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MILROY'S SOCIAL NETWORK MODEL REVISITED: ARABIC-CHAOUIA CONTACT, ETHNIC TIES, AND LANGUAGE CHANGE

A CASE STUDY OF BATNA CITY

Thesis Submitted to the Department of English Language in Fulfilment of the Requirements for the Degree of 'Doctorat Es-Sciences' in Linguistics and Didactics.

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I hereby declare that the substance of this dissertation is entirely the result of my investigation and that reference or acknowledgement is made, whenever necessary, to the work of other researchers.

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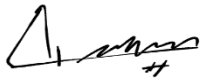
Signed: 

Dedication

I would like to dedicate this work to a number of people who have been supportive to me along this long journey.

To my father and mother, my sisters and brothers, for their support and encouragement.

To all my close friends and classmates for their invaluable and consistent assistance and support.

This humble work is dedicated with love to all of you.

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Abstract

The extensive Arabic-Berber contact gave rise to new social aggregations and ethnic networks of different types across various social hierarchies in Batna community, Algeria. Using a modified version of Milroy's Social Network Model, called '*the Syncretic Social Network Model'* (SSNM), this study set the task to examine the association between interethnic contact, ethnic network strength and patterns of dialect change among Chaoui speakers in Batna community. In essence, it seeks to: a) investigate the extent to which lexical change in Chaouia correlates, systematically, with speakers' ethnic network density, b) examine how Arabic lexical borrowing in Chaouia operates, its mechanisms and sociocultural and ideological motives, and c) explore the embodiment of ethnic identity formation in the linguistic habits of friendship networks. Framed within sociolinguistics, and informed by social constructivist views, this ethnic network study integrates methods and concepts from variationist sociolinguistics, sociology and anthropology. It incorporated a variety of research tools, including social network questionnaires, participant-observations, note taking and ethnographic interviews. Thus, ethnic network questionnaires of 1003 Chaoui informants were examined in relation with their lexical choices. In addition, intensive ethnographic observations were conducted to explore two ethnically based friendship networks, which vary on several sociocultural grounds. A set of Network-based analyses and field-observations were carried out to gauge both networks' ethnic cohesiveness, dynamics of lexical change and linguistic practices. The main result indicates that ethnic strength and cohesiveness co-vary, significantly, with dynamics of lexical change in Chaouia dialect. Respondents who contract strong Chaoui ties are more likely to adopt Chaoui words, whilst respondents who contract weak ties are less immune to Arabic influence and, hence, are more prone

to use Arabic loanwords. The ethnographic study of Chaoui youngsters in Batna ville elucidated that ethnically dense friendship networks support dialect stability and maintenance, whereas weak and multiethnic friendship networks promote lexical change. In urban interethnic settings, migrant Chaoui youngsters use various Chaouia linguistic practices, stylistically, as a socioindexical function of membership, Ethnic loyalty, bi-ethnic identity, and urbanity. Sedentary, urban youngsters, in contrast, cross into salient Chaouia dialect norms to mark distance from their Chaoui counterparts. The results, also, demonstrated the major role of weak ethnic ties, Brokers and geographically mobile speakers in the dissemination of Arabic loanwords into different social groups and rural landscapes. The extended *Syncretic Social Network Model* was discussed at the end of the thesis, along with its practical considerations and guidelines.

Keywords: Arabic, Chaouia, Ethnic network, Ethnic ties, Lexical borrowing, lexical change, Identity construction, Milroy's Social Network Model

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Conventions used in this Thesis: Transcription and Transliteration Protocols

This thesis uses the transcription protocols, both phonetic and orthographic, which are displayed in the tables below to represent all the examples and speech data observed in the research study. The symbols used are associated not only with the phonetic inventory of Chaouia varieties, but also with Classical Arabic, Modern standard Arabic and Arabic based dialects. Our motivation for doing so is to capture the sociolinguistic variation in the spoken, authentic forms used across regions in Batna speech community.

Phonetic Transcription

Arabic (Dariğa)

Consonants

Symbol	Phonetics Transcription	Example	MSA/Classical Arabic	English Gloss
ا	[ʔ]	اكيد [ʔkɪːd]	اكيد [ʔkɪːd]	Sure.
ب	[b]	باب [bɑːb]	باب [bɑːb]	door.
ت	[t]	توت [t uː n]	توت [tuː n]	blackberry (fruit).
ث	[θ]	ثوم [θuːm]	ثوم [θuːm]	garlic.
ج	[ʒ]	جذع [ʒɪd̪ʕ]	جذع [ʒɪd̪ʕ]	trunk.
ح	[ḥ]	حلم [ḥʊlm]	حلم [ḥʊlm]	dream.
خ	[x]	خدام [xədɑːm]	عامل [ʕemil]	worker.
د	[d]	دوا [dwɑː]	دواء [dwɑːʔ]	disease.
ذ	[d̪]	ذيب [d̪iːb]	ذئب [d̪ɪʔb]	wolf.
ر	[r]	ريڤ [riːg]	ريق [riːq]	saliva.
ز	[z]	زلڤ [zləg]	زلق[zʌlɪqʌ]	to slip
س	[s]	سيف [seif]	سيف[seif]	sword.
ش	[ʃ]	شر [ʃər]	شر [ʃʌr]	evil.
ص	[sˤ]	صوت [sˤɔːt]	صوت [sˤaʊt]	voice.
ض	[dˤ]	ضحك [dˤʌḥk]	ضحك [dˤʌḥɪk]	laughter.
ط	[ṭ]	طاقة [ṭʌqʌ]	نافذة [nʌfɪd̪ʌ]	window.
ظ	[ðˤ]	ظل [ðˤəl]	ظل [ðˤɪl]	shadow.
ع	[ʕ]	عبد [ʕebd]	انسان [ʔɪnsen]	human being.
غ	[ɣ]	غايب [ɣeib]	غائب [ɣeʔɪb]	absent.
ف	[f]	فشلان [feʃlɑːn]	تعبان [təʕbeb]	tired.
ق	[q]	سراق [sərɑːq]	سارق[sʌrɪq]	thief.
ك	[k]	بكا [bkɑː]	بكى [bʌkʌ]	he cried.
ل	[l]	يلم [Jləm]	يجمع [jəʒməʕʊ]	to collect.
م	[m]	مليح [mliːḥ]	جيد [ʒʌjɪd]	good.
ن	[n]	ناض [nɑː dˤ]	نهض [nʌhʌdˤʌ]	wake up.

