



Modern Standard Arabic and Yemeni Arabic Cognate: A Contrastive Study

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ABSTRACT

This study aims to investigate identical word pairs, word couples that have a phonemic correspondence, and the sound shift in phonological differences, sound variation, sound addition, and lenition. The study uses empirical data collected from 2 Yemeni college students who studied in Indonesia. Two hundred seven of Swadesh's basic vocabulary was used as the standard procedure for collecting data. The results indicated the relationship between form and meaning as a whole, a different pattern. Specifically, the three dimensions - cognate, phonemic correspondence, and a pair of words contain a different pattern, sound-change, phonological, and morpheme contrast in Modern Standard Arabic, Sana'a Yemeni Arabic (YEMS), Dhamar Yemeni Arabic (YEMD). The other sound change in the form of metathesis exposes that there are six rules: five kinds of word syllable systems and dissimilation, three forms of sound addition, and four types of sound loss. This study focuses on sound correspondence in three Arabic languages that influence more variations of Arabic. MSA, YEMS, and YEMD represent a case where two distinct language varieties exist in Yemen. It is anticipated that the findings of this study will help college students and lecturers to understand a phenomenon in Arabic-speaking communities and the significant impact it has on arranging Arabic teaching materials. The value of this research work is evident from the fact that the Arabic language teaching model has neglected the teaching of Arabic variation even though they are essential.

1. Introduction

The role of the Arabic language in promoting Islamic economic progress has been recognized (Ghlamallah et al., 2021). It has been identified as the most spoken language in the world (Uddin et al., 2019). One of the Arabic-speaking countries that have many dialects is Yemen. The Republic of Yemen (*al-Jumhuriyyah al-Yamaniyyah*) located in West Asia and the Arabian Peninsula has a common set of Arabic features which differ from other Arabic. It can be seen from linguistic and non-linguistic factors. From a linguistics factor, Yemen conducts student exchanges which are cultural exchanges. For example, one of the students from Yemen explained to Indonesian students that Yemeni people often chew the fresh leaves and twigs of the shrub to be healthy. This tradition is called "Khat" as described by (Kassim, 2020). In addition, non-linguistic factors, such as economic, political, and social situations,

population movements, conflicts, and civil wars affect the migration of the population to communicate with others. Yemen communicates with outsiders to resolve disputes using Modern Standard Arabics with other Arab nations. Arabic is the native and official language in Yemen, where Standard Arabic and other Arabic dialects are used in what is known as the diglossic situation, as described by Al-Munifi & Aleryani (2021), Palimaru et al. (2022), Watson (2006), Younes (2015).

During the previous four decades, the presence of scholars who have carried out comparative linguistic, cross-language, and cultural studies has impacted overcoming obstacles to communication between speakers of different linguistic backgrounds (Zang, 2021). However, the claim of the work in the field of Arabic linguistics comparative norms by a set of historical linguistics principles has lacked attention. Besides, they have not discussed the linguistic comparative of Yemeni Arabic Dhamar and Sana'a. Magidow (2021) highlighted that "Yemeni Arabic has known as a conservative dialect or the ancestor of modern Arabic dialects" (p. 3). Many of the photo Arabic sounds have diffused over time. Regarding this scholarship, the current study distinguishes Modern Standard Arabic from two Yemeni Arabic dialects Dhamar, and Sana'a, concerning basic vocabulary that shows similarities and differences.

The phenomena of migration, urbanization, and internet usage, characterized by e-commerce and social media growing fast in the Arab world have created social, political, linguistic, and cultural contacts (Alrubaidi et al., 2021). Consequently, language contact and cultural relations among Arabic-speaking societies increase an interesting comparative linguistic issue (Abolohom et al., 2021). Each country in the Arab world has its dialect, and each dialect has many sub-dialects (Hussein et al., 2022). Al-Huri (1997) highlighted that the dialect of Mecca was regarded as prestigious as Modern Standard Arabic because it was the dialect of Quraish (قبيلة قريش) (p. 30).

Historically, there are five factors that the Mecca dialect has considered as Modern Standard Arabic language, namely: a) the Quraysh tribe is a tribe that has a high position among other Arab tribes who stayed in the Arabian Peninsula; b) Mecca, where the Quraysh lived, was strategically located as a destination; c) Mecca was the housing of all idles worshipped by Arabs, d) all Arabs had to come to Mecca for pilgrimage, e) Mohammed was a member of the Quraish Tribe whose dialect has become the language of the Quran. In brief, MSA functions as a high variation, while colloquial Arabic serves as a low variation. Therefore, this study aims to observe the relationship between form and meaning, which has been seen from cognate, sound correspondence, and phonological differences in MSA, YEMD, and YEMS, and to explore several types of sound change in the form of metathesis, the syllable word system, sound loss, dissimilation, substitution, fortition, and lenition, in MSA, YEMD, and YEMS.

