# Chapter One: Introduction

[to be added]

# Chapter Two: Consonants

## [2.1] General Description of the Consonantal Phonemic System

The consonantal phonemic system in the Constantine Judeo-Arabic (CJA) dialect has a number of interesting features that, taken together, endow it with a somewhat conservative character.[[1]](#footnote-1) should here eCJA Despite its various dialectal process changes, CJA has in almost every case preserved the phonemes it inherited from earlier forms of Arabic. Indeed, of the phonemes present in Classical Arabic (CA), only the interdental consonants \*ṯ \*ḏ \*đ have been replaced by their plosive equivalents, as has been the case with many other urban dialects. When an item or characteristic from the colloquial (i.e., spoken) dialect is referenced, I have noted this expressly.

Moreover, several consonants that have disappeared from other Maghrebi dialects have survived in CJA: a clear distinction remains between the voiceless palatoalveolar fricative /š/ and the voiceless dental-alveolar fricative /s/ and between the voiced dental-alveolar fricative /z/ and affricate /ǧ/. The principal realizations of the phoneme /ǧ/ are [ž] and [ǧ], which function as free variants, neatly illustrate the location of Constantine on the border between one dialectal area where speakers always realize the phoneme /\*ǧ/ as [ǧ] and another where this phoneme is always realized as [ž].

The uvular consonant /q/ is almost always realized by speakers of CJA as [q]; this is a stable phoneme in their language. Only in a few borrowings from nomadic or rural dialects does this phoneme have a voiced realization: [g].

Although the glottal stop /ˀ/ is less stable than all other phonemes, it should not be overlooked. Its use in certain contexts may be explained as due to a combination of phonetic and morpho-phonemic features and the nature of this language as serving Rabbinic scholars. Various researchers attribute the presence of glottal stops in certain words to their being borrowings from CA. The dialect discussed here is specialized: it is used for translating the Psalms and is evidently not colloquial. This explains why the glottal stop is not entirely absent from our corpus. The voiceless glottal fricative /h/ also remains an independent phoneme in CJA.

Emphasis spread[[2]](#footnote-2) is a prominent feature in this dialect. There is evidence for a division of the phoneme /\*r/ into two separate ones: /r/ and /ṛ/. The latter of these has a strong emphatic influence on the entire word. As we will see, various arguments can be offered for considering the /ṛ/ either as an allophone or as a phoneme.

The “classic” emphatics /ṭ/, /ḍ/, and /ṣ/ are mirrored by the phonemes /t/, /d/, and /s/ that become emphatic in the presence of a stable emphatic consonant within the same word. Due to the strength of this phenomenon and based on my preference for the synchronic analytical approach, I have described the fixed realizations [ṣ] for /s/ and [ḍ] for /d/ as essentially already belonging to the phonemes /ṣ/ and /ḍ/, respectively. Emphasis spread is also evident in the presence of emphatic allophones for the phonemes /b/, /m/, /f/, /w/, /n/, /l/, and /z/.

It should also be noted that each of the semi-vowels has two allophones whose distribution is clearly conditioned: one emphasizes its consonantal and the other emphasizes its vocal aspect.

All of this means that the consonantal phonemic system of CJA is made up of 26 phonemes, 24 of which are stable and independent, one of which (/ṛ/) is in the process of stabilizing, and the other of which (/ˀ/ ) is in the process of weakening.[[3]](#footnote-3)

These are the broad outlines of the consonantal phonemic system of this language. Detailed discussion of each consonantal phoneme is presented below, organized according to their point of articulation. It includes descriptions and examples of each realization of each phoneme and the circumstances in which it appears. In addition to the principal realizations, unusual ones are also described, with notes indicating the degree of their rarity. Realizations resulting from assimilation are also described in this section and the one on assimilation [2.5].

The phonological discussion focuses mainly on realizations present in the reading of the *šarḥ*; any deviations from this (such as in the rabbis’ responses to the questionnaire) have been clearly noted as such. Almost no differences were found between the phonemic realizations in the reading of the *šarḥ* and those in the colloquial dialect.[[4]](#footnote-4)

The term “realization” refers to the specific performance of a phoneme when it is a free variant in a given word in a certain instance. It may not be present in a different instance of the same word and may be used by one rabbi and not by another. When there is a measure of conditioning, the conditioned realization is termed a “conditional allophone.” Where significant differences between the pronunciation of the various rabbis exist, these have been noted.

The discussion of the various consonantal phonemes is followed by a discussion of several issues concerning the consonants: emphasis spread, assimilation, dissimilation, interchanges between liquid consonants, and metathesis.

## [2.2] Realization of the Consonantal Phonemes

[2.2.1] Bilabials: /b/, /m/, and /w/

/b/

The phoneme /b/ etymologically relates to the CA consonant \*b (ب). The dialect of the Jews of Constantine reflected in the *šarḥ* includes two principal and two secondary realizations of this phoneme:

[b] – a voiced bilabial plosive. This is the commonest realization of the phoneme and is found in initial, medial, and final positions when not adjacent to an emphatic consonant. Examples:

*b-ǝl-xawf* (בְּיִרְאָ֑ה, Ps 2:11), *bāri* (נְקִ֥י, Ps 24:4), *bāṭǝl* (חָמָ֣ס, Ps 25:19), *fi hṛūb-u* (בְּ֝בָרְח֗וֹ, Ps 3:1), *tḥǝbbu* (תֶּֽאֱהָב֣וּן, Ps 4:3), *fi ǧbǝl* (בְּהַ֣ר, Ps 15:1), *kdǝb* (כָ֫זָ֥ב, Ps 5:7), *mduwwǝb* (נָ֝מֵ֗ס, Ps 22:15), *klāb* (כְּלָ֫בִ֥ים, Ps 22:17).

[ḅ] – an emphatic voiced bilabial plosive.[[5]](#footnote-5) This realization is a conditioned allophone that appears when the phoneme precedes or follows an emphatic consonant. Such emphatic realization is known in other Maghrebi dialects. It also features in nomadic Mashriqi dialects and sedentary Mashriqi dialects influenced by nomadic varieties.[[6]](#footnote-6) Examples:

*ḍǝḅḅaṛ ˁliya* (יְעָצָ֑נִי, Ps 15:7), *mkǝḅḅaṛ* (מַגְדִּל֮, Ps 18:51), *ṭḷǝḅ* (שָׁאַ֣ל, Ps 21:5), *hāḅṭ-īn t-tṛāb* (יֽוֹרְדֵ֣י עָפָ֑ר, Ps 22:30), *mǝn l-ḅṭan* (מִבָּ֑טֶן, Ps 22:10), *ḅ-aḷḷah* (בֵֽאלֹהִ֬ים, Ps 3:3).

An emphatic realization of the phoneme for psychological and sentimental reasons, rather than due to the influence of the consonantal surroundings is found in the word *ḅāḅa* (אָבִ֣י, Ps 27:10).[[7]](#footnote-8)

[p] – a voiceless bilabial plosive. This realization is relatively uncommon and may occur due to assimilation to a nearby voiceless consonant.[[8]](#footnote-9) Examples:

*p-ḥaṛǧ-u* (בְאַפּ֑וֹ, Ps 2:5), *pḥāl* (כְּמוֹ, Ps 29:6), *p-šyyāḥ* (ְּחַרְבֹ֖נֵי, Ps 32:4), *sǝppḥu* (שִֽׁירוּ־, Ps 33:3), *yisǝppqu-ni* (יְקַדְּמ֥וּנִי, Ps 18:19), *tpǝzzaˁt* (נִשְׁפַּכְתִּי֮, Ps 22:15), *qlūp-kum* (Ps 4:5).

[β] – a voiced bilabial fricative. This realization is rare, but there were several instances in the corpus[[9]](#footnote-10) in which it appears before a vowel or before a liquid or fricative consonant. Examples:

*u-šrāβ-hum* (וְתִֽירוֹשָׁ֣ם, Ps 4:8), *ṛβāyɪṭ-hum* (מֽוֹסְרוֹתֵ֑ימוֹ, Ps 2:3), *ḥβāl dyāl-hum* (עֲבֹתֵֽימוֹ, Ps 2:3), *u-wāǧǝβ-ni* (וַֽעֲנֵֽנִי, Ps 27:7).

No evidence was found in CJA of the realization [bw] as is found, for example, in the dialect of the Jews of Algiers and in several nomadic dialects, both Maghrebi and Mashriqi. In this respect CJA resembles the dialect of the Jews of Tunis, which also lacks this realization.[[10]](#footnote-11)

/m/

This phoneme etymologically relates to the CA consonant \*m (م). This phoneme has two realizations in CJA:

[m] – a voiced liquid bilabial nasal. This is the commonest realization of this phoneme and is found in initial, medial, and final positions that are not adjacent to an emphatic consonant. Examples:

*mša* (הָלַךְ֮, Ps 1:1), *mlīḥ* (ט֥וֹב, Ps 4:7), *mˁa* (עִם, Ps 18:26), *yaˁmǝl* (יַֽעֲשֶׂ֣ה, Ps 1:3), *msǝggm-īn* (יְ֭שָׁרִים, Ps 19:9), *u-nmǝǧǧǝd* (וַֽ֝אֲזַמְּרָ֗ה, Ps 27:6), *yitkǝllǝm* (יְדַבֵּ֣ר, Ps 2:5), *dāyɪm* (תָמִ֑יד, Ps 16:8), *f-ǝl-ḥkǝm* (בַּמִּשְׁפָּ֑ט, Ps 25:9).

[ṃ] – an emphatic voiced liquid bilabial nasal. This realization is an allophone conditioned on the appearance of the phoneme /m/ adjacent to an emphatic or back consonant. The realization [ṃ] may appear in an initial, medial, or final position. Examples:

*ṃḍaṛq-a* (מָגֵ֣ן, Ps 3:4), *ṃaṃḥūṣ-a* (מְ֝זֻקָּ֗ק, Ps 12:7), *ġaṃḍ-a* (רָֽגַע, Ps 6:11), *yiṭaṃṃaˁ* (וּבֹצֵ֥עַ, Ps 10:3), *yiṃṭǝṛ* (יַמְטֵ֥ר, Ps 11:6), *ḥaṃṃaq* (נִאֵ֖ץ, Ps 10:13), *ḥṃǝq* (פְּנֵ֣י, Ps 34:17), *ṛṣaṃ* (חֹ֥ק, Ps 2:7), *ḍāḷǝṃ* (רָשָׁ֑ע, Ps 9:17).