ه	[h]	مهبول [məhbuːl]	مجنون [meʒnuːn]	insane
و	[w]	وردة [wərdʌ]	الوردة [elwʌrdʌ]	rose
ي	[j]	يجبد [jəʒbəd]	يجذب [jəʒḏɪbʊ]	to pull
ء	[ʔ]	يئست [jʔəst]	يئست [jʌʔɪ stʊ]	get disappointed

Short Vowels

Transcrption	Example	MSA/Classical Arabic	English Gloss
[e]	يبان [jben]	يظهر [jʌðˤhʌrʊ]	to appear
[ɪ]	عطاني [ʕtʌni]	اعطاني [ʔʕtʌni]	he gave me…
[ʌ]	طابلة [tʌblʌ]	طاولة [tʌwɪlʌ]	Table
[ə]	برد [bərd]	جو البارد [jʌw berɪd]	cold weather
[ʊ]	كلش [kʊlʃ]	كل شيء [kʊlʊ ʃeiʔ]	everything
[ɒ]	سوطا [sˤɒtʌ]	قفز [qʌfʌzʌ]	jump
[æ]	الواد [əlwæd]	وادي [wʌdi]	valley

Long Vowels

Transcrption	Example	MSA/Classical Arabic	English Gloss
[ɑː]	مات [mɑːt]	مات [mɑːtʌ]	dead
[iː]	حيط [ḥiːṭ]	حائط [ḥɑːʔɪt]	wall
[uː]	حوت [ḥuːt]	سمك [sʌmʌk]	fish
[ɔː]	صوم [sˤɔːm]	صوم [sˤaʊm]	fasting

Chaouia

Symbol Tifinagh	Phonetics Transcription	Example	MSA/Classical Arabic	English Gloss
ⵖ	[b]	يلبوب [jəlbub]	يتسلق [jeteseleqp]	climb
ⵜ	[t]	تغاط [tɣaːt]	معزاة [mɪʕzet]	coat
ⵅ	[θ]	يتوثلاي [jətuːθlei]	يتكلم [jetekelemʊ]	he speaks
ⵉ	[ğ]	انيجيو [ʌnijiw]	ضيف [dˤeif]	guest
ⵣ	[dʒ]	يدجالا [jedʒellʌ]	يحلف [jeḥlɪfʊ]	to swear (by god)
ⵃ	[ḥ]	يحمز [jḥeməz]	يحسد [jeḥsɪdʊ]	to envy
ⵅ	[x]	ايخف [iːxəf]	راس [rʌʔs]	head
ⴷ	[d]	يريد [jerjəd]	خرج [xʌrʌʒʌ]	to go out
ⴹ	[ḏ]	ايذامن [iḏemmən]	دم [dem]	blood
ⵔ	[r]	هوراوين[hʊrewiːn]	رئتين [rɪʔʌtein]	lungs
ⵕ	[ṛ]	اروض [ʌṛuːdˤ]	لباس [lɪbes]	clothes
ⵣ	.[z]	يزنز [jəzzenz]	باع [bʌʕʌ]	to sell
ⵥ	[ẓ]	انزار [ʌẓɑːr]	مطر [mʌṭʌṛ]	rain
ⵙ	[s]	يسوسف [jsuːsəf]	يبزق [iʌbzɪqp]	to spit (on)
ⵛ	[ʃ]	يرشل [jerʃəl]	تزوج [tʌzʌwʌʒʌ]	he got married
ⵜⵛ	[tʃ]	يتشا [jetʃʌ]	اكل [ʌkʌlʌ]	ate

⊘	[sˤ]	يصقض [jesˤqədˤ]	(الماء) بارد [berɪd]	.cold (water)
∃	[dˤ]	ماضون [mʌdˤɔ:n]	مريض [mʌri:dˤ]	.sick
Ɛ	[ţ]	تيط [tiţ]	عين [ʕein]	.eye
∃	[δˤ]	لوظ [lɔ: δˤ]	وحل [wʌḥl]	.mud
⊦	[ʕ],[ɛ]	يتعلولا[ɪteɛelu:la]	تارجح [tʌʔʌrʒəḥʌ]	.swang
Ч	[ɣ]	يتنوغ [jətnu:ɣ]	يتعارك [jʌtʌɛrək]	.dispute
Ⱨ	[f]	فوس [fu:s]	يد [jed]	.hand
Ⴆ	[q]	يتقل [jeteqqal]	ينظرالى [jʌnδˤɒrɒ]	.look at
Ⴝ	[g]	يتڤ [jttug]	يعجن [jʌɛʒɪnʊ]	.to knead
Ⱪ	.[k]	يسكركر [jeskərər]	يجر [bʌḥr]	.to push
Ⱪ	[k̲]	فوكث [fu: k̲th]	شمس [ʃʌms]	.sun
Ⱞ	[.l]	اول [u:l]	قلب [qʌlb]	.heart
Ⱞ	[ɬ]	لوظ [ɬɔ:δˤ]	وحل [wʌḥl]	.mud
Ⴑ	[m]	تامثنا [temeθnʌ]	مطر [mʌţʌr]	.rain
Ⅰ	[n]	تانست [tennest]	مفتاح [mɪfteḥ]	.key
∅	[h]	نهني [nehni]	هم [hʊm]	.them
Ⴓ	[w]	ايباون [ibewən]	فاصوليا [fɑ:sˤɔ:lɪə]	.bean
⊁	.[j]	يسن [jesən]	يعرف [jʌɛrɪfʊ]	.to know
₀	[ʔ]	أفكاد [ʔfked]	اسكب [ʔʊskəb]	.pour (liquid)

Short Vowels

Transcrption	Example	MSA/Classical Arabic	English Gloss
[e]	اسڤنا [ʌsegnʌ]	سحاب [sʌḥa:b]	.clouds
[ɪ]	ايمي [imi]	فم [fʌm]	.mouth
[ʌ]	اضو [ʌdˤɔ:]	ريح [ri:ḥ]	.wind
[ə]	برد [jkərd]	نهض [nʌhʌdˤʌ]	.woke up
[ʊ]	دونت [dʊnt]	الشحم [ʃʌḥm]	.fats
[ɒ]	اكطوفت [ʌktɒft]	نملة [nʌmlʌ]	.ant

Long Vowels

Transcrption	Example	MSA/Classical Arabic	English Gloss
[ɑ:]	احلماظ [ʌḥəmɑ:δˤ]	اعسر [ʔʕsʌr]	.left-hander
[i:]	انغيغث [enɣi:ɣθ]	قتلته [qʌteltʊhʊ]	I killed him/her (it)
[u:]	هاڤوث [ḥʌgu:θ]	غيمة [ɣeimʌ]	.fog
[ɔ:]	لوظ /[lɔ:mδˤ]	وحل [wʌḥl]	.mud

Orthographic Conventions

Symbol	Meaning
…<laugh >…	Paralinguistic features-e.g. speaker's laughter…
[]	Squared brackets used in the phonetic transcription of sounds
()	Used to explain what the interviewee(s) mean(s)
.	very Short pause
..	short pause
…	long pause
amm أممم	Fillers
-	hyphenation used as a linking device between more than one word

Transliteration

The Transliteration Scheme table below was devised by the Library of Congress and the American Library Association for Non-Roman orthography. It displays the Transliterations of some of the Arabic names (places and figures) used in this thesis. As for Chaouia, we used the extended Latin alphabets instead of Tifinagh orthography for all Berber names, Toponomy and historical events. Romanization is applied whenever needed, as in *tabeʕli:t*. It is worth noting that we will be using the words *Chaouia* and *Tachawit* to mean the same thing; that is, a Berber variety spoken in the Eastern regions of Algeria. However, we will use the term *Chaoui* as an adjective (e.g., Chaoui teen).