1.1. Statement of Problem

The object of this study is Modern Standard Arabic, Dhamar, and Sana'a as two dialects of Yaman Arabic. The writers look at it from a contrastive analysis. Every element of this language is regarded as a basic word. Every word is an element, the linguistic system, and the cultural background of the first language (L1) and second language (L2). Thus, this study attempts to find answers to the following questions: (1) How is the relationship between form and meaning, which has been seen from the

identical cognate word, cognate with similar shape, phonological difference in MSA, YEMD, and YEMS? (2) What is the sound change in the form of dissimilation, metathesis, the prediction of word syllable system, epenthesis, paragoge, sound loss, apocope, and lenition in MSA, YEMD, and YEMS?

1.2. Literature Review

Many kinds of research have been done on Yemeni Arabic from different perspectives. For example, a cross-cultural study between Yemeni Arabic and American English (Almansoor et al., 2019). A sociolinguistics perspective to examine language contact of Yemeni Arabic codeswitching among people living in the Hadramawt in Yemen (Al-Saqqaf, 2006). In addition, ethnobotanical studies of traditional herbal medicine terms of Yemen (Al-Fatimi, 2019), a phonological structure of Amrani Yemeni Arabic (Alquhali et al., 2021). Recently, many types of research have been conducted to examine education in Yemen, as stated (Nasser et al., 2020). However, the claim that the typology of Arabic dialects needs to be investigated under some cross-linguistic, historical-comparative linguistics or by a set of language sound change principles and socio-cultural aspects has been highly controversial. For instance, Arabic dialects are factually different between regions in the same country (Abu Farha & Magdy, 2021).

Studying these dialects has been a challenge for Arabic. Moreover, study solutions for these dialects present unique challenges, including the lack of an official orthography for Arabic dialects, which can result in discrepancies in the phonological interpretation of these dialects (Khitam, 2019). Therefore, the current study contrasts MSA to YEMD and YEMS concerning the realization that the three dialects, when viewed from a phonological perspective, have similarities and differences, which show that all three have inherited from the same ancestral language and have a close kinship. In general, this study provides information about MSA, YEMD, and YEMS for comparative historical linguistic research from the Indonesian perspective that will broaden the repertoire of knowledge and precisely analyze the existence of phonemic correspondences in those three dialects.

As this cross-language study investigates the language of sound correspondence, this section uses comparative historical linguistics as the theoretical framework. Historical and comparative linguistics has investigated the relationship between language forms and their meanings, including the cultural and historical background and parallels for linguistic change and diversification (Henrich, 2009). Consequently, there is a consensus among scholars of comparative linguistics that this study compares two or more different words to understand similarities, differences, sound changes, and some historical relations between the two languages. In this study, several aspects were used to establish a kinship relation between MSA, YEMD, and YEMS: cognate word pairs, word couples that have phonemic correspondence, phonetic similarities, and a pair of words that contain one different phoneme but can be explained by environmental influences.

1.3. Significance of the Study

This study aims to observe the cognate word between MSA, YEMD, and YEMS. It is expected to facilitate cross-culture studies, specifically through language comparison. It is also used to encourage curriculum designers to focus on the possible diversity of basic words, particularly language comparisons concerning their

pedagogical plans in the Master Program of Arabic Language and Literature UIN Jakarta. Moreover, they can apply more authentic content to learn Arabic as a second language. This study is also expected to provide a better theoretical approach to the specificity and universality of languages, specifically Arabic languages. MSA, YEMD, and YEMS data can also be used as a basis for further contrastive language studies. Besides, this study is expected to contribute to the pedagogy of second languages and the growing flow of contrastive study, comparative historical linguistic research, and cross-cultural studies.

1.4. Theoretical Framework

This study draws on a contrastive linguistic lens that examines the differences, similarities, and interrelationships in two or more languages. Crowley (2010) highlighted that contrastive linguistics is the activity of comparing two (or more) languages of a language unit synchronously so that differences and similarities are found in the language being compared. Sellami-Baklouti (2021) investigated the system of causation in English and Arabic from a contrastive perspective. He analyzed typological differences. The lexicogrammatical realization of causation may be activated by a contextual factor, such as common systems, modifying the original system. He reveals that contrastive linguistics is a synchronous method used to analyze languages that aim to show differences and similarities between languages or dialects in search of practically applicable principles, such as language teaching and translators. Furthermore, this research is approached from the level of semantics and contrastive analysis. Nur (2016) defined that contrastive analysis is one of the methods that can be used to help people who learn other languages in finding some differences and similarities between the source language and target language that usually leads to some difficulties in the learning process encountered by the learner.

The contrastive study, comparative historical linguistic research, is almost restricted to everyday speech situations. As a result, many contrastive, comparative linguistics studies have been conducted to highlight typological differences, lexicogrammatically constrained morphology, and semantics. Henrich (2009) defined comparative linguistics provides an understanding of the nature of the development or change of the world's languages. The scope of research in comparative linguistics is to analyze and provide explanations about the nature of language change in terms of (i) having a structure (synchronous dimension) and (ii) language always undergoing changes (diachronic dimension). Language analysis synchronously studies the nature of language that languages at a particular time have structures or elements of language called phonology, morphology, syntax, and others.

