step forward toward a deeper comprehension of Ancient Egyptian civilization and culture.

Conclusion

Fayza Haikal (1999) proposed an encyclopedia of Ancient Egyptian survivals to record Ancient Egyptian traditions and language elements still used in modern Egypt:

'Most Egyptian Egyptologists are aware of the similarities between ancient and modern Egypt. An attentive reading of Ancient Egyptian texts shows that, despite the language change, how little did the people have changed regarding their culture and in the way they expressed themselves'.[102]

Studying the Ancient Egyptian language, through its traces in modern Egypt, offers a lively oral dimension to what was once a static, written language. It allows for significant advancement of our knowledge of Ancient Egyptian civilization and culture. For example, while Casey (2023) studied Arabic texts in Coptic scripts to explore 'Egyptian phonology Beginning from the End',[103] this contribution encourages the investigation of Ancient Egyptian survivals as living vestiges of ancient Egypt. It addresses various practical and theoretical challenges that constrain the utilization of this valuable resource, including the absence of comprehensive documentation of Egyptian Arabic and the misconceptions of studying Classical Arabic or Modern Standard Arabic as the contemporary native language of Egyptians. The paper discusses phonological pre-assumptions, such as the loss of /ʕ/ ꜤAyin in the Coptic stage of the Ancient Egyptian language. It illustrates the theoretical problems related to language contact theory, including the exclusivity of language-internal developments, posing additional challenges for the study of the external Ancient Egyptian substratum of Egyptian Arabic. Finally, the paper explores the continuity of Egyptian concepts, which is reflected in Ancient Egyptian and Egyptian Arabic languages, as a source to specify several Ancient Egyptian expressions and idioms. It illustrates, through the example of ḥr-Ꜥ, how can contemporary Egyptian cultural concepts shed light on the usage of similar abstract concepts in ancient Egypt.

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