Letters/ Sounds	Transliteration	Letter/ Sounds	Transliteration	Letter/ Sounds	Transliteration
ا	a	ش	sh	و	w
ب	.b	ص	ṣ	ي	y
ت	.t	ض	ḍ	ـِ	i
ث	th	ط	ṭ	ـُ	u
ج	J	ظ	ẓ	ـَ	a
ح	ḥ	ف	f	ـَى	á
خ	kh	ق	q	ـَا	ā
د	.d	ك	k	ـُو	.ū
ذ	dh	ل	l	ـِي	ī
ر	.r	م	m	ـَىْ	ay
ز	z	ن	n	ـَوْ	aw
س	s	ة ، ه	h	ء (middle & final)	’

List of Abbreviations

AAVE: African American Vernacular English

BC: Before Christ

ENSS: Ethnic Network Strength Scoring

EHI: Ethnic Homophily Index

EO: Ethnic Orientation

HCA: Haut Commissariat à l'Amazighité

HEO: High Ethnic Orientation

LEO: Low Ethnic Orientation

MSA: Modern Standard Arabic

ENSS: Ethnic Network Strength Scoring

SSNM: Syncretic Social Network Model

GENERAL INTRODUCTION

The sociolinguistic counterparts of interethnic contact may extend from particular miniature, linguistic choices to broader typological differences. Extensive contact between two structurally related linguistic systems, or language varieties, may lead to fine-tuned, miniature linguistic changes-interpersonal accommodation and style-shifting, whilst contact between two structurally unrelated languages may result in new linguistic developments, such as code switching and dialect shift. Accordingly, speakers in these two distinct contact situations avail themselves of a wider *Ethnolinguistic repertoire* in various social contexts. In the erstwhile situation, speakers tend to replace some of their native dialectal forms, be they lexical or morphosyntactic, with other socially embedded forms to index social and regional affiliations. In other interethnic encounters, the sociolinguistic outcomes are highly noticeable, such that speakers tend to gradually substitute their brought-along native dialects and adopt new varieties, most notably in host societies wherein heritage languages are stigmatized and underprivileged.

Research on language contact and its link with social network structures received a growing attention ever since the inception of the second wave of variationist sociolinguistics in late 1970s. The sociolinguists James Milroy and his wife Lesley Milroy, also called the Milroys, have done extensive sociolinguistic research on local networks and vernaculars in several English speaking communities, especially those which were dominated by rural, Lower Working groups. The Milroys called into question Labov's (1966) *pre-formulated* framework and, alternatively, used the participant observation method to identify any *emerging* locally based groupings in the community. Like Labov, however, they approached social identity as merely a symbol of we-group-building, marked by the use of local speech

norms. In 1980, Lesley Milroy designed a '*Social Network Model'*, which conceptualizes and operationalizes 'Social Network' construct in terms of density and multiplexity, and probed down the ways in which structured variation correlates with locally based taxonomies in geographically defined communities. Milroy's (1980) Social network model foregrounded the positive value of non-standard forms, and focused on role of dense social networks in maintaining local vernacular forms among Working Class groups. Milroy's (1980) Social network model, to which subsequent literature refers, has been replicated in many research projects, both large and small. A plethora of dialect surveys and introductory textbooks has been devoted to address the linguistic counterparts of cohesively dense and weak social networks in monolingual settings (Holmquist, 1985) and multilingual settings (Bortoni-Ricardo, 1985; Li Wei, 1992). Yet, while the 'Social Network' notion has been widely theorized and tested in several western societies, its veracity in the North African societies has never been tested. Also, while many fieldworkers working on the Berber dialects in Algeria-e.g., Chaouia, Kabyle-placed the global, social categories, like gender, ethnicity and regionality, at the center of their focus (Arezki, 2014; Dendane, 1994; Guedjiba, 2012; Sherazade, 1993), they, however, did not fully account for the impact of ethnic network density on dynamics of lexical change and dialect stability in the Arabo-Berber communities.

Batna is blessed with its complex multicultural make up and sociolinguistic diversity. A glance over the long arc of history shows that it has been inhabited by social groups, which vary on many sociocultural and regional grounds. The long-term population movements, coupled with modernization and Arabization processes, moulded the sociolinguistic profile of many areas in Batna and, by extension, Berber speaking communities in Algeria. Extensive interethnic contact between Chaoui people and Arabs yielded significant cross-linguistic

developments in the linguistic inventory of Chaouia. Chaouia has been increasingly, and continuously, cast aside by Arabic dialectal norms, especially in the case of lexicon. By way of example, Chaoui speakers who contract strong ethnic ties with other Chaoui speakers tend to be linguistically conservative, whilst speakers who contract with non-Chaoui contacts tend to adopt new Arabic forms. Yet, notwithstanding these noticeable linguistic developments, the sociolinguistic status quo of Arabic-Chaouia contact in Batna is among the least explored and understood phenomena in Berber linguistic literature. So far, very few attempts have been made to document some of the linguistic developments in Chaouia, especially those that pertain to lexicon and phonology (Kossmann, 2013; Guedjiba, 2012). Also, little is known about, for instance, the complex ways whereby lexical change and diffusion operate in Chaouia-speaking areas, and how they co-vary with patterns of ethnic network cohesiveness in different urban and rural areas in Batna. Moreover, a preponderant sociolinguistic counterpart of the long-term Arabic-Chaouia contact in Batna ville is the development of socially embedded linguistic practices among Arab urbanites and Chaoui migrant families. Many of these ethnicity based speech practices are ascribed to significant deep-seated social meanings, evaluation norms and local ideologies.

In addressing these aforementioned lacunas and issues, this present research project sets the task to examine, empirically, the interplay between social network density and lexical variation and change in Batna speech community. In essence, the researcher introduces a new extended version of Milroy's social network model, called the *Syncretic Social Network Model* (SSNM), to investigate properties of ethnic cohesiveness through variationist and ethnographic lens. This research, also, aims to investigate whether Chaoui speakers with strong Chaoui ties differ linguistically from those with weak ethnic ties or who contract with

non-Chaoui contacts. In addition, it seeks to examine how Chaoui and Arabic loanwords vary and change across ethnically cohesive and ethnically weak networks. Finally, this present study sets the goal to explore ethnically exclusive linguistic practices across Chaoui friendship networks in Batna city.

It is worth noting that this interdisciplinary research tackles distinct questions in the survey and ethnographic study. As for the survey, four basic questions will be addressed:

a. To what extent is the Syncretic Social Network Model applicable to the unexplored North African speech communites?
b. To what extent does ethnic strength co-vary with patterns of lexical variation and change in Batna city?
c. To what extent do weak Chaoui ties accelerate the transmission and dissemination of Arabic loanwords across youngsters in Batna city?
d. What are the socioregional forces which correlate, systematically, with lexical change in Chaouia dialect?

As for the ethnographic fieldwork, which was conducted in Batna Ville, the researcher addresses the following questions:

e. To what extent do migrant Chaoui families converge linguistically with the local mainstream sociolinguistic changes in Batna city?
f. To what extent is males' friendship network dissimilar socioethnically and linguistically from females' friendship network in Batna urban landscapes?

Based on the aforementioned sociolinguistic issues, research questions, coupled with the sociolinguistic literature on the topic, this research proposes the following hypotheses:

Hypothesis 1) Ethnic strength co-varies, systematically, with dialect change and stasis. Chaoui speakers with strong, multiplex ethnic ties are more resistant to lexical change, whilst speakers with weak, uniplex ethnic ties are more prone to adopt Arabic loanwords. Dynamics of ethnic strength crisscrosses, significantly, with other sociodemographic motives.

Hypothesis 2) Chaoui migrant male youngsters constitute an an ethnically-nested kinsfolk and a culturally homogeneous network. The sociolinguistic outcomes of this ethnic homogeneity is a resistance to Arabic influence and diffusion of Arabic loanwords. Female urban youngsters constitute an ethnically heterogeneous friendship network. The sociolinguistic counterparts of such ethnic heterogeneity is a high degree of Arabic lexical borrowing and eclipse of Chaoui native terms.