Meanwhile, Ellis (1994) defined diachronic language analysis as analyzing the language, not only the parts of the language that have changed but also the development of the language. The realization of this analysis has been widely approached. More importantly, the rest of this review is briefly dedicated to some major compliment studies. Contrastive linguistics focuses on two aspects of the study, namely the aspect of linguistic studies and the aspect of psychological studies. In addition to Keraf (1990) defines the linguistic study aspect is related to the problem of language comparison, while the psychological study aspect concerns learning difficulties, how to compile lesson materials, and how to deliver lesson materials. In short, pure contrastive analysis is language analysis by comparing first language and

second language oriented towards the study of language typology, namely language description based on the characteristics or types of language that are dominant in the language

Despite the relatively scarce literature on the topic and the lack of terminological consensus among scholars, Cognate Infinitives (CI) have been identified to know the basic word characteristics of those languages that belong to the Semitic family. The study describes the formal features of the Lebanese Arabic infinitive cognate (LA). The Lebanese Arabic linguistic data were collected through participant observation methods. The novelty of this description lies in its comparative analysis approach, developed based on available Lebanese Arabic evidence collected through a review of the main available literature on the topic. One major of his comparative analysis reveals that the grammatical features of infinitives in Lebanese Arabic seem to be in line with the trends of both classical and standard Semitic languages, in terms of Infinitive cognate (Díez, 2021)

2. Methods

Two college students become the target participants of the study. They are an informant who speaks MSA and YEMS, and a participant who speaks both MSA and YEMD. Yemeni data are taken from a native speaker of Yemeni. The informants are two male graduate students. The data sources are categorized into primary and secondary. The primary resource was taken from two post-graduate students who participated as main informants. This study applies qualitative research. The qualitative approach is a research procedure that produces descriptive data in the form of written or oral data from people and observable behaviors (Creswell, 2015). The morphological analysis method to analyze the sound changes, the phonological analysis method, is to reveal phonological contrast (Crowley & Bower, 2010). A quantitative method is performed by applying a lexicostatistic method to confirm language relationships Crowley and Bower (2010). They also highlighted that to get the data, the author performed three steps. The steps namely: (1) observing MSA, YEMS, and YEMD through the Swadesh basic vocabularies as guidance to understand the basic words of it, 2) typing 207 basic Swadesh vocabularies in the form of questionnaire to get the data from informants, (3) identifying the problem as the main issue. Thus, in analyzing the data, the study used the lexicostatistics method to collect the basic vocabulary of the language. There are five stages of analysis. The first is the collection and classification of words. The second starts with phonology, morphology, then, semantics analysis. The third stage involves the method of comparing phonemic correspondence. At this stage, segments have been compared to find sound changes, similarities, and differences in sound correspondence (Henrich, 2009).

3. Results and Discussion

Taking into account of the two-fold focus of this cognate word contrastive study, the section is set to answer the study's two questions. First, to reveal the relationship between form and meaning, which has been seen from the identic cognate word, cognate with similar shape phonological difference, and a pair of words that contain a different pattern in MSA, YEMD, and YEMS. Then, it further presents the sound change in dissimilation, metathesis, the prediction of word syllable system, epenthesis, paragoge, sound loss, apocope, and lenition in MSA, YEMD, and YEMS. Finally, the data were discussed with others empirical research.

3.1. Identic Cognate words

The cognate word refers to pairs of words with the same forms, sounds, and meanings. Examples of identical word pairs are as shown in Table 1.

Table 1. Identic Cognate words

MSA	YEMD	YEMS	Gloss
من /man/	من /man/	من /man/	'who'
لا /la:/	لا /la:/	لا /la:/	'not'
كل /kul/	كل /kul/	كل /kul/	'all'
أربعة /ʔarbaʕa/	أربعة /ʔarbaʕa/	أربعة /ʔarbaʕa/	'four'
زوج /zawj/	زوج /zawj/	زوج /zawj/	'husband'
أم /ʔumm/	أم /ʔumm/	أم /ʔumm/	'mother'
أب /ʔabb/	أب /ʔabb/	أب /ʔabb/	'father'
حَيَّوان /ħajawa:n/	حَيَّوان /ħajawa:n/	حَيَّوان /ħajawa:n/	'animal'

Source: Interview with informants in February 2022 by using 200 Swadesh vocabulary list

All phonemes of MSA's words are present in YEMD and YEMS. Thus, in contrastive linguistics, the word cognate shows that some language has a relationship. Stewart (2014) highlighted that standard Arabic and Yemeni Arabic belongs to the Western Semitic grouping, where Arabic is considered Central-West and Southwest Yemen. The two are genetically related, as evidenced by their phonology, morphology, and syntax. Ordan et al., (2010) explain Modern Standard Arabic (MSA) is grammatically close to Classical Arabic (the language of the Qur'an, for example), and they differ largely in their vocabulary and stylistic features. MSA is written and sometimes pronounced as well. In contrast, Arabic also has many dialects that differ from each other. These dialects and MSA coexist, a phenomenon is known as diglossia. To this end, the similarity has been inherited from the same ancestral language.