An emphatic realization of the phoneme /m/ for psychological and sentimental reasons, rather than due to the influence of the consonantal surroundings, can be found in the word *ūṃṃi* (וְאִמִּ֣י, Ps 27:10).[[11]](#footnote-12)

The corpus does not include minimal contrasting pairs [m] and [ṃ] and, accordingly, the status of the realization [ṃ] here is determined to be allophonic.

As with the realization of the phoneme /b/, the emphatic realization of /m/ is also found in both Maghrebi and Mashriqi dialects.[[12]](#footnote-14) Like [bw], the realization [mw] is also not attested in our corpus.[[13]](#footnote-15)

[2.2.2] Labiodental Consonant: /f/

The phoneme /f/ etymologically relates to the CA consonant \*f (ف). This phoneme has two principal realizations in CJA:

[f] – a voiceless labiodental fricative. This is the commonest realization of this phoneme and is found in initial, medial, and final positions. Examples:

*fṛāš-kum* (מִשְׁכַּבְכֶ֗ם, Ps 4:5), fi (בַּֽ, Ps 1:1), *fumm-i* (פִ֡י, Ps 19:15), *b-ǝl-ˁāfy-a* (בְּשָׁל֣וֹם, Ps 4:9), *nfǝttǝš* (אֲבַ֫קֵּ֥שׁ, Ps 27:4), *xālfu* (מָ֥רוּ, Ps 5:11), *b-ǝl-xawf* (בְּיִרְאָ֑ה, Ps 2:11), *nxāf* (אִ֭ירָא, Ps 3:7), *ḥfǝṛ* (כָּ֭רָה, Ps 7:16), *u-kǝššǝf* (וַֽיֶּחֱשֹׂ֪ף, Ps 29:9).

[f̣] – an emphatic voiceless labiodental fricative. This realization is found only when the phoneme is adjacent to an emphatic consonant. The /f/ may be a radical or part of the preposition /fi/ attached to a word beginning with an emphatic consonant. However, the emphatic realization is not found in every instance in which /f/ is adjacent to an emphatic consonant. Examples:

*f̣i ḍ-ḍayq-a* (בַּ֭צָּר, Ps 4:2), *f̣ǝḍḍ-a* (כֶּ֣סֶף, Ps 12:7), *ḥāf̣ǝḍ* (נֹצֵ֣ר, Ps 31:24), *nṣaf̣f̣ǝf̣* (אֶֽעֱרָךְ, Ps 5:4), *f̣i ḍ-ḍǝḷṃ-a* (בְּמוֹ־אֹ֝֗פֶל, Ps 11:2), *ṣaf̣f̣i* (צָרְפָ֖ה, Ps 26:2), *yixṭuf̣* (וּבֹצֵ֥עַ, Ps 10:3).

The voiced realizations of the phoneme /f/, which were attested only inconsistently in the pronunciation of a single informant, are as follows:

[v] – a voiced labiodental fricative. This realization appeared in a small number of words: *vǝṛṛaḥti* (שִׂמַּ֖חְתָּ, Ps 30:2), *ˁṛǝvdž*[[14]](#footnote-16) (יָ֝דַ֗עְתָּ, Ps 31:8), *ǝvtǝš* (בַּקֵּ֖שׁ, Ps 34:15).[[15]](#footnote-17) This realization of the phoneme /f/[[16]](#footnote-18) is also attested as possible in the Jijli and Hassaniyya dialects, for example.[[17]](#footnote-19) The same informant also pronounced the emphatic voiced realization in *ṿǝḍḷ-ǝk* (חַסְדְּךָ֗, Ps 36:8).

It should be noted in this context that all informants used [v] as the realization of ו in Hebrew words like *david* (Ps 3:1).

### [2.2.3] Alveolar-Dental Consonants: /t/, /ṭ/, /d/, /ḍ/, /n/

/t/

The phoneme /t/ etymologically relates to the alveolar-dental plosive \* t (ت) and the interdental fricative \* ṯ (ث) in CA. Examples of the shift \*t > t are numerous, such as:

*mˁātǝṛ ǝl-mawt* (מ֣וֹקְשֵׁי מָֽוֶת, Ps 18:6), *yibˁat* (יִשְׁלַ֣ח, Ps 18:17), *tyāb-i* (בְגָדַ֣י, Ps 22:19), *twāṛ* (פָּרִ֣ים, Ps 22:13).

As is well documented, the three interdental fricatives that form part of the consonantal system of CA – ṯ, ḏ, ᵭ̱ – are present in the nomadic dialects but are replaced by plosives in most of the sedentary dialects.[[18]](#footnote-20)

In CJA and in the sedentary dialects of Constantine Province generally the interdental consonants became plosives.[[19]](#footnote-21) The same is true of the city of Algiers, but in the other cities in Algiers Province the interdental fricatives have survived. Interdental consonants have also been preserved among the sedentary dialects of the Sahel in Tunisia, as well as in the Muslim dialect of Tunis itself.[[20]](#footnote-22) This feature distinguishes the Muslim dialect of Tunis from that of the Jews of this city, which has not preserved the interdental fricatives.[[21]](#footnote-23)

The plosive t originating in the interdental fricative \*t behaves like the original /t/ and may be pronounced in the same realizations.

CJA features numerous realizations of the phoneme /t/. These are free variables used interchangeably even within the same word although, in some cases, a tendency can be observed for the realization to appear in specific surroundings.

[t] – a voiceless coronal dental-alveolar plosive. This realization is found in the initial and medial position, but less so in a final position (where realizations accompanied by affrication are common).

*tmāṛ-u* (פִּרְי֨וֹ, Ps 1:3), *kīf t-tṛāb* (ְּעָפָ֥ר, Ps 18:43), *tḥǝbbu* (תֶּֽאֱהָב֣וּן, Ps 4:3), *ˀammǝnt* (הֶֽ֭אֱמַנְתִּי, Ps 27:13), *tfǝttǝš* (תִדְרֹֽשׁ, Ps 10:13), *fi šrīˁ-ǝt* (בְּתוֹרַ֥ת, Ps 1:2).

This realization is the primary one, for example, in the sedentary dialects of the Collo massif to the north of Constantine, in Jemmapes to the northwest, and among the Jews of Tunis and Algiers.[[22]](#footnote-24)

[tš] – a voiceless dental-alveolar plosive accompanied by affrication (š) – in other words, a fricative beginning with a *t* and ending with a short *š*. This realization was common to the two native Constantine informants but not to the informant born in Ain Beida, who performs the affrication as ts (see below). This realization was also the commonest in the speech of the female informant born in Constantine. This realization appears mainly in a word-final but also in the initial and medial positions, often before *k* and *ḍ*. Examples:

*yitškǝllǝm* (יְדַבֵּ֣ר, Ps 2:5), *u-tšḍīˁu* (וְתֹ֬אבְדוּ, Ps 2:12), *l-tškāl* (לָ֝בֶ֗טַח, Ps 4:9), *tšǝmǧīd* (מִזְמ֗וֹר, Ps 29:1), *tšāǧ* (תְּעַטְּרֵֽהוּ: תעמל ליה תאג', Ps 8:6), *tškǝltš*(חָסִ֑יתִי, Ps 7:2), *fi ḍbāṛǝtš*(בַּֽעֲצַ֪ת, Ps 1:1), *u-bˁatš* (וַיִּשְׁלַ֣ח, Ps 18:15), *l-mawtš*(הַמָּֽוֶת, Ps 13:4), *u-tškǝṣṣaṛ* (וְֽנִחֲתָ֥ה, Ps 18:35).

The phoneme /t/ is often realized as [tš] in the female plural morpheme /-āt/, for example: *b-ǝl-nǝġmātš*(בִּנְגִינ֗וֹת, Ps 4:1), *ǝl-ġǝlṭātš*(שְׁגִיא֥וֹת, Ps 19:13).

[tˢ] – a voiceless dental-alveolar plosive accompanied by affrication (s) – in other words, a fricative beginning with a *t* and ending with a short *s*. This realization was common in the speech of the informant born in Ain Beida but was also found in the speech of other informants, particularly in a final position.

*tˢqaˁǝd-ni* (תּֽוֹשִׁיבֵֽנִי, Ps 4:9), *tˢǝxṭāw* (תֶּ֫חֱטָ֥או, Ps 4:5), *ġītˢ-ni* (הֽוֹשִׁ֘יעֵ֤נִי, Ps 3:8), *imūtˢ* (יָ֝מ֗וּת, Ps 41:6), *ṣāwǝbtˢ* (כּוֹנָֽנְתָּה, Ps 8:4), *qǝllaˁtˢ* (נָתַ֑שְׁתָּ, Ps 9:7), *skātˢ* (דֻֽמִיָּ֥ה, Ps 22:3).

These affricated realizations – [tš] and [tˢ] – are not unique to the Jews of Constantine and are found in other sedentary dialects in Constantine Province.[[23]](#footnote-25) The realization [tˢ] is the ordinary form in all contexts in the dialect of Ouled Nouar (west of Philippeville).[[24]](#footnote-26) The realization [tˢ] is also common in other Algerian cities such as Tlemcen and Cherchell, in the Muslim dialects of Algiers and Djijli, and also in sedentary dialects in Morocco.[[25]](#footnote-27)

[tʸ] – This palatalized realization of the phoneme /t/ is less common than those presented above involving affrication. It often though not exclusively appears adjacent to the enclitic pronouns *–i*, *-ǝk*. Examples:

*ṣlātʸ-i* (תְּפִלָּתִֽי, Ps 4:2), *ulitʸtʸ-ǝk* (יְלִדְתִּֽיךָ, Ps 2:7), *ṣawtʸ-i* (ק֭וֹלִי, Ps 3:5), *l-mġītʸ-a* (הַיְשׁוּעָ֑ה, Ps 3:9), *kbāltʸ-ǝk* (נֶגְדֶּ֑ךָ, Ps 39:6), *u-ḥawz-a-tʸ-ǝk* (וַ֝אֲחֻזָּֽתְךָ֗: Ps 2:8), *u-šrīˁ-tʸ-ǝk* (וְ֝ת֥וֹרָתְךָ֗: Ps 40:9), *ǝtʸˀaddǝbu* (הִ֝וָּֽסְר֗וּ, Ps 2:10), *ktʸāṛ* (רַ֝בִּ֗ים: Ps 3:2), *tʸākl-īn* (ח֥וֹסֵי, Ps 2:12).