Significance of the Study

The sociolinguistic importance of this work is twofold. First, the research findings would provide future researchers with crucial background knowledge and new information about the impact of network structures on lexical change in Berber speaking communities. Second, this study cast light over some ethnicity-based practices in the Arabo-Berberic contexts, mainly *Linguistic Profiling* and *Crossing*, which echo broader social concerns for fieldworkers working within Variationist Sociolinguistics realm and Sociology of Language.

This present thesis is composed of six chapters. It builds from a sociohistorical account of Arabic-Chaouia linguistic contact, theoretical foundations of sociolinguistic variation and change, ethnic network density and speech change, research methodology, to data analysis and discussion.

Chapter ONE is devoted to a critical overview of basic notions and issues in variationist socioliguistic paradigm. It considers the locus of sociolinguistic variability, mapped against its social and spatial motives in the wider social sphere. Chapter ONE, also, attempts to discuss, quite comprehensively, the three waves of variationist studies underlying sociolinguistic enquiry ever since early 1960s.

Chapter TWO provides a brief historical sketch of Berber as a contact language across different lapses of time, foregrounding the ways in which various ancient languages and modern languages had an impact on the sociolinguistic makeup of Berber speaking landscapes in North African. This chapter, likewise, pays a close-grained attention to the different ways whereby Arabic-Chaouia contact intersects with its sociopolitical and ideological processes. Light was, also, shed on the sociolinguistic status quo of Berber and Arabic in their societal and educational avenues.

Chapter THREE sets out the task to discuss, critically, the notion of social network, its conceptualization and theoretical underpinnings. In the conceptual framework, notions such as Social Network, Multiplexity, Density and Ego are demystified. In the theoretical framework, preponderant models of social network analysis are discussed, and their applicability in different monolingual and multilingual landscapes are overviewed. The chapter ends up with a discussion of the interplay between weak ties and speech diffusion.

Chapter FOUR provides a discussion of data collection instruments and sampling strategies used in this present research. It discusses the strategies employed by fieldworkers to solicit social and linguistic information in both approaches: ethnographic fieldwork and dialect survey. Light was, also, cast over preponderant theoretical issues and some ethical considerations.

Chapter FIVE addresses the analyses of speakers' ethnic strength scores and lexical choices. Furthermore, it provides one-way regression analyses of the interplay of lexical change and different socioregional correlates. Chapter FIVE, also, addresses the statistical analyses of the two friendship networks' cohesiveness under study. In essence, it foregrounds patterns of lexical change in Chaouia dialect norms across youngsters in Batna urban setting. Then, it gradually moves to examine examples of ethnicity-based linguistic practices observed in the speech of youngsters in both networks.

Chapter SIX is mainly concerned with a discussion of the research findings in the present study. It, also, pays a close-grained attention to the social factors, which play a major role in lexical replacement and the propagation of new loans across different regional and social groups in Batna. Preponderant issues, such as dialect convergence and stasis, are discussed, quite comprehensively, in relation with the wider sociocultural processes in Batna city.

Finally, this thesis provides a conclusion of the major research findings, research limitations, social implications and suggestions for further research. *'Prospects for Future Action: What Next?'* provides sociolinguists and scholars with suggestions and guidelines to address Arabic-Chaouia linguistic concerns in public outreach programs.

1.1 Introduction

This chapter is devoted to a discussion of the interplay between linguistic variation and its social correlates in monolingual and bilingual settings. It maintains the idea that speakers, following Eckert (2008), deploy linguistic features to construct stances, characteristics and social identities. In essence, the chapter builds from basic sociolinguistic notions, patterns of language variation, to contact-induced linguistic change. Section *'Basic sociolinguistic Concepts and Issues'* addresses the conceptual framework of the chapter and considers some of the crucial constructs in variationist sociolinguistics, such as language and vernacular. Section *'Sociolinguistic Variation and Identity Construction'* addresses the ways in which language variation and language use play a major role in constructing personal and group identities. It gradually moves to review recent variationist research works on speech change, which placed speakers' *Agentivity* as their angle of vision. Section *'Sociolinguistic Variation'* tackles issues related to linguistic variation, both social and regional, and elucidates the social motives that influence the trajectory of linguistic changes. It also sketches the historical development of variationist sociolinguistics field across three distinct, yet related, waves: global, local and stylistic. Section *'Contact-Induced Language Change'* discusses aspects of linguistic contact and its structural outcomes in multicultural contexts.

1.2 Basic Sociolinguistic Concepts and Issues

1.2.1 Language as a Social Construct

Pateman (2009) states that language is a socially embedded construct that "cannot exist independently of some group of individuals somehow linked together in sustaining or reproducing that reality from day to day" (p. 34). That said, extinct languages, such as *Chimariko* and *Togoyo* are not social notions since they are not used in day-to-day interactions

by any social group. Conversely, French and English are characteristically social realities, because they are sustained as living languages, which are used not only to convey information, but also to mark personal stances and belongingness with social groups (Pateman, 2009).

That language is dovetail with society is crystal clear. Language, by its very nature, is not just *denotational*, a concept that refers to the act of conveying meanings, ideas and events. Rather, languages and language varieties are socio-political notions (Chambers & Trudgill, 2004). So susceptible are speakers to the link of social identities and language that it is quite easy for native speakers to hazard, say, the age of a speaker just by listening to his/her speech and voice quality. They would, for instance, say that he/she is an elderly person if he/she uses archaic words, such as الرومية [rɒmɪjʌ] (French) and مركانتي [mɒrkʌnti], meaning rich, instead ofلفرونسي [ləfrɒnsi] and ريش [riːʃ], respectively. Likewise, they would easily recognize the regional identity of a speaker as prototypically from Setif, east of Algeria, if he/she uses the sentence راه مرطها و راه يصب ڤد ما سنڤد [rʌh mʌrəṭhʌ gəd me səngəd], meaning it is snowing heavily. Furthermore, individual speakers and communities of speakers avail themselves of various symbolic and stylistic linguistic forms to index many personal identities, such as age, gender, social status, and to affiliate themselves with certain social groups (Eckert, 2012).

By the same token, Pateman (2009) notes that Cross-over pattern (Hypercorrection) is a good example that illustrates the interplay of language use, social reality and power. Speakers in Lower Middle Classes use the prestigious post-vocalic [r] more than Upper-middle Classes do. Labov (1966) explained this Linguistic Insecurity phenomenon by noting that Lower Middle Class speakers use more post-vocalic [r] variant to affiliate themselves

with higher, socially dominant classes in New York City and to distance themselves from Lower working classes.

Social dialectologists concur that any living language is, by its very nature, a socio-cultural construct (Chambers, J. K., & Trudgill, 2004, Milroy & Milroy, 1998). For instance, Cantonese and Manderine are dialects of Chinese. Nevertheless, speakers of these varieties do not understand one another. Danish, Swedish and Norwegian are considered distinct languages, notwithstanding the high degree of mutual comprehensibility. This suggests that linguistic factors are not adequate criteria to characterize and define any language. Italian is different from other languages, not only because it has its own specific lexicon and grammar system, but also because it has its own art, culture, literature, and history (Trudgill, 2000). Thus, in order to characterize any living language, one must account for the structural as well as socio-cultural factors.