3.1.1. Cognate words with a Similar Shape

The cognate vocabulary is identified as words that have a similar sound form. Stewart (2014) defined that cognate with a similar shape is most common in language contact in particular sound correspondence opportunities. Moroccan Arabic is thus a specific sub-genre of a language that has a vocabulary cognate with other Arabic languages. In brief, sound correspondence with similar shape also occurs in Yemeni. The data found that cognate words can be distinguished into two types: (i) cognate words at the level of vocal correspondence and (ii) words with cognate at the level of consonant correspondence.

At the level of vocal correspondence, this present study shows that *vocal correspondence encompasses with -a, -e and -i*. This is because a number of words that are cognates in the Modern Standard Arabic that end with /-a/ corresponds with /e/ in Yemeni Arabic, in both Dhamar, and Sana'a as could be seen in Table 2.

Table 2. Vocal Correspondence

MSA	YEMD	YEMS	Gloss
أنا /ʔana/	أنا /ʔane/	أَنِة /ʔaneħ/	'I'
ما /ma:/	ماهُو /mahu/	مِهْ /meh/	'what'

Source: informants in February 2022 by using 200 Swadesh vocabulary lists

Table 2 shows that the vowel /a/ of the word *ana* in MSA corresponds to the vowel /e/ of the word *ane* in YEMD and *aneħ* in YEMS. Likewise, the vowel /a/ of the

word *ma* has a correspondence with the vowel /a/ in YMES. At the level of consonant correspondence, the finding shows that consonant /h-/ in MSA corresponds with /h-/ in YMED dan YMES. Other examples can be observed in Table 3.

Table 3. Consonant Correspondence

MSA	YEMD	YMES	Gloss
هم /hum/	هم /hom/	هم /hom/	'they'
هنا /huna:/	هانا /ha:na/	هانا /ha:na/	'here'
هناك /huna:ka/	هانك /ha:nak/	هانك /ha:nak/	'there'

Source: interviews with informants in February 2022 by using 200 Swadesh vocabulary lists

3.1.2. Phonological Differences

Crowley & Bowern (2010) defines phonological differences as lexemes which are the realization of one meaning. He explained that phonological differences occur if (1) the differences in lexemes that state the exact meaning appear simultaneously. Regular or constitute correspondence; and (2) the differences between lexemes that express the same meaning are in the form of variations, and the differences only occur in one or two sounds in the same sequence. Lexical differences refer to something related to lexemes. It relates to words as shown in Table 4.

Table 4. Phonological differences

MSA	YEMD	YMES	Gloss
ما /ma:/	ماهو /ma:hu/	مَهْ /meh/	'what'
متى /mata:/	ايحين /ayihen/	أَيَّحِينَ /ayyāhi:n/	'when'
كثير /kaθi:r/	خيرات /xaʔrat/	خيرات /xaʔra:t/	'many'
كم /kam/	شوي /fuwai/	جَارَةٌ /za:rat/	'some'
قليل /qali:l/	بعض /ba'að/	قَلِيلٌ /gali:l/	'few'
آخر /ʔa:xar/	غيري /gairi/	غير /gayr/	'other'
صغير /-ṣaʔi:r/	صغير /-ṣaʔer/	زَعِيرٌ /zaʔi:r/	'small'
رفيق /raqi:q/	نحيف /nahif/	نحيف /nahif/	'thin'

Source: interviews with informants in February 2022 by using 200 Swadesh vocabulary lists

This study has found 179 lexical elements diverse from 207 lexical elements or essential words, which is compared. The distinction of words that occur in Arabic dialects can be viewed from its history. The Yaman Arabic has been influenced by Persian, Berber, Greek, and Spain (Watson, 2006). Sana'a and Dhamar Yemen, as one of the Arabic variations of the Arabic language, emerged because of cultural and linguistic contact between the nomadic tribes of the Arabian Peninsula. It impacts the spoken language as a daily language in daily activities. The process of language change has developed and has been used over the years. While YEMD is a kind of dialect Arab in Yemen. The Dhamar dialect is used by people living in the Dhamar area. The city of Dhamar is the governorate's capital and is situated on the main road, which connects Sana'a with several other governorates. Runge and Graham highlighted that this city was one of Yemen's prominent Arabian and Islamic cultural and scientific centers. Dhamar is located in the northern part of Yemen and is influenced by Europe and Britain (Runge & Graham, 2020). Table 4 shows that YEMD and YMES are two different Yemeni Arabic dialects. The difference can be seen in changes in sound and lexical. For example, MSA /q/ has also become [g] in YMES, included in religious contexts. For example, the MSA word qmr 'moon' is pronounced in YMES with an initial [g].

There are two aspects of language change; they are internal and external factors. Internal changes are correlated with the grammar system, namely, the sequence of phrases and sentences in the phonological system. External changes refer to language changes that occur due to outside influences, such as changes influenced by social, political, economic, educational factors, culture, and the natural environment that occur in society. The contact of a language society with another language society can occur. It can arise because humans are interconnected from one ethnicity to another, from one country to another. This can only occur because language is a means of communication in many activities. Judging from the geo-linguistic domain of Arabic, Arabic dialects show relatively high diversity. It happened because of the dialect experience evolution of language - about 1400-1600 years ago (Hamed et al., 2015). The way language changes show the nature of that language.