Cantineau describes this realization as a “moistened” (Fr: *mouillée*) consonant and documents its use among the sedentary dialects of Constantine Province.[[26]](#footnote-28) This realization is documented as a free variant alongside [tˢ] in Tunisian nomadic dialects spoken to the east of Constantine and within Algerian territory. The realizations [tʸ], [tš] of the phoneme /t/ are also documented for the Bône region.[[27]](#footnote-29)

[th] – an aspirated voiceless coronal alveolar-dental plosive. Though rare, we found this realization was found in two instances occurring before a vowel:

\* – before the vowel *a* in the second personal masculine singular pronoun – in *ǝntʰa*, (אנתא)[[28]](#footnote-31) and in *ktʰāṛu* (רַבּ֣וּ, Ps 3:2).

\* – when the enclitic possessive pronoun is added to a word ending in t, the /t/ may be aspirated: *fi waqtʰ-u* (בְּעִתּ֗וֹ, Ps 1:3), *u-wṛaq-tʰ-u* (וְעָלֵ֥הוּ, Ps 1:3). This aspiration i should not be regarded as a remnant of the original possessive pronoun *–hu*, since there is no *–h* in words ending in a consonant other than *–t* followed by an enclitic possessive pronoun.

Cantineau also documents the aspirated realization of the phoneme /t/ among the sedentary dialects of Constantine Province;[[29]](#footnote-32) it is even encountered in the spoken Arabic dialect of the Jews of Djerba.[[30]](#footnote-33)

[ṯ] – a voiceless interdental fricative. This realization is also rare, appearing occasionally in several words and after a vowel or adjacent to a fricative consonant. Examples:

*ġīṯ-ni* (הֽ֭וֹשִׁיעֵנִי, Ps 22:22), *tġīṯ* (תוֹשִׁ֣יעַ, Ps 36:7),[[31]](#footnote-34) *li-yṯkǝllǝm* (מִדַּבֵּ֥ר, Ps 34:14), *yiṯᵭ̱aṛṛqu* (יֶֽחֱסָיֽוּן, Ps 36:8).

This realization is also documented in the sedentary dialects of Constantine Province.[[32]](#footnote-35) It also occurs after a vowel in the dialects of the mountains north of Tlemcen and among the Arab-speaking population in the mountains of northern Morocco.[[33]](#footnote-36)

Voiced realizations of the phoneme /t/ may occur due to assimilation with an adjacent voiced consonant. For example, we found instances where /t/ was realized as a voiced dental-alveolar: [d]: *dǧāwǝb-ni* (תַעֲנֵ֣נִי, Ps 17:6), *dġayyar* (תְּ֝קַנֵּ֗א, Ps 37:1).[[34]](#footnote-37)

We also found instances where the /t/ was realized as a fricative [ǧ]: *u-nǝǧbǝṛṛa* (וְ֝נִקֵּ֗יתִי, Ps 19:14), *ǧḍawwi* (מְאִירַ֥ת, Ps 19:6), *nǝǧḍaṛṛaˁ* (אֶתְחַנָּֽן, Ps 30:9).

It is possible to explain the emergence of [ǧ] as a realization of /t/ in terms of a shift in the common realization [tš], which can become voiced [ǧ] (=d͜ž) before an adjacent voiced consonant. This shift may be explained by two voiceless elements of [tš] having become voiced through assimilation to the adjacent voiced consonant, thus producing the realization [dž], which has then become, in most cases, a true fricative [ǧ] (=*d͜ž*).

Full assimilation of the /t/ to /ǧ/ is sometimes found when it occurs before a radical /ǧ/ in the word: *ǧǧi* < *tǧi* (תָּב֬וֹא, Ps 18:7), *ǧǧǝzzu* < *tǧǝzzu* (תִּדְּפֶ֥נּוּ, Ps 1:4). The creation of this full assimilation can be explained as above, or alternatively as a two-stage shift: *ǧǧ* < *dǧ* < *tǧ*.[[35]](#footnote-38)

[ø] – the /t/ may b “realized” as [ø] in the word *d-ǝl-waq* / *d-ǝr-waq*, which translates into Hebrew as עתה (e.g., Ps 2:10). The spelling of this word in Rabbi Yosef Renassia’s book *Zikhron Ya’acov* is inconsistent. Sometimes the word appears with a ת – דלוקת (e.g., Ps 2:10, 20:7), while at other times a “phonetic” spelling without the ת is used – דלוק (e.g., Ps 17:11). The informants sometimes performed this word with the [t], but more often without it.[[36]](#footnote-39)

[ṭ] – an emphatic voiceless dental-alveolar plosive. This realization of the /t/ is rare in CJA: although the /t/ may appear in various realizations, as we have already seen, it does not lend itself easily to emphasis.[[37]](#footnote-40) This contrasts with its voiced twin, /d/, which has become a consistently rendered emphatic in many words.[[38]](#footnote-41) We found examples of this realization when an affixed *t* is assimilated to an adjacent radical /ṭ/: *ṭṭiyyǝḥ* (תַּשְׁפִּֽיל, Ps 18:38; תַּכְרִ֖יעַ, Ps 18:40), *ˁayyaṭṭ* (שִׁוַּ֥עְתִּי, Ps 30:3).[[39]](#footnote-42) Two instances of the emphatic realization of /t/ are documented in Rabbi Yosef Renassia’s orthography – צטרג'יתךּ (קִוִּיתִֽיךָ, Ps 25:21), צטרג'ית (הוֹחָ֑לְתִּי, Ps 38:16) – alongside the more usual spelling צתרג'ית (קִּוִּ֣יתִי, Ps 39:8, 40:2). In most cases the pronunciation of the *t* in these words was emphatic.

In conclusion, the phoneme /t/ has numerous realizations in CJA. In contrast to many other dialects in which the /t/ has a small number of realizations, the sedentary dialects in Constantine Province, including CJA, are notable for their large number of realizations of this phoneme. The tendency of the settled dialects of Morocco and Algeria to realize the /t/ through one or more of the realizations [ts], [tš], [tʸ], [ṯ], in which the passage of air is not completely blocked during pronunciation, is often attributed to the influence of the Berber substrate.[[40]](#footnote-43)

/ṭ/

The phoneme /ṭ/ etymologically relates to the emphatic voiceless dental-alveolar plosive \*ṭ (ط) in CA.

It is realized as an emphatic voiceless dental-alveolar plosive in initial, medial, and final positions. [[41]](#footnote-45) Examples:

*u-fi ṭrīq* (וּבְדֶ֣רֶךְ, Ps 1:1), *ṭˁām-hum* (דְּגָנָ֖ם, Ps 4:8), *ṭlǝbti* (שָׁאָֽלְתָּ, Ps 40:7), *ṭāyɪq* (אֵֽל, Ps 29:3), *naˁṭi* (וְאֶתְּנָ֣ה, Ps 2:8), *ṛǝṭṭǝb* (הֶחֱלִ֣יק, Ps 36:3), *zalṭu* (רָשׁ֣וּ, Ps 34:11), *nṭīḥ* (אֶמּֽוֹט, Ps 13:5), *nˁayyǝṭ* (אֲשַׁ֫וֵּ֥עַ, Ps 18:7).

/d/

The phoneme /d/ etymologically relates to both the voiced dental-alveolar plosive \*d (د) and the interdental affricate \*ḍ (ذ) in CA. As noted above, the interdental affricates have become plosives in CJA, leading to the merger of the phonemes \*d and \*ḏ.[[42]](#footnote-46) Examples of the \*ḏ>d shift are numerous: *ida* (אִ֥ם, Ps 1:2), *mǝn ǝd-dhǝb* (מִ֭זָּהָב, Ps 19:11), *ǝldi* (אֲשֶׁר, Ps 32:12), *ndǝkṛu* (נַזְכִּֽיר, Ps 20:8), *nǝdxul* (אָב֣וֹא, Ps 5:8) are some of them.

[d] – a voiced dental-alveolar plosive. This is the commonest realization of the phoneme /d/, appearing in initial, medial, and final positions. Examples:

*dāyɪr sāyɪr* (סָ֝בִ֗יב, Ps 3:7), *ǝl-ˁādl-īn* (צַדִּיקִ֑ים, Ps 1:6), *ulād* (בְּנֵ֥י, Ps 4:3), *qˁad* (יָשָׁ֑ב, Ps 29:10), *u-dāhǝš-hum* (וַיְהֻמֵּֽם, Ps 18:15), *l-ǝl-mǝddāḥ* (לַמְנַצֵּ֤חַ, Ps 18:1), *l-ǝl-ˀabǝd* (נֶ֑צַח, Ps 13:2).

The /d/ is also realized, though much more rarely, with the addition of affrication as [dz] or [dž]. Examples: *qāˁǝdᶻ* (יֹשֵׁ֥ב, Ps 17:12), *fi yǝdždž*(בְּיַד, Ps 31:9), l*-ǝl-mǝdždžāḥ* (לַמְנַצֵּ֥חַ, Ps 4:1, 61:1).

When \*d appears before an emphatic consonant – and in most of the instances in the corpus, this was *ṛ* – it is realized as an emphatic voiced dental-alveolar plosive [ḍ].[[43]](#footnote-47) This shift in such words occurs consistently and is also evident in Rabbi Yosef Renassia’s orthography, where it is represented by צ. Accordingly, we regard that, from a synchronic perspective, the [ḍ] in such words is a realization of the phoneme /ḍ/, since there is no distinction made in the speaker’s linguistic awareness between the צ' (ḍ) in צ'בבר (دبّر in CA) and the צ' (ḍ) in פ'צ'ל (فضل in CA). From a purely synchronic standpoint, we can determine that the realizations of /d/ as [ḍ] relate to the phoneme /ḍ/, though this requires us to define /d/ as a phoneme with restricted distribution, it not appearing alongside emphatic consonants. In this instance we preferred the synchronic perspective.[[44]](#footnote-48)

[ḏ] – a voiced interdental fricative. This realization appeared occasionally in the speech of two of the three informants.[[45]](#footnote-49) In most cases, this realization occurred when /d/ followed a vowel.[[46]](#footnote-50) Examples:

*kīf ˁaḏl-u* (כְּצִדְק֑וֹ, Ps 7:18), *fi wuḏn-u* (בְאָזְנָֽיו, Ps 18:7), yāxuḏ-ni (יִקָּחֵ֑נִי, Ps 18:17), *li-yaxuḏ* (לָקַ֖חַת, Ps 31:14), *izīḏ* (יוֹסִ֥יף, Ps 41:9), *ˁuḏyān-i* (אֹיְבַ֥י, Ps 25:19), *tsǝnnǝḏ-ni* (תִסְעָדֵ֑נִי, Ps 18:36), *isǝnnǝḏ-ni* (יִסְמְכֵֽנִי, Ps 3:6), *nǝrquḏ* (אֶשְׁכְּבָ֪ה, Ps 4:9), *u-nmǝǧǧǝḏ* (וַֽ֝אֲזַמְּרָ֗ה, Ps 27:6), *ǝḏǝbḥu* (זִבְח֥וּ, Ps 4:6).

