

Language shift and Lexical Erosion in Chaouia: The Case of Batna

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Abstract

The present research work aims to examine the findings of a quantitative study on lexical obsolescence in the Chaouia dialect spoken in Batna province, eastern Algeria. This study examines various Berber lexical variants across twelve regions in this province to ascertain whether lexical erosion is more pronounced in certain areas and, if so, to identify the contributing factors to these disparities. A compilation of 17 lexical items from the common Berber lexicon was developed and presented to 856 participants, who were requested to supply the Berber equivalents for each term. The research indicates that lexical erosion is the prevailing trend for the majority of lexical variables, yet demonstrates minimal variation in lexical loss across the examined regions.

Key words: *Chaouia, language contact, lexical borrowing, lexical erosion.*

Introduction:

It is estimated that more than half of the people living in the world today are bilinguals (Grosjean 1982; Pearson 2007;). This state of polyglotism is brought about by different political, social and economic reasons, such as migration, exogamy, language planning, educational policies and so forth. One of the main factors that foster multilingualism is language contact. This refers to a situation where more than one language is used, usually as a result of an ethnic contact i.e., people with different mother languages living in the same setting. It is worth considering the effects that can be exerted, on both speakers and languages, as a result of such ethnic and linguistic contact. At the level of

language, the effects of such contact can be manifested in the borrowing of foreign vocabulary as well as an adoption of foreign language features, and the like. Becoming a bilingual is not always guaranteed in contact situations. In fact, at the level of speakers, language contact may lead to a gradual replacement of one language, usually the one with a lower position, by another which is of a higher status. Pearson (2007) argues that to raise bilingual children, parents need to secure the acquisition of their indigenous minority language by their kids because learning the “language of the broader community, the language of commerce, education, and the mass media, is a given” (p.399). The process of replacing one language by another is referred to in the literature as language shift which is one of the final stages in the life cycle of a human language. It seems safe to say that the decline of a given language has no trigger stronger than the presence of another language around. This temporary co-existence creates battles over the social functions that can be fulfilled through language. Not surprisingly, when a given language is no longer used to fulfill the social functions it used to in non-contact situations, it tends to be gradually abandoned even if it is the native language of a given ethnic group. Languages around the world do not have the same status or level of vitality. They can be placed along a strong–weak continuum. While other languages are considered to be international, such as English, others are held to be in a weak position and are sometimes referred to as dying languages. It is estimated, in this regard, that by the end of the twenty-first century, ninety percent of the languages spoken worldwide today will be extinct.. Ever since Michael Krauss published his now classic article “*The World’s Languages in Crisis*” (1992), linguists, encouraged and funded by international organizations like UNESCO or sometimes heartened by nationalistic motives, became obsessively concerned with describing and recording the languages that are assumed to be facing a threat of extinction. Any language that becomes extinct is considered as an “irretrievable loss to mankind” (International Linguistic Conference 1992) and any language that becomes endangered entails an endangered human knowledge. Therefore, it is stressed that it is the responsibility of the scholarly world, in general, and the duty of linguists along with UNESCO’s support and sponsoring, in particular, to protect and preserve the languages and the cultures of ethnic minorities. To that end, the status of minority languages needs to be assessed and evaluated objectively depending on the factors and criteria that lie at the heart of language use, development and decay.

1. Fishman’s Graded Intergenerational Disruption Scale

For nearly two decades, Fishman’s GIDS has served as the single mostly implemented framework for assessing language endangerment (Lewis and Simons, 2010). This original framework is an eight level scale that describes language vitality based on three evaluative criteria: language domains, literacy and, of more importance, intergenerational language transmission. In the six first levels (1-6) of the scale, the language is considered as being maintained, whereas in the two last levels (7-8) there seem to be an irreversible language shift among the new generations. Put differently, “the higher the GIDS rating the lower the intergenerational continuity and maintenance prospects of a language network or community” (Fishman,1991:87).

For instance, level 1 language is believed to be utilized in mass, labor, and nation-wide governance, education, and the media. Level 7, however, the child-bearing generation is competent in the language and is able to converse with senior citizens, but is not passing it on to the following generation, whereas level 8 is concerned with a speech community whose members are the grandparent generation.