In summary, Table 4 shows 31 words with several different phonemes between YEMS, YEMD, and MSA. It is because they adapt to each other's natural environment. This adjustment is followed by a tendency to innovate, making languages different, even though they come from one language family. Sound and lexicon variations occur because of a shift in form and meaning (Anttila, 1989). The shift in meaning aforementioned is related to two features, namely: (1) giving different names to the same reference, as in the lexicon صغير /-ṣayī:r/ the meaning is 'small' in MSA and صغير /-ṣayēr/ in YEMD and زَغِير /zayīr/ in YEMS; (2) giving the same name to different things in a different part of speech, for example, the word جَدّ /jadd/ the meaning is 'grandfather'; 'seriousness' (noun) and 'do ones best' (verb).

3.2. Types of sound change

Sound changes between dialects reflect the sounds found in proto-language. Dialectal differences occur regularly, and some are irregular (sporadic). Sound changes that occur regularly are called correspondences, while sound changes that occur sporadically are called variations. The sound changes are at the vocabulary level. The shift sounds are caused by displacement. However, some have been caused by the sequence of the same two phonemes. This sound shift is divided into metathesis and dissimilation.

3.2.1. Metathesis

Metathesis is a change in sound related to the exchange of places between two sounds (Crowley & Bowern, 2010). Metathesis can occur due to misspellings as could be seen in Table 5.

Table 5. Metathesis

MSA	YEMD	YEMS	Gloss
نحن /naħnu/	إحنا /ihna/	إحنا /əħnə/	'we'
هنا /huna:/	هانا /ha:na/	هانا /ha:na/	'here'
هناك /huna:ka/	هاناك /ha:nak/	هاناك /ha:nak/	'there'
قملة /qamla/	قمله /qamlah/	قُمَّله /gummalih/	'louse'
ورقة /waraqa/	ورقه /waraqah/	وَرَقَه /waragih/	'leaf'
سن /sinn/	أسنان /asnan/	سِنَّه /sənnih/	'tooth'
ظفر /ðʕufr/	ظفر /ðʕafar/	أظْفُر /ʔuðfur/	'fingernail'

Source: interviews with informants in February 2022 by using 200 Swadesh vocabulary lists

3.2.2. Dissimilation

Dissimilation refers to one sound changing to become less like another nearby sound (Crowley & Bown, 2010). The data findings in this study are listed in Table 6.

Tabel 6. Dissimilation

MSA	YEMD	YEMS	Gloss
ريشة /ri:ʃa/	ريش /reeʃ/	رَيْشَة /re:ʃah/	'feather'
أذن /ʔuðun/	أذن /ʔithn/	إِذْن /ʔeðn /	'ear'
سحابة /saħa:ba/	سحب /saħib/	سحاب /saħa:b /	'cloud'
ممتلئ /mumtaliʔ/	مملوء /mamluʔa/	مَلْيَان / malya:n /	'full'
جديد /dʒadi:d/	جديد /jaded/	جديد /dʒade:d/	'new'
سيئ /sajjiʔ/	شوع /ʃuaʃa/	شوع /ʃu:ʃ /	'bad'
قمر /qamar/	قمر /gamar/	قمر /gamar/	'moon'
غُدْوَة /gudwa/	غُطْوَة /gʊtʃwa/	غُطْوَة /gʊtʃwa/	'tomorrow'

Source: Data from this researcher's interviews with informants in February 2022 by using 200 Swadesh vocabulary lists

Table 6 shows dissimilation. For example, the MSA word قمر /qama → r/ 'moon', ق /q/ is pronounced in YEMD and YEMS with initial /gamar/ ق /g/. On the other hand, medially, MSA د is spelled /d/, which is usually pronounced in YEMS as ط as if spelled /tʃ/. Such as, in MSA غُدْوَة /gudwa/ word meaning 'tomorrow' in YEMD and YEMS become غُطْوَة /gʊtʃwa/. While the example of the MSA word meaning ريشة /ri:ʃa/ word meaning 'feather', MSA ي spelled /i:/ is pronounced in YEMD ريش /reeʃ/, ي spelled /e:/ medially, and YEMS with رَيْشَة /re:ʃah/. In brief, the sound changes that occur from MSA to YEMD and YEMS in the example are: (i) ق → is pronounced /q/ → /g/; (ii) د → ط /d/ → /tʃ/; (iii) /i:/ → /e:/. This phenomenon happened when a sound feature was reinterpreted because of its surrounding environment (Janet C. E. Watson, 2011). The change of sound from MSA to YEMD and YEMS for example غ and و, usually appears the sound ط appears to make the two sounds more distinguishable (Crowley & Bown, 2010). This rule is often seen among people who speak a language that is not their native language, where the contrast of voices may be difficult, so the rule is applied for ease of production and perception. In short, MSA is not a mother tongue for the Yemeni people, therefore there are frequent sound changes for ease of production and perception for them.