However, we also found instances of the interdental fricative realization in postconsonantal positions. Examples:

*l-kḏǝb* (כָזָ֣ב, Ps 4:3), *hākḏāk* (כֵּ֤ן, Ps 1:5), *b-ǝl-gḏīm* (בְּנֶשֶׁךְ֮, Ps 15:5), *tfaqḏ-u* (תִפְקְדֶֽנּוּ, Ps 8:5), *ǧḏūḏ-i* (אֲבוֹתָֽי, Ps 39:13), *ḏkǝṛ-hum* (זִכְרָֽם, Ps 34:17), *l-xḏīˁ-a* (מִרְמָֽה, Ps 34:14).

The above examples include several words whose CA root includes the consonant ذ. However, the realization [ḏ] in these words should not be regarded as the preservation of the original interdental consonant,[[47]](#footnote-52) since in these words we also find a plosive realization [d] alongside the fricative [ḏ], for example: *xdīˁ-a* / *xḏīˁ-a*, *hākdāk* / *hākḏāk*.

A particularly interesting word is *kdǝb*, which is quite often pronounced with the interdental realization *kdǝb* but the plosive is almost always used in pluralized and conjugated forms, for example: *kdūb / gdūb; yikdǝb / ǝkdǝb*.

That the CA interdental fricatives have merged with the plosives in CJA and the commonest realization of the merged phoneme /d/ is [d] prompts questions about the origins of the occasional interdental fricative realization [ḏ]. Some instances may occur due to phonetic factors related to its post-vocalic position. Others may reflect the influence of nomadic dialects in this province, which have preserved the interdental fricatives.[[48]](#footnote-53) The originalinterdental fricative [ḏ] has been preserved, for example, in the Muslim dialect of Tunis (unlike in the city’s Jewish dialect)[[49]](#footnote-54) as well as in the dialect of Ouled Brahim and Saïda.[[50]](#footnote-55)

In some instances, /d/ loses its voicedness through assimilation with the adjacent consonant and is realized as its voiceless equivalent [t]; in such cases, the ([d] >) [t] is pronounced according to the characteristic realizations for /t/. In the word *nǝtˢxul* (אָבֽוֹא, Ps 26:4), the [d] lost its voicedness due to assimilation to the voiceless [x]. The *dt* > *tt* shift occurs in the words *ulitʸtʸ-ǝk* (יְלִדְתִּֽיךָ, Ps 2:7), *ṛqǝtštš*(שָׁכַ֗בְתִּי, Ps 3:6), *qˁatˢtˢ* (יָ֭שַׁבְתִּי, Ps 26:4), and *ǧḥǝtˢtˢ* (כִחַ֥דְתִּי, Ps 40:11).[[51]](#footnote-56)

/ḍ/

The phoneme /ḍ/ etymologically relates to the CA consonant \*ᵭ̱ (ظ),[[52]](#footnote-57) as it does in many other dialects.[[53]](#footnote-58) In some instances, the phoneme /ḍ/ reflects the consonant #d (د) in words in which this has undergone a permanent shift to /ḍ/ when adjacent to an emphatic consonant, usually *ṛ*.[[54]](#footnote-59) Rabbi Renassia consistently writes this phoneme as צ', whatever its origins.[[55]](#footnote-60)

The realizations of the phoneme /ḍ/ are as follows:

[ḍ] – an emphatic voiced dental-alveolar plosive. This is the commonest realization of this phoneme, occurring in initial, medial, and final positions.

\* – in words originating in ض (\*ḍ):

*ḍ-ḍaw* (א֨וֹר, Ps 4:7), *fi l-ˀaṛḍ* (בָּאָֽרֶץ, Ps 17:11), *(ˀ)abyaḍ* (אַ֝שְׁרֵ֗י, Ps 2:12), *titfǝḍḍal* (תִּתְחַסָּ֑ד, Ps 18:26).

\* – in words originating in ظ (\*ᵭ̱). Examples:

*ḍ-ḍǝlm* (חָמָ֑ס, Ps 11:5), *fi ḍ-ḍǝll* (בְּצֵ֥ל, Ps 17:8), *nḍaṛt* (רָ֭אִיתָ, Ps 31:8), *ˁḍām-i* (עֲצָמָ֑י, Ps 32:3), *u-ḍahṛu* (וַיֵּ֤רָא֨וּ, Ps 18:16).

\* – in words originating in د (\*d), when the shift \*d > ḍ that occurs in the vicinity of an emphatic consonant is fixed and documented in writing:

*ḍyāṛ* (חֲצֵרִ֗ים, Ps 10:8), *u-nḍūṛ* (וַאֲסֹֽבְבָ֖ה, Ps 26:6), *iḍawwṛ-u* (יְסֽוֹבְבֶֽנּוּ, Ps 32:10), *mḍaṛq-a* (מָגֵ֣ן, Ps 3:4), *fi ḍbāṛǝt* (בַּֽעֲצַ֪ת, Ps 1:1), *u-tḍǝṛṛǝq* (וְתָסֵ֣ךְ, Ps 5:12), *ḍǝbbaṛ ˁli-ya* (יְעָצָ֑נִי, Ps 16:7).

The realization of /ḍ/ as [ḍ] is also found among the Jews of Tunis and Algiers.[[56]](#footnote-61)

Rarely, the [ḍ] is realized with the addition of affrication as [ḍz]: *yiḍᶻḥǝk* (יִשְׂחָ֑ק, Ps 2:4), *l-fayḍᶻ-ǝt* (לְ֭שֵׁטֶף, Ps 32:6).

[ᵭ̱] – an emphatic voiced interdental fricative. This realization is less common than [ḍ], but was found in several instances in the speech of two of the informants. Examples:[[57]](#footnote-62)

*tᵭ̱īˁ* (ֹּאבֵֽד, Ps 1:6), *u-yᵭ̱īˁu* (וְ֝יֹֽאבְד֗וּ, Ps 4:4), *nāᵭ̱ṛ-īn-i* (שֽׁוֹרְרָ֑י, Ps 5:9, 27:11), *yitᵭ̱aṛṛqu* (יֶֽחֱסָיֽוּן, Ps 36:8), *ᵭ̱lamt* (רָ֝שַׁ֗עְתִּי, Ps 18:22), *taᵭ̱ṛīˁ-āt-i* (תַּֽ֭חֲנוּנַי, Ps 28:2), *fāᵭ̱l-īn-u* (חֲסִ֫ידָ֥יו, Ps 31:24), *fāᵭ̱ǝl* (חָסִ֨יד, Ps 32:6), *faᵭ̱l-ǝk* (חַ֭סְדְּךָ, Ps 36:11), *u-yiᵭ̱wāw* (וְנָהָ֑רוּ, Ps 34:6).

The tendency seems for this realization to appear when the phoneme /ḍ/ follows a vowel/ semi-vowel or is in proximity to the liquid consonants. In the nomadic dialects of Constantine Province, the realization [ᵭ̱] is reserved as a principal realization of \*ḍ (ض) / \*ᵭ̱ (ظ).[[58]](#footnote-63)

[ṭ] – an emphatic invoiced dental-alveolar plosive. This realization is rare and occurred in the of one informant’s pronunciation of two words from the same root: *tṭīˁ* (תֹּאבֵֽד, Ps 1:6), *u-tṭīˁu* (וְתֹ֬אבְדוּ, Ps 2:12). Despite its rarity, it is mentioned since both Cantineau and Ostoya-Delmas recorded it in the sedentary dialects of Constantine Province. Its absence as a principal realization is explained by the fact that speakers tend to restore the [ḍ], regarding it as a more learned form of pronunciation.[[59]](#footnote-64) This may explain why this realization is almost entirely absent in the reading of the *šarḥ*; it may be more prevalent in the colloquial language.

The realization of the CA ض / ظ of as [ṭ] is common in Tlemcen, but unknown in the nomadic dialect in Ouled Brahim and Saïda.[[60]](#footnote-66) This realization is also found in various Moroccan dialects in such as Safru, Fes, Tangier, and Tetouan,[[61]](#footnote-67) and in the spoken Judeo-Arabic dialect of Tafilalat.[[62]](#footnote-68)

/n/

The phoneme /n/ etymologically relates to the CA consonant \*b (ن). This phoneme has two realizations in CJA, the first of which is the more common:

[n] – a voiced liquid dental-alveolar nasal. This realization is common in initial, medial, and final positions. Examples:

*nxāf* (אִ֭ירָא, Ps 3:7), *b-nǝġmāt* (בִּנְגִינ֗וֹת, Ps 4:1), *nmīl* (אֶמּֽוֹט, Ps 16:8), *dnūb* (עֲו֖‍ֹן, Ps 32:5), *kāṛh-īn-ǝk* (שֹֽׂנְאֶֽיךָ, Ps 21:9), *s-snān* (שִׁנֵּ֖י, Ps 3:8), *u-l-wīdān* (וְֽנַחֲלֵ֖י, Ps 18:5).

[ṇ] – an emphatic voiced liquid dental-alveolar nasal. This realization appears in words in which the *n* is a radical and one of the radicals is an emphatic consonant. It is also sometimes found in instances where the *n* is not a radical but a first-person future morpheme (singular or plural), and in instances involving the *n* of the passive form, whether these are added to a word including an emphatic consonant. In the first personal plural past morpheme –na and the enclitic accusative first personal singular morpheme –ni, the *n* is not emphatic even if there is an adjacent emphatic consonant.[[63]](#footnote-69) Even in circumstances in which the emphatic realization [ṇ] may be found, the non-emphatic [n] may also appear. Examples:

*yiṇṭaq* (יֶהְגֶּ֗ה, Ps 1:2), *ṣḷāṭǝṇ* (מַלְכֵי, Ps 2:2), *ṇqaṭˁu* (נְֽ֭נַתְּקָה: Ps 2:3), *ṇǝqṭaˁt* (נִגְרַזְתִּי֮, Ps 31:23), *li-yǝṇḍaṛ* (לַֽחֲז֥וֹת, Ps 27:4), *u-l-ṇǝṣḷ-u* (וּלְזַרְע֗וֹ, Ps 18:51), *ṇxǝḷḷaṣ* (אֲ֝שַׁלֵּ֗ם, Ps 22:26), *ṇǝṇqǝṣ* (אֶחְסָֽר, Ps 23:1).