	GIDS
LEVEL	DESCRIPTION
1	The language is used in education, work, mass media, government at the nationwide level
2	The language is used for local and regional mass media and governmental services
3	The language is used for local and regional work by both insiders and Outsiders
4	Literacy in the language is transmitted through education
5	The language is used orally by all generations and is effectively used
	in written form throughout the community
6	The language is used orally by all generations and is being learned by children as their first language

7	The child-bearing generation knows the language well enough to use it with their elders but is not transmitting it to their children
8	The only remaining speakers of the language are members of the grandparent Generation

Ttable1: Fishman's Graded Intergenerational Disruption Scale

2. The Position of Cahouia in Algeria

The status of the Berber varieties spoken in Algeria is no different from the rest of the Berber speaking regions. In fact, Algeria seems to manifest language endangerment more than the neighboring Maghreb countries. Of the 17 languages listed by Ethnologue for Algeria, eleven are Berber languages. As far as language status is concerned, the Berber varieties are grouped into: *developing* (3 languages), *vigorous* (1 language), *threatened* (4 languages), *shifting* (2 languages), and *nearly extinct* (1 language) (Gordon, 2005). UNESCO's *Atlas of the World's Languages in Danger*, on the other hand, lists eleven Berber languages that assumed to be endangered (Moseley, 2010). These are categorized into three groups: *vulnerable* (4 languages), *critically endangered* (3 languages), and *severely endangered* (4languages) (Moseley, 2010). Taking into account the Berber varieties which are judged as not being endangered and, accordingly, not included in the Atlas, we conclude that UNESCO estimates more Berber languages than those included in Ethnologue. Even so, all the Berber languages that were ranked by Ethnologue (via EGIDS) as endangered (i.e., level 6b and beyond) were also listed in the Atlas. To begin with, Tidikelt language which is spoken in some of the oases of Oued Righ around Touggourt, for instance, is said to be left with only 1000 speakers and the number is continuously decreasing (Lewis, Simon and Fennig, 2013) (30000 according to the Atlas, Moseley, 2010). Described as *nearly extinct*, the language seems to be used only by older generations whereas the younger generations had already shifted to Arabic (Lewis, Simon and Fennig, 2013). Less critical, if unstable, is the status of the Chenoua language spoken west of Algiers (provinces of Tipaza, along with Cherchell, and Chlef). Despite having a substantial population of about 76.000 speakers (as for 2007), the language seems to be unsafe and, hence, was described as a *shifting* language (Lewis, Simon and Fennig, 2013). The use of the Chenoua language is mainly confined to rural areas while it is replaced by Arabic in larger towns and cities (Lewis, Simon and Fennig, 2013). Evidence shows that some parents teach children Arabic for educational advantage and the youth seem to learn Chenoua from elders at an older age (Lewis, Simon and Fennig, 2013). Temacine language, with a population of 6000-10000 speakers by 1995 (Lewis, Simon and Fennig, 2013), is another example of a Berber variety whose population is witnessing an irreversible shift to Arabic in almost all locations. Some other Berber varieties spoken in Algeria are referred to as *threatened* languages. These include Tumzabt (spoken in the Mزاب region of the northern Saharan Algeria by a population

of 150.000 speakers as for 2007); Taznatit (spoken mainly in Gourara oases of Timimoun-Adrar, Ouakda (Bechar), dying out in Touat region, and the total population is around 58.000 speakers); Tagargrent (spoken in Ouargla by a population of 5000 speakers as for 1995); and Tamahaq (spoken south Hoggar but also in Libya and Niger by a population of 80.000 speakers) (Lewis, Simon and Fennig, 2013). Languages which were listed in the Atlas but not in Ethnologue include Tayurayt (*vulnerable*), Tasnusi (*severely endangered*), Tamahaq and Tamazight of Arzew (both *critically endangered*) (Moseley, 2010). It can be clearly noticed from the statistics showed above how the number of native speakers is not the only factor to decide upon the status of a given language. Community member's attitudes, UNICCO's second listed factor above, for instance, is what makes the Tagargrent language, whose speakers are said to have a positive attitude towards their language (Lewis, Simon and Fennig, 2013), less critically endangered than Temacine and, more clearly, the Chenoua language despite the substantial difference in the absolute number of speakers especially with this latter. What seems to have also created such difference in levels of vitality is the contact with another dominant language (in this case Arabic) which is noticeably more intense in the case of Berber varieties spoken in the north of Algeria, such as Chenoua itself, than the varieties spoken in the Sahara, such as Tagargrent and Tamahaq. Another Algerian territory that demonstrates a high degree of language contact is the mountainous region of the Aures where a major Berber variety is used, the Chaouia language. The sociolinguistic dynamics of the Awras region and the linguistic vitality of the Chaouia are the focus of this study.