3.3. Sound Addition

In this study, the addition of sound in a word is classified into three: prothesis, epenthesis, and paralogue.

3.3.1. Prothesis

Prothesis refers to the addition of sounds at the beginning of a word (Crowley & Bown, 2010) as could be seen in Table 7.

The word MSA عض /ʕadʕa/ 'to beat' is determined as a prothetic change to يقحص /yagħas/ in YEMD and قَحَص /gaħas/ in YEMS. The shifts that occur are the addition of the cluster phoneme namely /y/ and /g/, at the beginning of the word YEMD and the phoneme /g/ in YEMS. Besides, the word MSA شرب /ʃariba/, the word meaning 'to drink' is identified as a prothetic change to يشرب /yaʃrab/ in YEMD and

شرب / jirib/ in YEMS. The changes that occur are the addition of the phoneme /y/ at the beginning of the word YEMD and the MSA phoneme /a/ to /i/ in YEMS. This fact suggests the change of Yemeni Arabic into the Dhamar and Sana'a dialects occurred internally. On this occasion, it is only seen from the internal changes in its phonological system specifically on the base word. This change is thought to have originated in speakers' daily behavior to adjust to each other, followed by a tendency to innovate in familiar groups of people. Other changes can gradually follow these initial changes in chains, eventually making the Yemeni Arabic language different from each other, (Watson, 2006). Generally speaking, sound change in verbs while giving activity is influenced by two factors: local and external. The local factors include the behavior of speakers mispronouncing their past that is not realized. This fact is called spoonerism i.e. reversal of the initial letters or syllables of two or more words (Yule, 2010). The external occurs due to language contact with other societies. The linguistic analysis of Yemeni verbs commonly practiced in everyday life shows that distinction marker is not common in Arabic because of the limited exposure to the outer world in villages and the limited sources people utilize to name daily activities.

Table 7. Prothesis

MSA	YEMD	YEMS	Gloss
شرب /ʃariba/	يشرب /yaʃrab/	شرب /jirib/	'to drink'
عض /ʕadʕa/	يقحص /yaghas/	قَحَص /gaḥaṣ /	'to beat'
مَصَّ /masʕsa/	يمص /yamuss/	مَصْمَص /maṣmaṣ /	'to suck'
تنفس /tanaffasa/	يتنفس /yatnafas/	يتنفس /yatnafas/	'to breathe'
ضحك /dʕahika/	يضحك /yaḍihik /	يَضِحْكِ /yaḍihik /	'to laugh'
سَمِعَ /samiʕa/	يسمع /yasma'a/	يَسِمِيعُ /yasimiʕ/	'to hear'
علم /ʕalima/	يدري /yadri/	يَدْرِى /yaderi/	'to know'

Source: interviews with informants in February 2022 by using 200 Swadesh vocabulary lists

3.3.2. Epenthesis

Epenthesis is used to describe changes by which a vowel is added in the middle of a word to break up two consonants in a cluster. Epenthesis is the insertion of a segment into a word in a position where no segment was previously present (Crowley & Bower, 2010) as can be seen in Table 8.

Table 8. Epenthesis

MSA	YEMD	YEMS	Gloss
صَحِيح /ṣaḥiḥ/	صحيح /sahaih/	صحيح /sahaih/	'right'
دَفِئ /dafiʔ/	دافِئ /da:fiʔi/	دافِئ /da:fiʔi/	'warm'
حَاد /ħa:d/	حدود /ħudud/	حدود /ħudud/	'sharp'
مَحَا /maħa:/	يمسح /yamsah/	مِسِح /misiħ/	'to wipe'

Source: interviews with informants in February 2022 by using 200 Swadesh vocabulary

The word MSA حَاد /ħa:d / 'sharp' is determined as an epenthesis change to حدود /ħudud/ in YEMD and in YEMS. The shifts that occur are the addition of the phoneme vowel /u/ between the cluster phoneme consonant, namely ح /ħ/ and د /d/ in the middle of the word YEMD in YEMS. In addition to, the word MSA مَحَا /maħa:/ 'to wipe' is determined as an epenthesis shift to يمسح /yamsah/ in YEMD and مِسِح /misiħ / in YEMS. The alternations that arise are the addition س /s/ in YEMD and

YEMS. Besides, the addition of ي /y/ in the beginning word of YEMD, while in YEMS there is no added sound. However, there is a change in the sound of the vowel /a/ to /i/. Those words account for the alternation in the lexical phonology framework where a sound or two sounds are attached to the middle of the stem. The insertion of one or two sound in the middle of a lexical is made merely on their relationship to the stem. Crowley & Bowern (2010) highlighted that epenthesis refers to “each vowel in the syllable joins the consonant which is directly to its left to form a mora” (p. 31). Hence, a mora can dominate a CV sequence such /a:/; /i:/. Elashhab (2018) defined “mora is the smallest rhythmic unit for measuring quantity or length in a prosody system. In addition, every consonant that is not joined with a vowel form more on its own. Then, moras are grouped into syllables.” (p. 2). Examples حدود YEMD and YEMS show the representation before syllabification takes place. In YEMD and YEMS, the و stranded between two consonants د cannot form a syllable on its own. Consequently, a vowel is inserted. The same دافي in MSA process takes place in دافي in which the /ا/ stranded between two consonants د and ف cannot form a syllable on its own. As a result, a vowel is inserted after the stranded consonant. Finally, reflect the full syllabification in YEMD and YEMS Arabic.