1.2.2 Vernaculars

Delimiting the exact meaning of *Vernacular*, as it is so often true with standard code, is a complex endeavor. Nevertheless, there are some areas of preliminary agreement among sociolinguists on this construct.

Vernaculars are, by their very nature, used with reference to those language varieties which are unwritten, non-standardize and non-official. Macaulay (2009) offers a two-tiered definition; in his view, world vernaculars are non-standardized and non-officialized codes. They are not accepted as means of interaction in the intellectual and political arenas. Therefore, the Maghrebian dialects, *Brummie* variety, also labeled Birmingham dialect, and the Australian aboriginal varieties are characteristically vernaculars. Some world vernaculars,

Schiffman (1998) notes, are standardized in the traditional sense-e.g., vernacular literature, dialect poetry, and advertising.

In essence, vernaculars are usually associated with informal contexts. Due to their tight link with informality, vernaculars are spoken with the least attention paid to one's speech habits. Labov (1972) asserts that vernacular is "the style in which the minimum attention is given to the monitoring of speech" (p. 208). In other words, it is the most naturalistic, conversational, unmonitored speech code used by native speakers in their daily interactions. Tagliamonte (2006) agrees with labov and adds that vernacular is characteristically the most systematic and stabalized form of speech. First, it is systematic because it is the first variety acquired in a speaker's life span. Second, vernacular is free from the influence of Crossover pattern or Hypercorrection (Labov, 1966). Because it is unaffected by social correction and speaker's agency, vernacular became a core concept in variationist studies of ongoing speech changes (Eckert, 2012). Vernacular is mostly reserved for daily communication at home and between friends and family members. In some speech communities, vernacular marks cultural pride, solidarity and membership among its speakers (Holmes, 2001). Conversely, in other communities (e.g., United Kingdom) vernaculars are emblematic of lower classes, rural settings and uneducated people. They are socially perceived as vulgar, broken and aberration from the *correct* standard speech norms (Schiffman, 1998)

1.2.3 Speech Communities, Social Networks, and Communities of Practice

Eckert (2000) notes that "because sociolinguists' treatment of language focuses on its heterogeneity, they seek a unit of analysis at a level of social aggregation at which it can be said that heterogeneity is organized" (p. 30). The notion *Speech Community*, since the advent of variationist sociolinguistics in the early 1960s, has been a core concept is sociolinguistic

paradigm. As it is so often the case with Social Network and Community of practice, delimiting the exact meaning and characteristics of speech community is a difficult endeavor.

Some scholars defined Speech Community in terms of purely structural criteria. Lyons (1970), for instance, defined speech community as "all the people who use a given language (or dialect)" (p. 326). A rather more complex definition was introduced by Hockett (1958, p. 8): "Each language defines a speech community: the whole set of people who communicate with each other, either directly or indirectly, via the common language". Along the same line of thought, Hockett agrees with Lyons, noting that speakers in any speech community share and communicate in one variety, be it a language or dialect. However, speech community is not a purely linguistic notion, and it is easy to state many counter-examples. Troike (2003) notes that Speakers of Cantonese and Mandarin, notwithstanding the low degree of mutual comprehensibility, consider themselves as members of one speech community. Speakers of Spanish in Spain and Argentina, despite the high degree of mutual intelligibility, do not believe that they belong to one common speech community. Members in any speech community, it must be noted, share not only a common variety, but also similar social norms, speaking patterns, perceptions and attitudes towards their dialectal and cultural norms. Thus, in order to characterize a 'speech community', one must account for the sociocultural and attitudinal factors in addition to linguistic factors.

In the 1960s and 1970s, many scholars revised and elaborated the notion of speech community. Like Lyons, Gumperz (1968) stressed that a 'shared body' of speech features must be used by all speakers. However, he believed that a speech community may involve more than one language variety. Labov's (1966) groundwork on New York speech was highly

influential in that it shifted the focus from 'linguistic criteria' to shared *'social evaluations'* in the community:

> The speech community is not defined by any marked agreement in the use of language elements, so much as by participation in a set of shared norms; these norms may be observed in overt types of evaluative behavior, and by the uniformity of abstract patterns of variation which are invariant in respect to particular levels of usage. (p. 120-121)

On closer inspection, Labov (1966) states that all speakers in the community, regardless of their social backgrounds, share the same attitudes towards standard speech norms. In his seminal work of New York City speech, he found that lower working classes and higher social classes share the same positive social evaluation towards the use of post-vocalic [r] and, by extension, standard varieties. Nevertheless, Labov's *'Consensus Model'* has been criticized by many researchers. Milroy and Milroy (1998), whose framework was based on a *'Conflict Model*' of society, note that "in nation states in which there is consciousness of a standard language, vernacular maintenance can result in conflict between two opposing norms." (p. 37). The use of the non-standard form *'h-less'*, Milroys assert, was positively evaluated by many working class speakers. Likewise, in some predominantly Kabyle communities, speakers feel a strong affinity to their Tamazight culture and ascribe positive evaluation norms towards the use of Kabyle dialect.

The concept of Social network, which was borrowed from anthropology, was introduced into sociolinguistics by James Milroy and Lesley Milroy (1978), who presumed a less abstract approach to speech community. Said differently, the Milroys focused on the relationships individual speakers contract with other speakers in society. Social ties, which are characteristically dense and multiplex, act as a norm reinforcement of language use.

Conversely, loose, uniplex social ties do not support language maintenance and are more open to linguistic change and innovation (Mullany, 2007)

Community of practice, like Social network, was first borrowed from social theories of learning (Lave & Wenger, 1991). It was introduced to variationist sociolinguistics by Eckert and McConnell-Ginet (1992) and was adopted and used as a core concept in recent research studies. Eckert and McConnell-Ginet defined Community of practice as "An aggregate of people who come together around mutual engagement in an endeavor. Ways of doing things, ways of talking, beliefs, values, power relations – in short – practices – emerge in the course of this mutual endeavor." (p. 464). Communities of practice, by their very nature, can be small or large and can emerge in all formal and informal domains-e.g., religious, political, educational. Its members can be *core* or *peripheral*, depending on their social roles and position in their groups. 'Mutual engagement' lies at the heart of all communities of practice such that all members must be in a direct contact with each other. Lave and Wenger (1991) note that all members, be they 'core' or otherwise, work collectively to attain certain goals (jointly negotiated enterprise). Researchers working within this framework tend to examine language as a form a practice, whereby 'meaning' is constructed, re-constructed, and negotiated in spoken and written discourse (Eckert & McConnell-Ginet, 1999). They, also, investigated all aspects of language variation, ranging from phonology, lexis, use of jokes, speaking styles to discourse features in small communities of practice (Meyerhoff, 2006).

1.3 Sociolinguistic Variation and Identity Construction

The ubiquity of identity in several sociolinguistic research projects pertains to its status as an essential sociocultural construct in society. It has been and continues to be a cornerstone in modern sociolinguistic inquiry. Scholars from all strands of thought sought ways to

conceptualize, examine and understand the interplay between language variation and identity formation in day-to-day social encounters. However, a general consensus among researchers is one that sees identity as fluid and multifaceted.