It is perhaps unreasonable to consider that Chaouia language is as seriously endangered as the aforementioned Berber varieties. Though not a plausible explanation, this may be because the previous languages are relatively incomparable to the Chaouia language in terms of the absolute number of native speakers. Accurate statistics concerning the total population speaking Chaouia are unavailable, yet it was estimated to be around 3 million speakers as of 2011 (a census made in 1993 estimated the Chaouia population to be around 1.4 million speakers, Lewis, Simon and Fennig, 2013). Be that as it may, the Chaouia language is still a minority language and cannot be compared, as far as language vitality and stability is concerned, to even some other Berber varieties, such as the standard Moroccan Tamazight (a national and official language), let alone other major languages like Arabic and French. Regarding the rest of UNESCO's vitality factors (4, 5, 6, 7, 8, and 9), the Chaouia is by no means in a better position than the above endangered varieties. As to the first factor i.e. intergenerational language transmission, things cannot be portrayed in black and white, but involve, as we will see below, a lot of shades of grey.

3- Methodology:

3-1- Sampling and population:

This study comprised a sample of 856 participants, of whom 504 were female (58.88%) and 352 were male (41.12%). The participants' ages ranged from 17 to 100 years, with a mean age of approximately 46 years and a total age span of 83 years. Twelve distinct localities within the Batna province were chosen: Tazoult (74), Oued Taga (120), Theniet Elabed (70), Timgad (92), Fem Toub (92), Ichemoul (82), Inoughissen (36), Arris (96), Ghessira (54), Tkout (68), Menaa (44) and Bouzina (28).

3-2- Method:

The participants were given a 17-word list of lexical items in Standard Arabic and requested to supply their equivalents in Chaouia. The list includes six semantic domains: These include references to **time**, such as *morning*, *afternoon*, *winter*, and *summer*, as well as terms

related to **sense perception**, like *heavy* and *light*. The **physical environment** is also represented through words such as *ice* and *shade*. Additionally, the dataset features vocabulary related to **animals**, including *fish*, *birds*, and *pigeons*. Terms referring to **body parts**, such as *beard*, *heel*, *eyelashes*, and *span*, are also present. Lastly, items from the domain of **food and drink** further enrich the lexical variety observed in the study. It is evident that the majority of these concepts is part of the fundamental lexicon and is prevalent across all human languages. We compiled the list in Arabic and requested the corresponding terms in Chaouia instead of the reverse, aiming to capture the forms utilized by each informant rather than depending on word recognition as a measure of language usage. Although this approach carries the risk of eliciting responses in the same language as the stimuli (i.e., loanwords instead of native Berber terms), the empirical data presented below demonstrate that this was not the case for the majority of responses. For instance, the words *ice*, *afternoon*, *bird*, and *fish*, *heel*, and *salt* indicated that the participants frequently, and in some instances universally, offered answers that did not reflect the stimuli in any manner. Furthermore, it appears illogical to embrace the aforementioned interpretation in instances where the majority of participants selected a singular response.

4-Results:

The findings of the current research indicated a certain degree of variation in the utilisation of the Berber variants. Nonetheless, lexical attrition remains the dominant pattern observed. The following section presents the findings related to the semantic domains of the lexical items examined in this study, beginning with the first domain.

The findings for the first domain, 'the physical world', indicate a propensity for lexical substitution. Nevertheless, the two concepts discussed within this domain, 'shade' and 'ice', are not equivalent. The Berber term for 'shade', *t.ili* [θ.ɪlɪ], appears to be obsolete, reported by only ten informants (5.3%), in contrast to the Arabic loanword *ḍḍel* [əðʕəll^ʕ, ədʕəll^ʕ], which is overwhelmingly prevalent (94.6%). The Berber term for 'ice', *ajris* [aʒrɪs], remains in contemporary usage. It constituted over a quarter of the tokens generated for the relevant lexical item (36.57%). Arabic borrowings, specifically *ḡemmad.a* [əɫ.ɖʒəmmad.a] and its various realisations, as well as, albeit less frequently, *jjlid* [ʒʒɪɫɪd] and *la.glas* [la.ɡlasʕ], were identified as predominant (63.43%).