3.3.3. Paragogue

Paragogue refers to adding sound at the end of a word, but it is not changing the meaning of its word (Henrich, 2009) as can be seen in Table 9.

Table 9. Paragogue

MSA	YEMD	YEMS	Gloss
سمك /samak/	سمك /samak/	سَمَكِه /samakih/	'fish'
عظم /ʕaðʕm/	عظم /ʕaðʕm/	عُظْمِه /ʕuðmih/	'bone'
بيض /bajdʕ/	بيضة /baydʕah/	بَيْضَه /baydʕah/	'egg'
سمن /samn/	سمينه /saminah/	شَحْم /ʃahm/	'fat'

Source: interviews with informants in February 2022 by using 200 Swadesh vocabulary list

The word سمك /samak/ 'fish' in MSA is determined as a paragogue change to سَمَكِه /samakih/ in YEMS. The added sound at the end is not found in YEMD, its word equals with MSA. In addition to, the word MSA سمن /samn/ 'fat' is determined as a paragogue shift to سمينه /saminah/ in YEMD, and شَحْم /ʃahm/ in YEMS. The alternations that arise are the addition of /h/ only in YEMD but in YEMS there is an addition of the sound ح in the middle between the sounds م and ش. Besides, the word MSA بيض /bajdʕ/ the addition of /h/ in the end word of namely بيضة /bajdʕah/ occur in YEMD and in YEMS. In short, sound changes in adding sounds at the end of words in YEMD and YEMS are not always the same. Sometimes YEMD has the same vocabulary as MSA, while YEMS does not have the same vocabulary as MSA. The data discussion shows that /h/ and *kasrah* /i/; م and ش did not predominate as a paragogic vowel in the study data because there were only 10 words out of 207 words or as many as 5%. This situation suggests a paragoge pattern of YEMD consonant vowels, YEMS similar to MSA of the small number. Therefore, diachronically YEMD and YEMS have changed pattern that differs from Modern MSA. It happens because there is social behavior used in communication between individuals influencing and interdependent. Hence, the Yemeni Arabic-speaking community, when the language is viewed from a social point of view, consists of a community consisting of several ethnic groups that have linguistic behaviors that show their characteristics MSA is

used in formal situations, and YEMD and YEMS are used in informal situations. In brief, the change was caused by three social factors: geography, language contact, and cultural assimilation (Watson, 2011).

3.4. Sound Loss

Sound loss is the process of removing one part of a construction of the word. The loss can be one or more sounds (Crowley & Bowern, 2010). Three types of sound loss are covered by sound loss concepts. These special concepts are described and illustrated as follows, (1) Apheresis, (2) Apocope, dan (3) Syncope.

3.4.1. Apheresis

Apheresis is the process of reducing one or more phonemes at the beginning of a word as can be seen in Table 10.

Table 10. Apheresis

MSA		YEMD		YEMS		Gloss
أنف	/ʔanf/	أنف	/ʔanf/	نُخْرَة	/nuxrih/	'nose'
امراة	/ʔimraʔa/	مرة	/maratun/	مَرِه	/marih/	'woman'
أظْفَر	[ʔuðʕu:r]	ظفر	/thafar/	ظفر	/ðʕufr/	'fingernail'

Source: interviews with informants in February 2022 by using 200 Swadesh vocabulary lists

The MSA word أنف /ʔanf/ 'nose' is determined as apheresis to become نُخْرَة /nuxrih/ in YEMS. Phoneme /أ/ /a/ in MSA is maintained in YEMD, however, /أ/ disappears at the beginning of the word in YEMS /أ/ → Ø. Besides, the MSA word امراة /ʔimraʔa/ is decided as apheresis to become مرة /maratun/ in YEMD and /marih/ in YEMS. Phoneme /ا/ or /a/ in MSA disappears at the beginning of the word in YEMD and YEMS the formulation such as /ا/ → Ø. In brief, this phenomenon shows YEMD and YEMS are dialects of Arabic that indicate the specificity of language use within a particular area or a certain level of society in the Republic of Yemen (Watson, 2011).

3.4.2. Syncope

Syncope refers to the loss of segments in the middle of words, not the end (Crowley & Bowern, 2010) as can be seen in Table 11.