See section [5.4] for *ṇ* as a syllabic consonant.

[2.2.4] The Sibilants: /š/, /s/, /ṣ/, /z/

Before a detailed discussion of each of the phonemes for the sibilant consonants, it is worth noting that one of the distinctive phonological features of CJA is the clear distinction between the phonemes /s/ (*sifflante*) and /š/ (*chuintante*), as well as between the phoneme /z/ and the phoneme /ğ/, one of whose realizations is [ž].[[64]](#footnote-70) Isolated exceptions to this rule reflect a process of dissimilation and/or the influence of Hebrew or other dialects, but do not impair the validity of this observation. This contrasts with the situation in other North African dialects, and particularly in Jewish dialects,[[65]](#footnote-71) in which each of these pairs of phonemes tends to merge. In the Moroccan Jewish dialects, for example, \*s and \*š has merged into /s/.[[66]](#footnote-72) In the Jewish dialect of Tunis, \*s and \*š are realized as [š], while the variant [s] appears only before a non-emphatic *r* (while the phonemes are represented solely by [ṣ] before emphatic consonants).[[67]](#footnote-73) Similarly, the phonemes ס (שׂ) and שׁ have merged in the traditional Hebrew accent of the Jews of Tunis, Algiers, Morocco, and Djerba. In the Tunisian Jewish dialect, they were realized as [ž], and the restricted variant [z] appeared solely before a non-emphatic *r*.[[68]](#footnote-74) The Arab phonemes \*ğ and \*ž merged in the Moroccan Jewish dialects;[[69]](#footnote-75) among the Jews of Tunis they were realized as [ž], while the restricted variant [z] appeared only before a non-emphatic *r*.[[70]](#footnote-76)

/š/

The phoneme /š/ etymologically relates to the CA consonant \*š (ش). This phoneme is realized as follows in CJA:

[š] – a voiceless palatoalveolar fricative. This realization is found in initial, medial, and final positions. Examples:

*šrāyɪk l-ˀaṛḍ* (אַפְסֵי־אָֽרֶץ, Ps 2:3), *šqa* (עָ֝מָ֗ל, Ps 7:15), *štwīt* (שִׁוִּ֬יתִי, Ps 16:8), *kīf šqāf* (כַּחֶ֨רֶשׂ, Ps 22:16), *u-kǝššǝf* (וַֽיֶּחֱשֹׂ֪ף, Ps 29:6), *fǝššǝšt* (דִּשַּׁ֥נְתָּ, Ps 23:5), *tišˁal* (תִבְעַר, Ps 39:4), *q-qāš* (כַּ֝מֹּ֗ץ, Ps 1:4), *lays* (בַּל, Ps 10:18, and in many other places), *ˁayyišti-ni* (חִ֝יִּיתַ֗נִי, Ps 30:4), *u-nkǝšfu* (וַֽיִּגָּלוּ֮, Ps 18:16), *fǝttǝš* (בַּקֵּ֖שׁ, Ps 34:15), *ʸiḥašmu* (יֵבֹ֤שׁוּ, Ps 6:11).

[š] also appears as the second element in the dialectal negation form *ma - … - š*. This form is not used in the *šarḥ*, but is common in the colloquial language and can also be found in the commentary on the Psalms in Nishmat Kol Chai (the translation and commentary on the Mishna),[[71]](#footnote-77) and in other works written by Rabbi Yosef Renassia.

The above examples show that the phoneme /š/ is realized in CJA as [š] before both back and front vowels. The corpus even includes an instance where [š] occurs near an emphatic consonant: *fṛāš-kum* (מִשְׁכַּבְכֶ֗ם, Ps 4:5).[[72]](#footnote-79)

In instances in which /š/ appears in a word that also includes another /š/ or a /ğ/ realized as [ž] or [d͜ž],[[73]](#footnote-80)dissimilation may occur due to the proximity of two palatoalveolar consonants, leading to the realization of the /š/ as [s].[[74]](#footnote-81)

Instances of the word *ğays* (derived from the CA جَيْش) and its plural form *ğyūs,* consistently demonstrate dissimilation, as is also evident in Rabbi Yosef Renassia’s orthography. Examples: *ǧays* (חָ֑יִל– ג'יס, Ps 33:16), *rabb l-ǧyūs* (יְהוָ֥ה צְבָא֑וֹת– רב לג'יוס, Ps 24:10).[[75]](#footnote-82) Interestingly, in his trilingual dictionary Rabbi Yossi Renassia documents the realization of this word with *š*: جيش – djich(!) (p. 24).[[76]](#footnote-83) This dissimilation is also found in the corpus in some instances of the words סג'רא (עץ) and סמש (שמש):

The word “tree” (עץ) is translated in the *šarḥ* as סג'רא (Ps 1:3), the orthography hence testifying to this dissimilation.[[77]](#footnote-84) The pronunciation of this word as *s-sǝğr-a* was found for two of the informants in their reading of the *šarḥ* under the influence of the orthography. In his dictionary, Rabbi Yosef Renassia records: עץ – سجرة – sedjra (p. 23). Conversely, in the rabbis’ own translations and in the questionnaire, they (including the informants) pronounce this word as *š-šǝğr-a*, without dissimilation. We can conclude that the word עץ was probably pronounced *sǝğr-a* by Rabbi Yosef Renassia, as documented. However, the natural pronunciation free of the influence of the written text is without dissimilation: *šǝğr-a*. Similarly, throughout the Philippeville district, in the northern part of Constantine Province, speakers pronounce the word as *šaźr-a* rather than *säźr-a*, as the word is pronounced in most of Algeria.[[78]](#footnote-85)

The same pronunciations offered by the informants for the word סג'רא were also found for the word “sun.” This word was translated in the corpus as (ל)סמש (לַ֝שֶּׁ֗מֶשׁ, Ps 19:5), with a spelling that reflects a dissimilatory pronunciation. This is the dominant spelling for this word throughout Psalms, although other forms are also found.[[79]](#footnote-86) When reading the *šarḥ*, the rabbis sometimes pronounced the form לסמש (Ps 19:5) as *l-s-sǝmš* and in other instances as *l-š-šǝmš* while, in their independent translations and in the questionnaire, they consistently adopted the pronunciation *šǝmš*. It would seem that, while the informants’ natural pronunciation of this word is *šǝmš*, they deviated from this when reading the *šarḥ* out of respect for its language. The pronunciation *šǝmš* is also found in Moroccan Arabic dialects,[[80]](#footnote-87) among the Jews of Tunis,[[81]](#footnote-88) in Malta,[[82]](#footnote-89) and in the Tlemcen dialect.[[83]](#footnote-91) It is also the principal form used by the Jews of Algiers.[[84]](#footnote-92)

It is interesting to review the processes of dissimilation and assimilation that occurred in the Arabic word for “sun” from the earliest stages. In Ancient Arabic, dissimilation produced the form *\*sams* > *šams*. A process of assimilation and harmonization led to the shift *šams* > *šamš*,[[85]](#footnote-93) and in some dialects a “repeat” process of dissimilation then occurred: *šǝmš* > *sǝmš*.

A consistent shift of *s > š* is found in a small number of words:

– we found that the word *layš* (not), originating in *\*laysa*, is consistently realized with [š] and written ליש.[[86]](#footnote-94)

– the word קֹדֶש, the CA cognate of which is قُدس, is translated in the *šarḥ* as *qudš*, under the influence of the Hebrew, and written קדש (e.g., דְּבִ֥יר קָדְשֶֽׁךָ – (מחארב) (קצר) קדשךּ: Ps 28:2).[[87]](#footnote-95) However, the informants perceived this as an Arabic not Hebrew word. When they wished to use a Hebrew word, they said קֹדֶש.[[88]](#footnote-96) Similarly, other Hebrew forms derived from the root ק.ד.ש were also translated by Arab forms with the root *q.d.š*, such as קדוש (Ps 22:4) – מקדדש – *mqǝddeš*.[[89]](#footnote-97)

The paucity of instances in which ס appeared in the text instead of ש may also testify to the stable character of the separate phonemes /s/ and /š/.[[90]](#footnote-98)

/s/

The phoneme /s/ etymologically relates to the CA consonant \*s (س). This phoneme is realized as follows in CJA:

[s] – a voiceless dental-alveolar fricative. This is the commonest realization of this phoneme among the Jews of Constantine and almost always occurs in the initial, medial, and final positions alongside non-emphatic consonants. Examples:

*swāqi* (פַּלְגֵ֫י, Ps 1:3), *u-sīsān ǧ-ǧbāl* (וּמֽוֹסְדֵ֣י הָרִ֣ים: Ps 18:8), *nsa* (שָׁ֣כַֽח, Ps 10:11), *msǝggǝm* (יָ֝שָׁ֗ר, Ps 11:7), *ǧnūs* (לְ֝אֻמִּ֗ים, Ps 9:9), *sākǝn* (יֹשֵׁ֣ב, Ps 9:12), *skāt* (דֻֽמִיָּ֥ה, Ps 22:3), *twussaˁ* (תַּרְחִ֣יב, Ps 18:37), *lǝssǝs-ha* (יְסָדָ֑הּ, Ps 24:2), *l-sǝbbǝt* (לְ֝מַ֗עַן: Ps 27:11).

[ṣ] – an emphatic voiceless dental-alveolar fricative. When \*s appears next to an emphatic or back consonant (q, ḥ), it almost always becomes emphatic [ṣ].

In most instances this shift is permanent; it is also reflected in the writing of Rabbi Yosef Renassia (where such words are written with צ). Since there is no distinction in the speaker’s linguistic awareness between [ṣ] (צ) in the word צולטאן (سلطان in CA) and [ṣ] (צ) in the word עצפור (عصفور in CA), from a synchronic standpoint the realization of [ṣ] in these words, in which the shift to *ṣ* (צ) is permanent, can be regarded as belonging to the phoneme /ṣ/ (in CA \*ṣ ص). We have adopted a similar approach to the permanent realization [ḍ], considering it to relate to /ḍ/. This is not unproblematic, however, since the corpus includes words in which the shift *s* > *ṣ* is possible but not permanent.