1.3.1 Constructing Identity

Before the advent of the 21st century, scholars treated identity as tightly correlated with one's phenotype. Thus, if someone is characteristically black, it is presumed that he/she belongs to a predominantly African community, and that he/she speaks AAVE. Nevertheless, this one-to-one link is not necessarily true and it is easy to state counter-examples. If a black child is born and grew up in, for instance, Turkey, chances are that he/she is more likely to acquire and use Turkish. Likewise, white children who grew up in, say, Madagascar, are more likely to use Malagasy as their first language or any other variety-e.g., Tanosy Malagasy and Tesaka Malagasy. A rather more plausible view posits that identity is not a static, fixed entity; rather, it is a dynamic, malleable entity which is constructed and reconstructed by individual speakers (Kiesling, 2013)

Kiesling (2013) defined identity as "a state or process of relationship between self and other; identity is how individuals define, create, or think of themselves in terms of their relationships with other individuals and groups, whether these others are real or imagined." (p. 450). He asserts that identity is an ongoing *process*, whereby individuals construct and re-construct their identities in relation with other individuals in a wider social spectrum.

1.3.2 How Language is used to Construct Identity: Agentivity and Indexicality

Kiesling (2013) stressed that "identity is something that people do, rather than something that is done to them" (p. 456), whereby speakers agentively engage in signaling socio-demographic identities (e.g., being a Berber or middle-aged), expressing personae (e.g.,

authentic or non-authentic) and indexing specific stances (rebellious, tough). The links between social categories and meanings are mediated by an array of social practices in which language is a basic component.

Eckert (2008) introduced the concept of *Indexical Field* to refer to "a constellation of meanings that are ideologically linked" (p. 464). This means that one linguistic variable can have various ideologically-related social meanings. For Eckert, English speakers tend to use the velar [ŋ], emblematic of upper classes, to index various meanings, such as *educated*, *articulate* and *pretentious*. The choice of each of these social meanings is not haphazard, but is correlated with where, with whom and when it is used (Kiesling, 2013). Moore (2011), along with the same line of thought, adds that "Meanings will shift and adapt dependent upon the wider style in which social and linguistic resources are used, and we will interpret identities based upon our understanding of the whole style." (p. 222). Put plainly, because language is a social practice, it should not be detached from other social practices with which it occurs.

Several ethnographically based studies addressed the link between indexicality, social meaning and language variation. In her groundbreaking research on female Latino gangs in California, Mendoza-Denton (2008) studied the raising of short [ɪ] in the speech of two communities of practice, namely: Norteñas and the Sureñas. Mendoza-Denton found that, notwithstanding their shared ethnic origins, both groups use the same features to signal different stances. While Norteñas use a raised [I] to index 'bicultural' and 'modern' stances, Sureñas use the same variant to signal loyalty to Mexican ethnic identity and a resistance to American mainstream culture. In other cases, however, outsiders avail themselves of stylistic features to index stances associated the group (or community) and to affiliate with or distance

themselves from other groups. Cutler (1999) found that *Mike*, a white Middle Class teen, tends to sound more Black by incorporating socially salient phonological features-e.g, stopping fricatives, phat-to signal affiliation with the Hip Hop culture and to mark toughness and coolness, two stances believed to be associated with African youth culture. In Rampton (1999) study on Ethnic Crossing, white boys used a stylized Asian English to index "argument, abuse, assertiveness, verbal resourcefulness and opposition to authority" (p. 37).

1.3.3 Voicing Multiple Identities: Polyphonous Identities

In his discussion of identity formation, Barret (1999) discussed the mutability and multi-faceted nature of identity:

> Speakers may heighten or diminish linguistic displays that index various aspects of their identities according to the context of an utterance and the specific goals they are trying to achieve ... This practice implies that speakers do not have a single "identity" but rather something closer to what Paul Kroskrity . . . has called a "repertoire of identity," in which any of a multiplicity of identities may be fronted at a particular moment. In addition, ... speakers may index a polyphonous, multilayered identity by using linguistic variables with indexical associations to more than one social category. (p. 318)

Granted that identity is a socially embedded, multi-layered notion, individuals tend to index an array of identity components, ranging from global social categories (age, gender, status) to specific stances, such as coolness and masculinity (Cutler, 1999; Eckert, 2012). Kiesling (2013) stated that speakers in the lower end of the social hierarchy, compared to upper-class speakers, are described as *more authentic* and less *discreet*. Code-switching is an essential source of voicing multilayered identities. Fought (2003) found that American Mexican speakers, who are born and grew up in Los Angeles, switch between Chicano

English and Spanish to affiliate with Chicano ethnic heritage and to distance themselves from immigrant Mexicans. Myers-Scotton (1993) notes that in multilingual settings, such as Kenya, speakers draw on English to index an educated stance, Kikuyu to project an affiliation with their ethnic heritage and Swahili to index urban identity (as cited in Fought, 2006)

1.4 Sociolinguistic Variation

1.4.1 The Locus of Variation

Sapir (1921) notes that "Everyone knows that language is variable" (p. 147). Variation, by its very nature, is socially embedded in various social contexts, across different individual speakers, communities of speakers and regions. Individual speakers make deliberate choices as to whether to use standard or non-standard variants, depending on the social context in which they interact with their interlocutors. Notwithstanding its pervasive nature, variability was considered as out of favor in earliest linguistic inquiries. Chomsky (1957) and his followers, for instance, focused on the *idealized* and *uniform* entities of language and dismissed *variable data* as "unstructured or random and therefore not worth studying" (Milroy & Milroy, 1998, p. 33). Scholars working within formal linguistics paradigm claimed that any linguistic variation is attributed to either 'linguistic mixture' or free fluctuation, and hence must be, at best, avoided in any linguistic enquiry.

With the advent of variationist sociolinguistics in early 1960s, Weinreich, Labov and Herzog (1968) introduced two central tenets that criticized the established linguistic descriptions and formed the cornerstones of modern sociolinguistic theory. *'Orderly Heterogeneity'*, it was asserted, posits that variation is not random or unstructured. Rather, it is systematic and co-varied with various, interrelated, socio-demographic structures, thus a viable object of study. By the same token, *'Inherent Variation'* stipulates that language is

intrinsic to the mental grammar of native speakers, "effectively perceived, processed, and produced by all speakers, and therefore lies within competence, and hence within grammar." (Guy, 2011, p. 179). Fieldworkers working within variationist sociolinguistic paradigm concur that linguistic differentiation patterns significantly with external factors. Some of these factors are 'natural', such as 'space' and 'time' axes, while others are 'human' factors, such as age, gender and class stratification (Milroy & Milroy, 1998). Interaction of language variation with the *natural* motives were examined by dialect geographers and traditional dialectologist ever since the second half of the nineteenth century. The distribution of linguistic variation across socioeconomic parameters has been an eye-catching area of research for many social dialectologists. A basic tenet in sociolinguistic variation theory is the Multiple Causes (Bayley, 2013; Young & Bayley, 1996), which postulates that variation is not constrained by one single external factor; rather, it is constrained by several factors simultaneously, ranging from global social categories (e.g., gender and ethnicity), migration and mobility, to social evaluations and personal stances (e.g., masculinity, toughness)

1.4.2 Regional Variation

Language variation across regions has always been and continues to be an interesting topic that piques the attention of laypeople and dialectologists as well. It is not surprising, then, to hear people commenting and forming opinions, positive and negative, about the varieties spoken in their homelands and other areas. A variety is classified as a regional dialect when a group of people in a geographically limited area share similar sound patterns, lexis and grammar forms (Kretzschmar, 2004) Thus, one can speak of several dialects, such as Parisian French, Boston dialect, AAVE, Chicano and Chaouia. Within one single regional dialect, Kretzschmar (2004) adds, speakers avail themselves of a wide communicative

repertoire to choose speech styles, ways of speaking, or speech segments, depending on the addressee(s), topic and place. So susceptible are speakers to 'regionality' that, in the absence of visual cues, it is quite possible for them to identify the regional origin of a speaker just by listening to the way he/she utters some speech forms or the words he/she uses.