Table 11. Syncope

MSA		YEMD		YEMS		Gloss
عود	/ʕu:d/	عُود	/ʕu:dih/	عُود	/ʕu:dih/	'stick'
سحابة	/saħa:ba/	سَحَب	/sahib/	سَحَب	/sahib/	'cloud'

Source: interviews with informants in February 2022 by using 200 Swadesh vocabulary lists

The MSA word عود /ʕu:d/ 'stick' is determined as a syncope to become عُود /ʕu:dih/ in YEMD and YEMS, عود /ʕu:d/ → عُود /ʕu:dih/. Phoneme /و/ /w/ in MSA disappears in YEMD, and YEMS at the middle of the word in YEMS /و/ → Ø. Besides, the MSA word سحابة /saħa:ba/ 'cloud' in number 88 is decided as a syncope to become سَحَب /sahib/ in YEMD and in YEMS. Phoneme /ا/ or /a/ in MSA disappears in the middle of the word in YEMD and YEMS the formulation such as: /ا/ → Ø. In brief, the lost phoneme in the middle are /و/ → Ø and /ا/ → Ø.

3.4.3. Apocope

Apocope refers to a sound change in the form of omission of a phoneme or more at the end of a word (Crowley & Bown, 2010) as in the following Table 12.

Table 12. Apocope

MSA	YEMD	YEMS	Gloss
ليلة /laylah/	ليل /lail/	ليل /lail/	'night'
سال /sa:la/	سال /sa:l/	سال /sa:l/	'to flow'
لعب /laʕiba/	لعب /laʕab/	لعب /liʕib/	'to play'
قال /qa:la/	قال /ga:l/	قال /ga:l/	'to say'
غسل /ḡasal/	غسل /ḡasil/	غسل /ḡasal/	'to wash'

Source: informants in February 2022 by using 200 Swadesh vocabulary lists

The MSA word ليلة /laylah/ 'night' is identified as an apocope to become ليل /lail/ in YEMD and YEMS, ليلة /laylah/ → ليل /lail/. Phoneme / ʕ / /h/ in MSA disappear in YEMD and YEMS at the end of the word / ʕ / → Ø. Besides, the MSA word سال /sa:la/ 'to flow' is decided as an apocope to become سال /sa:l/ in YEMD and in YEMS. Phoneme / ʔ / or /a/ in MSA disappear at the end of the word in YEMD and YEMS the formulation such as: / ʔ / → Ø. In brief, the lost phoneme in the middle are / ʕ / → Ø and / ʔ / → Ø.

3.4.4. Lenition

Lenition is the loss of the sound that occurs in various changes in which sound results change becomes weaker articulation compared to sound at the beginning, (Crowley & Bown, 2010) as in the following Table 13.

Table 13. Lenition

MSA	YEMD	YEMS	Gloss
قطع /qatʕaʕa/	يقطع /yagtaʕa/	قَصّ / gaʕʕ/	'to cut'
قتل /qatala/	يقتل /yagtul/	قتل /gatal/	'to kill'
شم /ʃamma/	يشم /yaʃum/	تَمّ / tamm /	'to smell'
سمع /samiʕa/	يسمع /yasmaʕa/	سَمِعَ / simiʕ/	'to hear'

Source: informants in February 2022 by using 200 Swadesh vocabulary lists

Table 13 shows the change in lenition from MSA > YEMS > YEMD. Lenition can be seen at the sound change at the word قطع > قَصّ > يقطع with the word meaning 'to cut'. MSA's phoneme [q] is identified as consonant uvular, plosive and voice. It is identified as having stronger articulation than [y]. The phoneme /y/ is identified as semivowel, palatal. In brief, sound change ق /q/ > ي /y/ is determined as lenition. In addition to, data (13) shows the change in lenition from MSA > YEMS > YEMD. Lenition can be seen at the sound change at the word شَمّ > يشمّ > تَمّ with the word meaning 'to smell'. In MSA, phoneme ش [ʃ] is identified as consonant alveo-palatal, fricative plosive, and voiceless. It is identified as having stronger articulation than ي [y]. The phoneme /y/ is identified as semivowel, palatal. In short, sound change ش [ʃ] > ي /y/ is determined as lenition.

4. Conclusion

Based on the sound change analysis of the form and meaning relationship in the previous discussion, the first aim of this study is to find the relationship between

form and meaning, which is seen from cognate, sound correspondence. A pair of words containing a different pattern in MSA, YEMS, YEMD found that there are 29 words or 14% cognate, 8 patterns of sound correspondence, 13 words couple that have some different phonemes. These data were chosen through random sampling from data 1- 50. The second aim of this study or determination of the sound change in MSA, YEMS, and YEMD namely sound change in the form of metathesis, exposes that there are six rules, there are five kinds of word syllable system and dissimilation, three forms of sound addition namely prothesis, epenthesis, and paragogue. There are four sound loss types: apheresis, syncope, apocope, and lenition.

We would like to suggest to the subsequent researchers to explore the study of comparative linguistics or cross-language passionately in a different context, such as making a comparison in syntactical aspect, dialectology, sociolinguistics points of view, such as the addition of comparative of Arabic loanword, analogical change, spoonerism, a slip of the tongue, linguistics reconstruction or internal reconstruction between the Arabic language in relation to Arabic culture and social trend. Furthermore, the next researcher can choose another genre of sound change analysis of a phrase, or sentence. These diversities can broaden views on language change in Arabic, and historical linguistics.

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