The findings for the domain of 'time' showed that the Berber word for one concept is maintained, while the variants for the other three are nearly extinct. The Berber term for 'summer', *anebdu* [anəbðu], is significantly retained in the Tacawit dialect of the examined region (84.53%). This variant is utilised in the northern Berber languages, including Tachelhit, Central Moroccan Tamazight, Tarifit, Kabyle, Ghadamès, and Nefoussa, while the variant *iwilenis* is primarily documented in Tuareg. Arabic borrowings representing the same concept, specifically *ṣṣif* [əssɪf], *l.ḥumman* [əl.ḥumman], and *awessu* [awəssu], were utilised by a mere 16.47% of the participants. The data acquired for 'winter' exhibit a markedly distinct trend. The Berber term for winter, *t.ajres.t* [θaʒrəst], is considered obsolete in this region (3.27%). The vast majority of speakers have utilised the Arabic loan *l.mecta* [əl.m.əʃta], with occasional variants *ccta* [ʃʃta] or *cceta* [ʃʃta] (96.73%). The Berber term for 'morning',

ti.fawt, was entirely absent from the data and can therefore be deemed obsolete. The alternative Berber variant, t.anezzay.t [θ.anəzzaj.θ], was also found to be obsolete (2.97%). The Arabic borrowing, t.aṣebhi.t [θ.asʕəbhɪ.θ], was found to be predominant (97.03%). The data analysis revealed comparable results concerning the concept of 'afternoon.' The Arabic loanword, t.aʕecwi.t [θ.aʕəfwi.θ], was found to be predominantly prevalent (86.25%). The Berber variant, t.ameddi.t [θ.aməddɪ.θ], was reported by a minimal percentage of informants (12.58%), suggesting that it is an antiquated term in the area addressed in this study.

The results derived from the three concepts selected within the realm of 'animals' closely resemble those of the previously discussed variables; lexical loss persists as the dominant pattern. The Chaoui word for 'fish', aslem [asləm] or t.aslem.t [θ.asləmθ, θ.asləm.t], was found to be slightly maintained at 21.14%, in contrast to the Arabic loanword, l.ḥut [əl.ḥut], also rendered as elḥut.it [elḥut], making up 78.86% of the total. The occurrence of Berber terms for *bird* and *pigeon* reveals an even greater degree of lexical erosion. The Berber variant, actit [aʕtɪtʰ], constituted merely 0.94% of the tokens generated, in stark contrast to the Arabic borrowings, aṭeyyar [atʕajjarʕ] and afrux [afrʕux], which overwhelmingly prevailed in informants' responses at 92.51%. Only a small number of speakers produced the Berber form for the latter item, such as *adbir* [aḍbir] or t.adbir.t [θ.aḍbir.θ], accounting for just 4.72% of all responses. In contrast, the Arabic loanword t.aḥmam.t [θ.aḥmamθ, θ.aḥmamθ] was overwhelmingly favored, comprising 97.54% of the total instances.

The lexical field of 'body' presents somewhat different outcomes compared to the previously analyzed items. The Berber term for 'heel', most commonly expressed as *nirz* [nɪrəz] and occasionally as *inirz* [ɪnɪrəz], emerged as the best retained among the three, with a preservation rate of 56.37%. It occurred with slightly greater frequency than Arabic loans, lḥafer [əl.ḥafər] and ləaqəb [əl.ʕaqəb] (35.85%). The difference in frequency between the Berber forms and the Arabic borrowings was found to lack statistical significance. The Berber term for 'span', t.ardas.t [θ.arḍas.t, θ.arḍas.t], was retained significantly (33.27%), whereas the Arabic loanword cber [ʃʃbər] was considerably more prevalent (64.38%). Similarly, the Arabic terms llehyet [lləhjaθ] and llehya [lləhja] emerged as the predominant variants for 'beard' (71.88%), in contrast to the Berber variant t.mar.t [θ.mar.θ] (31.79%). In contrast to the results derived from the preceding three variables, the analysis indicates that the Chaoui word for 'eyelash(es)', abel [abəl], frequently shown in the plural form abliwen [abliwən], is documented in the Tacawit variety prevalent in the province of Batna (5.47%). The Arabic borrowing, manifested as asccfer [ʃʃfərʕ], ccifer [ʃʃɪfərʕ], ccafer [ʃʃafərʕ], or acfer [aʕfərʕ] (plural: ccwafer [ʃʃwafərʕ], ccfafer [ʃʃfərʕ], or lecfafer [ʃʃwafərʕ]), exhibited a predominant presence of 93.32%.