Dialect geographers examined how geography co-varies with linguistic variation, and how speakers use speech forms to mark their affiliation with certain regional dialects. Labov's (1963) seminal work on Martha's Vineyard illustrated how speakers who lived in the up-island centralized the diphthongs (aw) and (ay) to mark their '*belongingness'* to the local community. Phonological variation is probably the most noticeable and stereotyped aspect in language. Speakers from Southern New Hampshire would pronounce '*hot'* and '*dog'* in the same way, whereas Boston speakers would not (Nagy, 2001). The word 'god' is realized as [gɒd] in Britain and as [gɑːd] in the USA (Holmes, 2013). Kretzschmar (2004) notes that the insect '*dragonfly'* has various lexical realizations ranging from s*nake feeder, mosquito hawk,* to *darning needle.* Also, if someone visits the USA, he will drink '*soda'* in Boston and *'soda-pop'* in Los Angeles (Wolfram, 2005). Grammatical features, though less susceptible to public awareness, correlate significantly with geography. British speakers would prefer to say: *'have you eaten*?', whereas their American counterparts would say*: did you eat?* Likewise, The grammatical structure '*do you have?'* is associated with American mainstream English, whereas '*have you got?'* is much more associated with British dialects (Holmes, 2013)

Since the advent of sociolinguistics in the 1960s, dialect geographers adopted methods from human geography to examine linguistic diffusion across space. Bailey (1973) postulates that linguistic transmission is likened to a stone that falls on water and engenders waves. Said differently, new forms propagate from, say, area A to area B and then to other adjacent areas

in waves pattern. Nevertheless, Bailey's 'Wave Model' was criticized by many researchers, and its application was not well-attested in cases of speech diffusion (Britain, 2013; Meyerhoff, 2006). Trudgill (1974), whose Geolinguistic projects were informed by the work of Torsten Hägerstrand (1952), developed 'the time-geography model' or 'Gravity Model' that accounts for both population density and distance. The underlying tenet of this model states that innovations, be they technological or linguistic, tend to spread spatially into larger centers before they reach smaller towns. Trudgill, who was the first to apply 'Gravity model' in research on spatial diffusion, visualizes linguistic diffusion as a stone skimming across water, out of which the stone skips over surface many times. Likewise, innovations diffuse from the most populated, metropolitan cities into less populated, smaller cities, before they reach the neighboring villages and rural areas. Figure 2.1 illustrates the gravity model graphically:

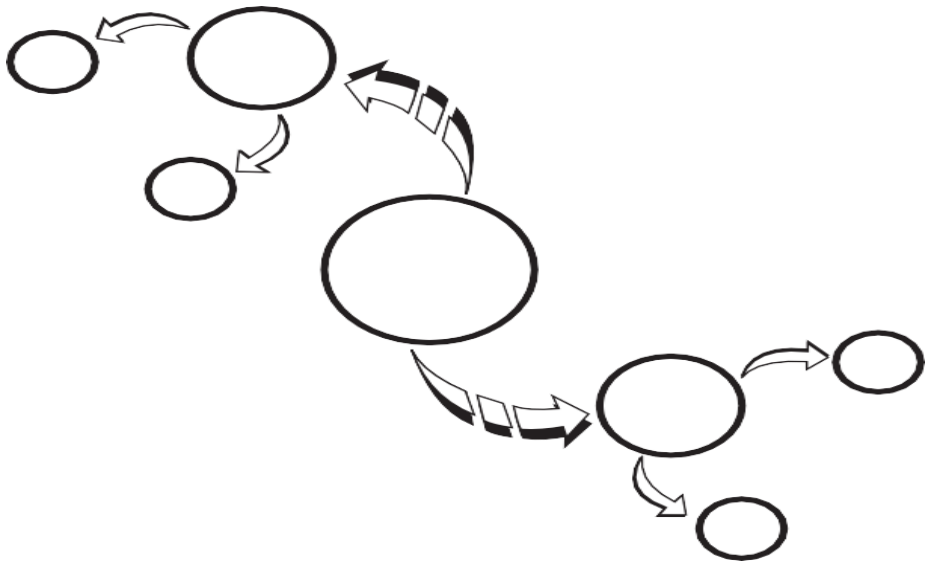

Figure 1.1 The Gravity model of speech diffusion. From *The Handbook of Historical Linguistics* (p. 724), by Wolfram, W and Schilling-Estes, N, 2003, USA: Blackwell Publishing Ltd.

If a new speech innovation was introduced into, for instance, Algiers city, it would disseminate into other metropolitan cities (e.g., Constantine, Blida, Oran) and then into smaller cities, villages and towns in between. Apart from wave and gravity models, dialect geographers emphasize that some patterns of spatial linguistic innovation can be explained in terms of many socio-demographic forces, such as means of transportation, political boundaries and attitudinal factors. Nagy (2001) studied the realizations of two phonetic variables in Boston, Massachusetts and New Hampshire. Unlike many US varieties, Boston speakers do not merge the vowels in the words *father* and bother, and do not merge the mid and low vowels before the consonant [r], as in *marry* and *merry*. Nagy (2001) found that even though Southern New Hampshire is close to Boston, speakers in this city do merge low central vowels with low back vowels in words like *father* and *bother*. Speakers, who live in cities far from Boston, tend to converge linguistically to Boston dialectal norms. Nagy concluded that Southern New Hampshire speakers tend to maintain their local speech patterns "to mark their local identity as distinct from the closest and thus most threatening urban center" (p. 40).

1.4.3 Social Variation

The link between language and its social motives attracted the attention of researchers from all strands of thought, ranging from variationist sociolinguistics, to linguistic anthropology and ethnography of communication. Intriguingly, individual speakers adopt certain linguistic features not only to affiliate themselves with some age-groups and social classes, but also to *cross* into other ethnic groups to mark ethnic membership or distinctiveness (Cutler, 1999; Rampton, 1995)

Age correlated linguistic changes can be detected by recording the speech habits of the same (or comparable) generation at different points in time axe, thus yielding Real Time data.

It can also be conducted by examining the speech used by different generations at the same time, thus yielding Apparent Time data (Chambers & Trudgill, 2004). Changes in progress take place when archaic, old forms associated with old speakers are progressively cast aside by linguistic innovations associated with youngsters. Labov (1963), in his seminal work to which subsequent literature refers, found that the centralization of the diphthongs (aw) and (ay) was spearheaded by speakers in their thirties as a reaction against the seasonal immigrations to the island of Martha's Vineyard. Using apparent time method, Boberg (2010) investigated the synchronic age distribution of some lexical variables in North Canada. He found that the Canadian terms *chesterfield, eavestroughs, scribblers,* and *zed* were gradually replaced by the American equivalents *couch, gutters, notebook* and *zee,* respectively. Boberg noted that these lexical replacements and, by extension, linguistic convergence, reflect the influence of American mainstream culture on the Canadian local culture.