This complex situation may be described as follows: The influence of the emphatic environment on the adjacent consonant *s* is a phonetic feature that is almost always realized. Many words in which the realization [ṣ] is permanent are in a transitional phase from [ṣ] being a conditional allophone of /s/ to being a realization [ṣ] of the phoneme /ṣ/. For the reasons discussed above, we have presented these words under the phoneme /ṣ/.

[ś] – a voiceless fricative whose point of articulation is between the dental-alveolar and the palatoalveolar (between *s* and *š*). This realization is relatively rare in CJA,[[91]](#footnote-99) but we found it in occasional use. Examples:

*u-śǝktu* (וְדֹ֣מּוּ, Ps 4:5), *kāś-hum* (כּוֹסָֽם, Ps 11:6), qyāś-hum (קַוָּ֗ם, Ps 19:5), *u-nhǝrrǝś-hum* (וְֽאֶשְׁחָקֵ֗ם, Ps 18:43), *yifrǝś* (טֹרֵ֥ף, Ps 22:14), *nāś bāṭǝl* (מְתֵי־שָׁ֑וְא, Ps 26:4), *yaḥśǝb* (יַחְשֹׁ֬ב, Ps 32:2).

These examples suggest a tendency for the realization [ś] to follow a vowel and/or be adjacent to a back consonant ḥ/h. However, since this realization is not common and does not always occur in these environments, we provisionally note it as no more than a possible tendency.[[92]](#footnote-100)

The realization of /s/ as [š] is extremely rare in CPA.[[93]](#footnote-101) We shall discuss here the small number of instances in which it was found.

\* – the Hebrew verb לשיר is translated in the *šarḥ* to the Psalms by the Arabic verb סבח,[[94]](#footnote-102) for example: *sǝbbaḥ* (שָׁ֥ר, Ps 7:1), *sǝbbḥu* (שִֽׁירוּ, Ps 33:3). The form אשירה is also translated by the same verb, appearing once in the written form נסבבח (Ps 27:6), pronounced *nsǝbbaḥ* by the informants,[[95]](#footnote-103) and once in the form נשבבח (Ps 13:6), pronounced *nšǝbbaḥ* by the informants, careful to follow the written text.[[96]](#footnote-104) The verb סבח for “to sing” has its origins in the CA سبّح (\*sabbaḥa), which conveys the meaning of “to praise (God).” The relationship between “to sing” and “to praise (God)” is clear, particularly in the context of the Psalms.

Forms of the Hebrew verb לשבח do not appear in the corpus but are found in other psalms. These were also translated by the Arabic root סבח.[[97]](#footnote-105) By contrast, the equivalent of the Hebrew word לשבח in the informants’ spoken language was pronounced with *š*: *li-yšibbaḥ*, although *li-yškur* is the word usually used in the colloquial.

Thus, the *šarḥ* uses the verb סבח both in the sense of “to sing” and “to praise,” and in most instances the /s/ is realized by [s] (ס). The forms realized with [š] (ש), few though they be, may suggest the penetration into the *šarḥ* of the form used by the informants in their speech (in the sense of “to praise”): *šǝbbaḥ*. This form probably reflects the influence of its Hebrew cognate.

\* – two verbal forms from the root ḥ.r.z were found in the corpus, beginning with the prefix *–št*, both as pronounced and as written: ושתחזרת – *u-štaḥrǝzt* (וָֽ֝אֶשְׁתַּמֵּ֗ר: Ps 18:24), שתחרז – *štaḥrǝz* (נִזְהָ֣ר, Ps 19:12). Other forms in CJA that originate in Form X of CA begin with *–st* (or *-ṣt* when the root is emphatic). Accordingly. we conclude that the above-mentioned forms are exceptional and unique to this root, at least in the corpus. This very may have entered CJA under the influence of the Jewish dialect of Tunis, which preserves the *–št* prefix for this form.[[98]](#footnote-106) Like their coreligionists in Constantine, the Jews of Algiers use the prefix *–st*.[[99]](#footnote-107)

/ṣ/

The phoneme /ṣ/ etymologically relates to the CA consonant \*ṣ (ص); it also reflects the consonant \*s (س) in words in which this has undergone a permanent shift to [ṣ] when adjacent to an emphatic or back consonant. Rabbi Yosef Renassia represents this phoneme, with its various sources, by צ, although the /ṣ/ originating in \*s (س) is still sometimes written with ס in certain words.[[100]](#footnote-108) The following are the realizations of this phoneme:

[ṣ] – an emphatic voiceless dental-alveolar fricative. This is the commonest realization of this phoneme, found in initial, medial, and final positions.

\* – in words originating in ص (\*ṣ). Examples:

*ṣawt-i* (ק֭וֹלִי, Ps 3:5), *ṣ-ṣāfi* (בַ֡ר, Ps 2:12), ṣla (תְּפִלָּ֗ה, Ps 17:1), ṣ-ṣayf (קַ֣יִץ, Ps 32:4), *u-tṣāwǝb* (וּתְכוֹנֵ֪ן, Ps 7:10), *nṣaffǝf* (אֶֽעֱרָךְ, Ps 5:4), *xǝlṣu* (פַ֥סּוּ, Ps 12:2), *xāṣǝm* (רִיבָ֣ה, Ps 35:1), *nǝnquṣ* (אֶחְסָֽר, Ps 23:1).

\* – in words originating in س (\*s), when the shift \*s > ṣ occurring due to the proximity of an emphatic or back consonant (q, ḥ) is permanent. Examples:

*ṣulṭān-i* (מַלְכִּ֑י, Ps 2:6), *qawṣ* (קֶֽשֶׁת, Ps 18:35), ṣḥāb-u (עָבָ֥יו, Ps 18:13), (יְחַלְּק֣וּ, Ps 22:19), *fi ṛāṣ-u* (בְרֹאשׁ֑וֹ, Ps 7:17), *ṣūq-ni* (נְחֵ֬נִי, Ps 5:9), *mṣṣaġṛaḍ* (חָ֥פֵֽץ, Ps 18:20), *nṣǝl* (זֶ֥רַע, Ps 22:31).[[101]](#footnote-109)

[t͜s] – the palatalized realization of /ṣ/ is relatively rare, appearing in a handful of words as pronounced by two informants. In some instances, the realization is influenced by a similar Hebrew word. Examples:

*l-mt͜sǝdāt* (פַּ֫חִ֥ים, Ps 11:6), *l-mt͜sǝd-a dyāl-i* (וּמְצֽוּדָתִ֗י, Ps 18:3), *t͜sǝddqu* (צָֽדְק֥וּ, Ps 19:10), *ˁat͜sf̣ūṛ* (צִפּֽוֹר, Ps 11:1), *ṛt͜sam* (חֹ֥ק, Ps 2:7).

The same realization is used when ציון is pronounced as a Hebrew word (Ps 2:6; 9:12,15), although the word was also often pronounced *ṣiyon* (e.g. Ps 14:7).

The vocalized realizations [z] / [ẓ] of the phoneme /ṣ/ are extremely rare. We found the realization [ẓ] occasionally in the words *ẓġāṛ* (עֽוֹלְלִ֨ים, Ps 8:3, 17:4) [לבדוק שם: לְעֽוֹלְלֵיהֶֽם] / *ẓġīr* (קטן), showing assimilation to the adjacent voiced consonant *ġ*. All the rabbis used this realization alongside the more common one [ṣ], both in these words and in their feminine forms: *ṣġīr-āt* (קְ֝טַנּ֗וֹת, Ps 104:25), *ṣġīr-a* (קטנה). Changes in the pronunciation of the word صغير are not unique to CJA: the realization *ẓġīr* is also found among the Jews of Tunis,[[102]](#footnote-110) while *ẓġīr* and *sġīr* are found in the Jewish dialect of Algiers, reflecting a loss of emphasis in this word.[[103]](#footnote-111) A shift from [ṣ] to [z] or [ẓ] in the word صغير is also found in the Syrian and אילי"ם dialects.[[104]](#footnote-112)

It is interesting to note that while Rabbi Yosef Renassia writes *ṣġāṛ* with a ס (Ps 8:3, 17:14), the rabbis pronounced it as [ṣ] or [ẓ] rather than [s].[[105]](#footnote-113)

The voiced realization [z] was also found once in the word *u-mḥzǝnt-i* (וּמְצֽוּדָתִ֣י, Ps 31:4) as pronounced by one of the informants.

/z/

The phoneme /z/ etymologically relates to the CA consonant \*z (ز) and is realized as follows in CJA:

[z] – a voiced dental-alveolar fricative. This is the commonest realization of this phoneme in initial, medial, and final positions. Examples:

*zyād-a* (ע֑וֹד, Ps 10:18), *fi zrīb-i* (בְחָפְזִ֗י, Ps 31:23), *tǧǝzz-u* (תִּדְּפֶ֥נּוּ, Ps 1:4), *u-nhǝzzu* (וַ֝יִּתְגָּֽעֲשׁ֗וּ, Ps 18:8), *ǧāzu* (עָֽבְר֑וּ, Ps 18:13), *ˁzīz* (Ps 36:8), *ḥrǝz* (שָׁמְרָ֣ה, Ps 25:20), *ǧāyɪz* (עֹ֝בֵ֗ר, Ps 8:9), *u-ḥawz-at-ǝk* (וַ֝אֲחֻזָּֽתְךָ֗, Ps 2:8).

[ẓ] – an emphatic voiced dental-alveolar fricative. This realization occurred occasionally in the vicinity of an emphatic or back consonant (ḥ, ġ, q). However, the phoneme /z/ was not emphatic in all such instances. Examples:

*ẓalṭu* (רָשׁ֣וּ, Ps 34:11), *fṛǝẓ* (הִפְלָ֣ה, Ps 4:4), *ḥaẓẓǝmti-ni* (וַתְּאַזְּרֵ֣נִי, Ps 18:40), *ẓalqu* (מָֽ֝עֲד֗וּ, Ps 18:37), *kīf l-ġẓāl-āt* (כָּֽאַיָּל֑וֹת, Ps 18:34), *u-ẓalq-āt* (וַֽחֲלַקְלַקֹּ֑ת, Ps 35:6), *nǝẓlaq* (אֶמְעָֽד, Ps 26:1).