Statistical analysis has indicated that the words 'salt' and 'yeast' within the 'food and drink' domain are no longer used in the region. The Berber term for 'salt', t.isen.t [θɪsənt, θɪsənθ], was entirely absent from the data (0.00%), in contrast to the Arabic borrowings, l.mlḥ [əl.məlḥ, lə.mləḥ] and rrbḥ [rrbəḥ, rrəbḥ], which were predominantly represented in the data (99.02%). A comparable trend was noted for 'yeast'; the term amtun

[amtun] was articulated by only two informants (0.23%). The Arabic loan t.axmir.t [θ.axmir.θ] was spoken by nearly all respondents in the study (99.02%).

The semantic category, *sense perception*, analysis demonstrated two divergent patterns. The Berber adjective for *light*—rendered as *y.fess* [jɸəss, ɪɸəss] or *y.fsis* [jəɸsɪs, ɪɸsɪs]—was found to be completely obsolete, with no recorded occurrences (0.00%). In contrast, the corresponding Arabic loanword dominated the responses, primarily appearing as *y.xfif* [jəɸɸɪf, ɪɸɸɪf], and less frequently as *y.xeff* [j.xəɸɸ, ɪ.xəɸɸ] or *axfif* / *t.axfif.t* [axɸɪf, θ.axɸɪf.θ], accounting for 99.55% of the total. Conversely, statistical results showed that the Berber equivalent for *heavy* has been largely retained in the region. The forms *yi.ɣag* [jɪɣɣag] and *yi.ɣay* [jɪɣɣaj] made up 62.72% of the responses, whereas the Arabic alternatives—*yetqel* [jə.θqəl] and *ye.dqel* [jə.ðqəl] were slightly less common, representing 37.22%. However, the difference between these proportions was not found to be statistically significant.

Figure 1 below illustrates the rates of the Berber variants in comparison to those of loanwords.

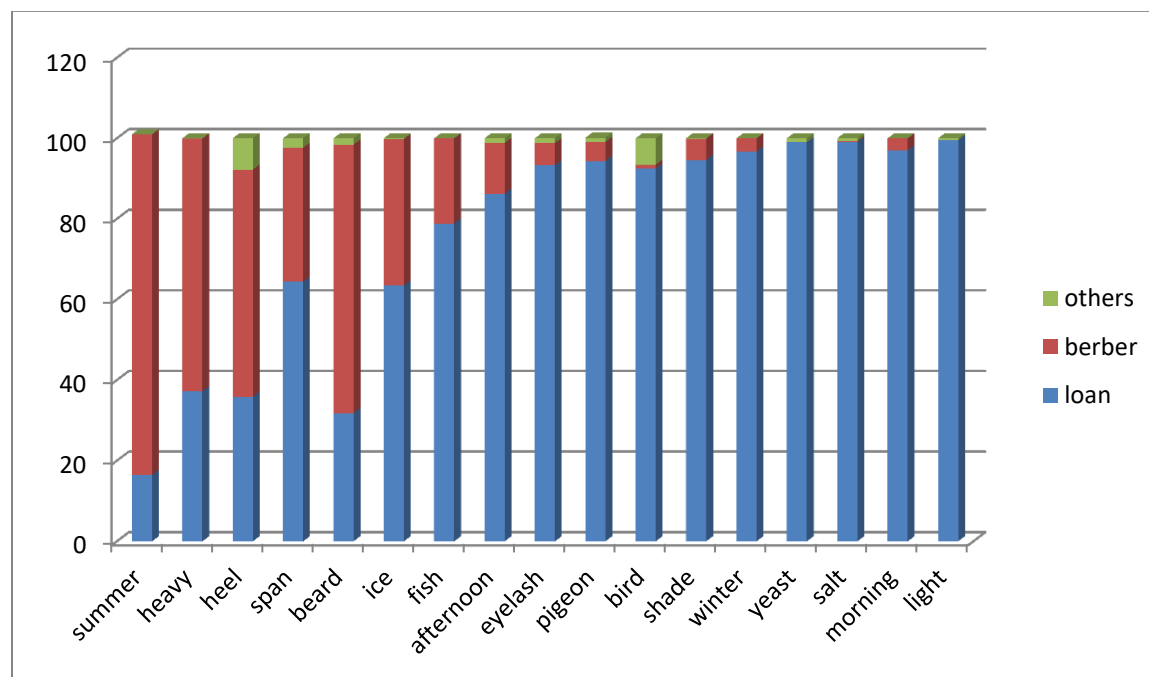


Figure No. 1: Lexical Substitution in the 17-Word List

The final results of the current work are presented in the table below. The Chaoui words are arranged in descending order of lexical preservation, from the most preserved to the least preserved, accompanied by our assessment of their prevalence in the region studied in this work, based on the findings outlined above, the extent of lexical loss in the region under investigation is calculated by deducting the percentage of Berber usage from the total (100%). Responses that deviate from the commonly employed Berber variant intended to convey the targeted meaning, including semantic extensions of other Berber terms with varying significances, borrowings, and other extraneous responses, are all regarded as facets of lexical attrition.0%