No examples were found in the corpus allowing [ẓ] and [z] to be opposed as a minimal pair and, accordingly, [ẓ] is determined to be a realization of [z] that tends to appear before an emphatic or back consonant. As Heath notes,[[106]](#footnote-114) this type of emphatic realization is logical in terms of the structure of the language: just as the dental-alveolar consonants /t, d, s/ have their emphatic partners /ṭ, ḍ, ṣ/, so this dental-alveolar consonant – /z/ – is furnished with its emphatic partner. Unlike the other emphatic dental-alveolars, however, the emphatic realization [ẓ] does not have phonemic status in CJA.[[107]](#footnote-115)

[ź] – a voiced fricative whose point of communication is between the dental-alveolar and palatoalveolar (between *z* and *ž*). This realization occurred in the corpus solely for the root √zhw as performed by two informants, and even in their case not consistently. For example: *yiźhāw* (יָ֘שִׂ֤ישׂוּ, Ps 40:17), *u-źha* (וַיַּֽעֲלֹ֥ז, Ps 28:7), *u-źhāw* (וְ֝גִ֗ילוּ, Ps 2:11), *u-yiźhāw* (וְֽיַעְלְצ֥וּ, Ps 5:12). It should be recalled that the realization [ś] of the phoneme /s/ also occurred in the vicinity of *h* (or *ḥ*).[[108]](#footnote-116)

[2.2.5] The Vibrant Consonant – /r/, /ṛ/

It seems that the vibrant consonant \*r (ر) in CJA has split into two phonemes: /r/ and /ṛ/, although the situation that emerged following this split is complex.

The assertion that this dialect features two separate phonemes – /r/ as a voiced alveolar vibrant and /ṛ/ as an emphatic voiced alveolar vibrant – is based on the following minimal pair: [[109]](#footnote-117)*dāṛ* –הסתובב / *dār* – עשה. It should be noted that the verb *dār* in the sense of “do” is not used in CJA (as in the Moroccan Jewish dialects), and accordingly it does not appear in the *šarḥ*. However, they are familiar with the word from the Muslim dialect and, accordingly, distinguish it from *dār* in the sense of “turn around” (to convey the sense of עשה, the Jews use the verbs *ṣnǝ*ˁ*, ˁmel*, *fˁel*).[[110]](#footnote-118)

This phonemic distinction between /r/ and /ṛ/ is consistent with the broad picture regarding this consonant in the Maghreb. Most dialectologists of various Maghrebi dialects assume a phonemic distinction between /r/ and /ṛ/ and present minimal pairs as proof.[[111]](#footnote-119) Indeed, Cantineau mentions the same minimal pair we presented above,[[112]](#footnote-120) and Marçais also mentions this in relation to the dialect of Ouled Brahim.[[113]](#footnote-121) Unlike Cohen, who presents a relatively large number of minimal pairs for the Jewish dialect of Tunis,[[114]](#footnote-122) scholars mention only a handful of minimal pairs for the other dialects and acknowledge the complexity of this issue.[[115]](#footnote-123)

1. This contrasts with the Jewish dialect of Algiers, which Cohen described as a modern dialect that demonstrates a relatively large number of phonological changes. See: Cohen, M. 1912, p. 20. [↑](#footnote-ref-1)
2. On the phonetic character of this feature and the terminology used in this book, see section [2.4]. [↑](#footnote-ref-2)
3. See the attached table; realizations in parentheses do not have phonemic status. [↑](#footnote-ref-3)
4. See the discussion in Chapter 11: A Comparison between the Language of the *šarḥ* and Other Registers. [↑](#footnote-ref-4)
5. See the detailed discussion of emphasis in section [2.4]. [↑](#footnote-ref-5)
6. Cantineau 1960, p. 30; Talmoudi 1980, p. 20; Cohen 1975, p. 16; Stillman 1981, p. 235; Harrell 1962/1965, p. 3 [CHECK DATE]. Blanc even offers minimal pairs testing the phonemic value of the distinction between b and ḅ: Blanc 1953, pp. 53-54. [↑](#footnote-ref-6)
7. See: Cohen 1975, p. 16; Marçais 1956, p. 4. [↑](#footnote-ref-8)
8. An example that does not follow this tendency we find in the word *apyad* (אַ֥שְֽׁרֵי, Ps 1:1) as pronounced by one of the informants. [↑](#footnote-ref-9)
9. Cantineau explains the presence of this realization in sedentary dialects in Morocco as the influence of a Berber substrate. See: Cantineau 1960, p. 31, and cf.: Cohen, D. 1975, pp. 15-16; Marçais, W. 1908, p. 23. [↑](#footnote-ref-10)
10. Cohen, D. 1975, p. 15 ; Cohen, M. 1912, p. 57 ; Marçais, W. 1908, pp. 23-24; Cantineau 1960, pp. 30-31. [↑](#footnote-ref-11)
11. Cf. Cohen, D. 1975, p. 117. [↑](#footnote-ref-12)
12. Cantineau 1960, p. 30. Cf.: Blanc 1953, p. 55; Cohen, D. 1975, p. 17; Talmoudi 1980, p. 36; Harrell 1962/1965, p. 3 [CHECK]. [↑](#footnote-ref-14)
13. This realization is found, for example, in Ouled Brahim, see: Marçais 1908, pp. 23-24, as well as in eastern nomadic dialects: Cantineau 1960, pp. 30-31. [↑](#footnote-ref-15)
14. In this word, the second person past tense morpheme – t – was also voiced. [↑](#footnote-ref-16)
15. On the existence of a root פ.ת.ש., both in the *ktǝb* form and the *kǝttǝb* form, see section [7.3.2.1], p. 209, note 6. [↑](#footnote-ref-17)
16. This realization is found consistently before voiced consonants in the Druze dialects of the Galilee and Mt. Carmel – see: Blanc 1953, p. 54. It is interesting to note that the labiodental fricative [v] that appears infrequently in CSA as a realization of the phoneme [f] is also a realization of the interdental fricative [ḏ] in several nomadic dialects in the Mostaganem region of western Algeria: Cantineau 1960, p. 45; cf. Marçais 1908, p. 20. This phenomenon is also documented for the dialect of Siirt in southeast Anatolia: Fischer and Jastrow 1980, p. 50. [↑](#footnote-ref-18)
17. Marçais, Ph. 1956, p. 4; Fischer and Jastrow 1980, p. 252. [↑](#footnote-ref-19)
18. Cantineau 1960, p. 44. [↑](#footnote-ref-20)
19. Cantineau 1938, p. 853. [↑](#footnote-ref-21)
20. Cantineau 1960, p. 44. [↑](#footnote-ref-22)
21. Cohen 1975, p. 19. [↑](#footnote-ref-23)
22. Ostoya-Delmas 1938, p. 67; Cohen 1975, p. 19; Cohen 1912, p. 21. [↑](#footnote-ref-24)
23. Cantineau 1938, p. 853; Mangion 1937, p. 374. [↑](#footnote-ref-25)
24. Ostoya-Delmas 1938, p. 67. [↑](#footnote-ref-26)
25. Fischer and Jastrow 1980, p. 252; Marçais, Ph. 1956, p. 6. [↑](#footnote-ref-27)
26. Cantineau 1938, p. 853. [↑](#footnote-ref-28)
27. Ostoya-Delmas 1938, p. 67. [↑](#footnote-ref-29)
28. The aspirated realization in this word appears when it refers to God; it may be due to sentimental and psychological reasons, just as other empathic realizations are documented in similar contexts. [↑](#footnote-ref-31)
29. Cantineau 1938, p. 853. [↑](#footnote-ref-32)
30. Katz 1978, p. 17. [↑](#footnote-ref-33)
31. Since this root usually appears with the plosive realization of [t], this would seem to constitute a “new” fricative [ṯ] realization under the influence of the preceding vowel, rather than the preservation of the original fricative غيث√. [↑](#footnote-ref-34)
32. Cantineau 1938, p. 853. [↑](#footnote-ref-35)
33. Cantineau 1960, p. 37. [↑](#footnote-ref-36)
34. Cf. Marçais 1908, p. 21. [↑](#footnote-ref-37)
35. See section [2.5.1] “Assimilation;” Cohen 1912, p. 75. [↑](#footnote-ref-38)
36. See section [10.10]. [↑](#footnote-ref-39)
37. On the tendency of *t* to remain non-emphatic, even alongside emphatic consonants, see: Heath and Bar-Asher 1982, p. 40. Heath ranks *t* as the least likely to be emphasized of /t/, /d/, /s/, and /r/(1987, pp. 309-310). [↑](#footnote-ref-40)
38. See the discussion of *ḍ*, p. 30. [↑](#footnote-ref-41)
39. Each of the two forms was pronounced by a different informant. [↑](#footnote-ref-42)
40. Cantineau 1960, p. 37; Marçais 1902, p. 14;. cf. Basset 1894, pp. 2, 9-16. [↑](#footnote-ref-43)
41. Two rare realizations of this phoneme are found in the corpus, though they may be incidental:

 [ḍ] – an emphatic voiced dental-alveolar plosive. This realization appeared in the pronunciation of one informant of the word *u-ḍṛīq* (וְדֶ֖רֶךְ, Ps 1:6). See also the reverse shift ḍ>ṭ, p. 32.

 [ṭˢ] – an emphatic voiceless dental-alveolar plosive accompanied by affrication (s). This realization in a single informant’s pronunciation of the word *u-xāṭˢy-īn* (וְ֝חַטָּאִ֗ים, Ps 1:5). Heath and Bar-Asher suggest that the quasi-affricative pronunciation of t – [ts] – is not present in Tafilalat for ṭ. See: Heath and Bar-Asher 1982, p. 40. [↑](#footnote-ref-45)
42. See the discussion of the interdental affricates above, p. 25. [↑](#footnote-ref-46)
43. Cf., for example: Heath and Bar-Asher 1982, p. 40, and see also section [2.4.2]. [↑](#footnote-ref-47)
44. For further details, see the discussion on the phoneme /ḍ/ in this section. [↑](#footnote-ref-48)
45. The same informant, who never used the [ḏ] realization of the phoneme /d/, also never used the realization [ᵭ̱] of the phoneme /ḏ/; see p. 32. [↑](#footnote-ref-49)
46. Similarly, in the mountain dialects of northern Morocco the *d* may be shifted to [ḏ] after a vowel. See: Cantineau 1960, p. 37. [↑](#footnote-ref-50)
47. Cf. Cohen 1912, p. 22. [↑](#footnote-ref-52)
48. Cantineau 1938, p. 853; Ostoya-Delmas 1938, p.66. [↑](#footnote-ref-53)
49. Cohen 1975, p. 19. [↑](#footnote-ref-54)
50. Marçais 1908, pp. 19-20. [↑](#footnote-ref-55)
51. In popular medieval Judeo-Arabic texts, this shift is also documented in writing. See: Blau 1980a, p. 34, §12a. In the writing of Rabbi Yosef Renassia, -דת is used in such instances. [↑](#footnote-ref-56)
52. See the discussion of the interdental fricatives above, p. 25. [↑](#footnote-ref-57)
53. Fischer and Jastrow 1980, p. 39. [↑](#footnote-ref-58)
54. See מש"כ above, p. 31. [↑](#footnote-ref-59)
55. See Chapter Six: The Orthography of Zikhron Ya‘acov. [↑](#footnote-ref-60)
56. Cohen 1975, p. 19; Cohen 1912, pp. 28, 52. [↑](#footnote-ref-61)
57. The same informant who never uses the [ᵭ̱] realization of the phoneme /ḍ/ also never used the realization [ḏ] of the phoneme /ḍ/; see p. 30 above. [↑](#footnote-ref-62)
58. Ostoya-Delmas 1938, p. 67. [↑](#footnote-ref-63)
59. Ostoya-Delmas 1938, pp. 67-68; Cantineau 1938, p. 853. See also Cantineau’s explanations for the realization of [ṭ]: Cantineau 1960, p. 45. [↑](#footnote-ref-64)
60. Marçais 1908, p. 21. [↑](#footnote-ref-66)
61. Stillman 1981, p. 233, fn. 8. [↑](#footnote-ref-67)
62. Heath and Bar-Asher 1982, p. 38. Rarely, the pronunciation as [ṭ] penetrates their *šarḥ* - see: Bar-Asher 1988a, pp. 8, 62. [↑](#footnote-ref-68)
63. Cf. Cohen 1975, p. 20. [↑](#footnote-ref-69)
64. The discussion of the phoneme /ğ/ will be included in Section [2.2.7]: The Palatal Consonants. [↑](#footnote-ref-70)
65. Fischer and Jastrow 1980, p. 50. [↑](#footnote-ref-71)
66. Brunot 1950a, p. 37; Stillman 1981, p. 235. Cf. Heath and Bar-Asher 1982, p. 44. [↑](#footnote-ref-72)
67. Cohen 1975, pp. 20-25. [↑](#footnote-ref-73)
68. Cohen 1975, pp. 20-25. [↑](#footnote-ref-74)
69. Brunot 1950a, p. 37; Heath and Bar-Asher 1982, pp. 37, 44; Stillman 1981, p. 235. [↑](#footnote-ref-75)
70. Cohen, D. 1975, pp. 20-25. [↑](#footnote-ref-76)
71. See section [10:1]: Negative Particles, and Chapter Eleven: Comparative Analysis of the Language of the *Šarḥ* Relative to Other Registers of CJA. [↑](#footnote-ref-77)
72. Even in CA words, instances of ش alongside an emphatic consonant are relatively rare. Cohen reports that, among the Jews of Tunis, [š] never appears next to an emphatic consonant and is instead realized as [ṣ] (1975, pp. 21, 23). Despite this, Cohen himself records the form *få̐ṛš* (ibid., p. 27). [↑](#footnote-ref-79)
73. See below in section [2.2.7]: The Alveolars. [↑](#footnote-ref-80)
74. However, it is possible that this realization reflects the influence of pronunciation of these words in other dialects, and not only an internal process of dissimilation. [↑](#footnote-ref-81)
75. Other examples can be found in verses 10:10, 18:33 (ג'ייס), 18:40, 33:2, 33:6, 33:17. [↑](#footnote-ref-82)
76. Renassia [~1930], p. 24. Marçais documents a similar pronunciation in Tlemcen: *jîš* (1902, p. 32). An instance of “inverted” dissimilation (zê͜ĭš) is documented in the nomadic dialects (see: Marçais 1908, p. 19; Dhina 1938, p. 314). [↑](#footnote-ref-83)
77. In the questionnaire I presented to them, the informants used both the word *ˁūd* and *šǝǧr-a*. In the šarḥ to the Psalms the word עוד is also found (Ps 105:33, 148:9), and in the plural עואד (Ps 96:12). In Ps 74:5, אלסג'ור (אלעוד) are presented by way of alternatives. [↑](#footnote-ref-84)
78. Ostoya-Delmas 1938, p.69. cf. Marçais 1902, p.32 (séjra), Cohen 1912, p. 81. The š / s exchange in the word شجرة is not confined to the Maghreb and can also be found in Mashriqi dialects: Landberg 1942, III, p. 2021. [↑](#footnote-ref-85)
79. See section [6.1.3], D. In his trilingual dictionary (p. 413), Rabbi Yosef Renassia writes *chemss*, thereby documenting a different pronunciation to the one he usually used in the *šarḥ*. [↑](#footnote-ref-86)
80. Heath presents this pronunciation as one of his examples of the process of harmonization that occurred in the Moroccan Arabic dialects (1987, pp. 213-214). [↑](#footnote-ref-87)
81. Cohen1975, pp. 59, 141. [↑](#footnote-ref-88)
82. Brockelmann 1961, I, p. 159. [↑](#footnote-ref-89)
83. Marçais 1902, p. 32. [↑](#footnote-ref-91)
84. Cohen 1912, p. 85. [↑](#footnote-ref-92)
85. Brockelmann 1961, I, pp. 159, 234. [↑](#footnote-ref-93)
86. In the texts of the Jews of Algiers, the word is realized with [s]: līs. See: Cohen, M. 1912, p. 378. [↑](#footnote-ref-94)
87. Additional examples: ג'בל קדשו (Ps 3:5), קצר קדשו (Ps 11:4), מן סמאואת קדשו (Ps 20:7), etc. [↑](#footnote-ref-95)
88. In a book in which he compared the Hebrew and Arabic roots, Rabbi Renassia wrote the Arabic root with an *s*: *k'ods* قدس; for the Hebrew equivalent, he gave *k'odéche* قدش. He applied the same principle in all the declensions of this root. Renassia [check date], pp. 164-165. [↑](#footnote-ref-96)
89. Similarly: לקדושים (Ps 16:3) – ללמקדשין – *l-ǝl-mqaddš-īn*; קדשיו (Ps 34:10) – מקדשינו – *mqadš-īn-u*. [↑](#footnote-ref-97)
90. See section [6.1.3], D. [↑](#footnote-ref-98)
91. It is common, for example, as one of the realizations ס-שׂ-שׁ among the Jews of Jerba, both in their Hebrew tradition and in their Arabic speech. See: Katz 1978, pp. 12-13. [↑](#footnote-ref-99)
92. However, see the discussion of [ź], p. 41. [↑](#footnote-ref-100)
93. See above concerning the permanent shift *s* > *š* in the word ליש and the root ק.ד.ש. [↑](#footnote-ref-101)
94. The informant who translates without looking at the text often translates this verb by the root ג;ני: *nġǝnni* / *nsǝbbaḥ* (אָשִׁ֥ירָה: Ps 13:6). [↑](#footnote-ref-102)
95. See previous note. [↑](#footnote-ref-103)
96. The form ומשירי (Ps 28:7), translated ומן תסביחי in the *šarḥ*, was translated by one of the rabbis as: *u-mǝn tašbīḥ-āt-i*. [↑](#footnote-ref-104)
97. And only once by שבח (יְשַׁבְּחֽוּנְךָ, Ps 63:4). Forms of לשבח meaning “to quieten” were translated by הדדן (Ps 89:10, 95:8). [↑](#footnote-ref-105)
98. Cohen 1975, p. 130. [↑](#footnote-ref-106)
99. Cohen 1912, p. 232. [↑](#footnote-ref-107)
100. See section [6.1.2], B. [↑](#footnote-ref-108)
101. The origin of the emphatic quality in this word is unclear. [↑](#footnote-ref-109)
102. Cohen1975, p. 44. See also: Katz 1978, p. 382 (in transliteration). [↑](#footnote-ref-110)
103. Cohen 1912, pp. 92-93. [↑](#footnote-ref-111)
104. Barthélemy 1930, p. 501; Cantineau 1960, pp. 47-48. Cantineau quotes Zamakhshari, who states that even in CA [c] and [ṣ] could shift to [z] and [ẓ] before *d*, for example: يصدق *yazduqu*. See also: Elihi 1977, p. 450. [↑](#footnote-ref-112)
105. See the discussion on the orthography of these words in section [6.1.2] C. [↑](#footnote-ref-113)
106. Heath 1987, pp. 302-303. [↑](#footnote-ref-114)
107. Cf.: F. Talmoudi attributes the emphasis of [ẓ] to the dramatic speech of women: Talmoudi 1980, pp. 31-32. M. Cohen observes that in the Arab dialect of the Jews of Algiers, the realization [ẓ] is found in vulgar speech, onomatopoeia, and in borrowed elements. Cohen, M,. 1912, p. 55. [↑](#footnote-ref-115)
108. See above, p. 38. The realization [ź] is found, for example, in the Hebrew accent of the Jews of Djerba: Katz 1978, pp. 14-15. [↑](#footnote-ref-116)
109. Due to the emphatic quality of the *ṛ* in this word, the voiced *d* has also become emphatic: [ḍāṛ]. Rabbi Yosef Renassia always uses צ' for this root and its derivatives in his book *Zikhron Ya‘acov*. In his trilingual dictionary, however, (p. 443) he presents the original Arabic root of the word: دور. Regarding the influence of the emphatic [ṛ] on other consonants, see section [2.4.2]. [↑](#footnote-ref-117)
110. The word *ḍ-ḍār* is used in CJA in the sense of חצר (in the *šarḥ* only the plural form ḍyār (חֲצֵרִ֗ים, Ps 10:8); here, too, the initial emphatic element is the *ṛ*. [↑](#footnote-ref-118)
111. Fischer and Jastrow 1980, p. 253. [↑](#footnote-ref-119)
112. Cantineau 1960, p. 50. [↑](#footnote-ref-120)
113. Marçais 1908, p. 95. [↑](#footnote-ref-121)
114. Cohen 1975, p. 27. [↑](#footnote-ref-122)
115. Cf. Heath and Bar-Asher 1982, pp. 41-42; Cohen, M 1912, p. 53; Talmoudi 1980, p. 37. [↑](#footnote-ref-123)