Table n°1: Findings

Lexical item	Chaoui term	Preservation level (%)	Attrition level	Position
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			(%)	
summer	anebdu	84.53	16.47	maintained
heavy	yi.ɣag/ yi.ɣay	62.72	37.22	moderately maintained
heel	i.nirz	56.37	35.85	moderately maintained
span	t.ardas.t	33.27	64.38	marginally maintained
beard	t.mar.t	66.62	31.79	marginally maintained
ice	ajris	36.37	63.43	marginally maintained
fish	t.aslem.t	21.14	78.86	marginally maintained
afternoon	t.ameddi.t	12.58	86.25	dated
eyelash(es)	abl.iwen	5.47	93.32	dated
pigeon	t.adbir.t	4.12	94.38	dated
bird	actiɛt	0.94	92.51	virtually obsolete
shade	t.ili	5.3	94.6	virtually obsolete
winter	t.ajres.t	3.27	96.73	virtually obsolete
yeast	amtun	0.0	99.02	virtually obsolete
salt	t.isen.t	0.23	99.02	virtually obsolete
morning	ti.faw.t	97.03	2.97	virtually obsolete
light (adj.)	y.fss / y.fsis	0.00	99.55	virtually obsolete

The variations in lexical obsolescence among the twelve examined localities were statistically insignificant, with the exception of two concepts: heavy and bird. The former exhibits regional variation more prominently. The data analysis indicates a gradual decrease in the utilisation of the Berber variant, yi.ɣag /yi.ɣag, in eastern regions.

Regarding the second variable, bird, cross-regional variation was demonstrated to pertain to the nature of loans utilised instead of highlighting a contrast between loanwords and the Berber form, the variant *aɣeyyar* was found to be overwhelmingly prevalent (92.51%) in the western areas, while the variant *aɣɣux* appeared infrequently (0.94%).

5-Discussion:

The findings of this research indicated a reduction in the usage of indigenous Berber terms, with a marked inclination towards Arabic borrowings across most examined lexical categories. The native form referring to *summer* was found to be completely preserved. Moreover, a balance was

observed between Berber and borrowed expressions for the concepts of *heavy* and *heel*. The results also showed that Arabic loans are prevalent, though to differing degrees. The Berber variants for certain other variables, specifically ice, beard, span, and fish, although diminishing, were demonstrated to remain in use. The remaining variables morning, afternoon, bird, pigeon, eyelashes, shade, winter, salt, yeast, and light displayed Berber variants that were either dated, nearly obsolete, or completely obsolete.

Data analysis indicated negligible variation in lexical obsolescence across the studied localities. The main difference resides in the ratios of Arabic loanwords employed for specific terms, particularly 'bird.' The data reveals a higher level of lexical obsolescence in northern locations regarding the notion of heaviness. In the western region of the state, the Berber designation (yīzag/yīzay) is chiefly used for this notion, while in the eastern area, the Arabic borrowing (ye.tql / ye.dql) is more commonly employed.

An important aspect to emphasize is the participants' place of residence over time. This variable appears to have influenced at least one concept, namely birds. The data analysis reveals that Arabic loans are widespread in all twelve studied localities. The Berber variant actiṭ was provided by individuals who were raised outside the specified study regions. Three individuals come from Souk Naamane, and one comes from Ras el Aioune. Both areas are located within the Bellezma region, where the Chaoui form appears to be somewhat preserved.

6. Conclusion:

This research highlighted the dominance of Arabic borrowings over Berber forms within the Chaouia dialects spoken in Batna province. The rise in foreign loanwords within core vocabulary, as evidenced by the provided wordlist, illustrates the depth of linguistic contact between Chaouia and Arabic. It also signifies the expansion of bilingualism within the Chaouia linguistic community. Although the study indicated negligible regional variation in lexical erosion among the analysed localities, a more comprehensive list is necessary to accurately reflect cross-regional disparities. Factors including age, gender, and mobility must be considered to achieve a comprehensive understanding of lexical obsolescence in a minority language.

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