Gender, like age, correlates significantly with patterns of language variation and change. For instance, in most predominantly English speaking contexts, the standard velar form [ŋ] is more associated with women, whereas the alveolar [n] is more associated with men. By the same token, Holmes (2013) reported that, unlike women, men in Sydney, Australia, are more likely to use the stigmatized variant [f] in words with [θ] sound in the initial position, such as *thing* and *think*. Researchers were also interested in the distribution of gender across social stratification. Labov (1966) found that women, across all social classes, are at the leading edge of postvocalic [r] use, whereas men tend use the vernacular forms much more extensively. Chambers and Trudgill (2004) explained that women, because they focus on how they look, tend to use symbolic speech features associated with prestigious upper classes. Men, in contrast, use more non-standard forms to mark stances like toughness, harshness and

masculinity, characteristics believed to be dovetail with lower social classes. Variationist sociolinguists were also interested in how language is deployed to construct ethnic identities and personal stances. Rampton's (1999) study in the UK revealed that white boys adopted a '*stylized Asian English'* to index "argument, abuse, assertiveness, verbal resourcefulness and opposition to authority" (p. 37). Hewitt (1986) notes that white boys use various linguistic practices, such as joking and verbal insults, as a secret language to 'cover' the use of vulgar terms.

The link between ethnic and linguistic convergence in multiethnic settings has drawn growing attention among researchers. Dialect convergence is attributable to many sociocultural triggers, including interethnic contact, be it extended or restricted, solidarity, phenotype and prestige. An oft-cited variationist work was conducted by Labov (1963), who noted that speakers of Portuguese and speakers of Native American ancestry are at the leading edge of (aw) and (ay) centralization to mark their ethnic affiliation with the island. Wolfram (1974) reported that Puerto Rican male teens with black contacts tend to use grammatical and phonological variants of AAVE-e.g., habitual *be* and realization of [θ] as [f]. However, research on the impact of minority ethnic varieties on majority ethnic varieties is also well attested in many social settings. Fought (2006) reported that several AAVE slang terms, such as *tote*, *gorilla*', *gumbo*, *jazz,* and *cola*', were adopted by speakers in white speech communities to project stances of 'coolness' correlated with African American culture.

1.5 Variation and Change

At the heart of concern for variationist sociolinguists is the interplay between linguistic diversity and change. Milroy and Milroy (1992) note: "at any time we care to look at a language … it is variable and in a state of change" (p. 2). A glance over the long arc of history

of languages reveals that Old Berber varies and differs quite considerably from the Berber version spoken today and, all other things being equal, will be even more different, linguistically, in the coming decades. As one time-travels back, he/she would find out that Arabic version spoken in the 6th century is so difficult to understand, and that 'Arabic' varieties used in the pre-Islamic era are remarkably unintelligible.

Linguistic change is preceded by a stage of fluctuation in which alternative features, old and innovative, co-exist in one speech community (Wolfram, 2005). Innovative forms, once socially embedded, are more likely to be attached to values of prestige, youth and modernity. However, archaic, stigmatized features would begin to eclipse in favor of the new features which, once established, propagate into different regions and hierarchical layers in speech community (Holmes, 2013). Yet, while language change is a pathway to variability, "not all variability and heterogeneity in language structure involves change*" (*Weinreich et al., 1968, p. 188). An oft-cited classical example is the alternation between [n] and [ŋ]. In many English speaking regions, [n] is much more associated with lower classes and is highly stigmatized. By contrast, [ŋ] is extensive in the speech of high social classes and is emblematic of formality and prestige. Though highly perceptible to English speakers, [n] and [ŋ] co-existed ever since the earliest periods of Old English, without one variant pushing the other alternative away from daily usage (Trudgill, 1974).

1.6 Variation, Identity, and Social Meaning: Waves of Variation Studies

A glance over the long arc of history reveals that several trends of thought sought new ways to analyze and understand the ways in which language variation and identity are intertwined. Eckert (2012) reviewed the evolution of variationist sociolinguistics in terms of three distinct, yet related waves, namely: big picture, local perspective and stylistic

perspective. Each of these perspectives approaches identity in a different way. She noted that the first wave examines the interplay between social categories-e.g., age, gender, status, and linguistic variation. The second wave focuses on more concrete local taxonomies, investigating the link between participant-based networks and language variability. Unlike the first two waves, in which variables mirror social identities, the stylistic perspective (third wave) asserts that speakers stylistically employ variants to index socio-demographic affiliations, stances sand characteristics.

1.6.1 First Wave

The first wave examined the statistical correlation between pre-determined census categories, such as age, sex and class, with linguistic variation in geographically delimited speech communities. It comprises large-scale research projects, such as those conducted by Labov in Martha's Vineyard (1963) and New York City (1966), and which have been replicated in several studies in the USA and Great Britain (Trudgill, 1974; Wolfram, 1969) and Asia (Modaressi, 1978). By using sociolinguistic interviews and questionnaires, earlier sociolinguists examined the interplay between global (abstract) socio-demographic factors and the distribution of salient speech variables which, it was noted, carry social meanings in society. Mendoza-Denton (2002) notes that surveys within the first wave paradigm were highly influential in that they provided a large picture of the trajectory of linguistic change across space and time. By way of example, the use of the centralized onset (aw) and (ay) by Yankee fishermen, whose fishing economy was threatened by the seasonal immigrations, marks a strong affiliation with the Traditional Vineyarder life-style in Martha's Vineyard island (Labov, 1963). In his classical and oft-cited work, Labov (1966) found that socially embedded forms are associated significantly with class stratification, whereby stigmatized

variants decline in use as one moves upward in the social spectrum, whilst prestigious equivalents are correlated with upper social classes. However, Eckert (2012) points out that the role of speakers' *Agency* in the first wave studies was restricted to patterns of Crossover effect, whereby speakers in all social classes tend to use standard variants in formal contexts.

1.6.2 Second Wave

Arguing against the aforementioned '*passive'* role of speakers, researchers in the second wave sought ways to examine the positive socioindexical value of stigmatized forms (Eckert, 2012). The advent of the second wave, led by James Milroy and Lesley Milroy in late 1970s and 1980s, was motivated by a desire to probe into the link between the abstract, sociological categories and more concrete dynamic categories (Moore, 2011).

Using ethnography, the Milroys noticed that social network ties, measured by speakers' engagement degree in various personal networks, are strong determinants of language maintenance and stability in Belfast. Dense, multiplex networks, emblematic of working classes, is correlated with the use of local, stigmatized phonological forms. Conversely, the use of innovative forms was spearheaded by loose, uniplex networks (Milroy, 1980). Eckert's (1989) groundbreaking fieldwork in Detroit, USA, explored adolescents' orientation towards two diametrically opposing youth cultures- 'Jocks' and 'Burnouts'. The former orientated towards school, embodied Middle Class life-style, and used more prestigious forms. The latter, however, orientated towards local community norms, adopted less 'standard' features and more stigmatized regional markers. Eckert found that the backing of front [e] and the central [ʌ] was frequent in the speech of female Burnouts. Thus, the word 'bet' is pronounced with short [ʌ] like the word 'but', and 'bus' is pronounced with short [ɒ] like 'knot'.

The first and second wave examined the association between linguistic variables and socioeconomic correlates. Granted, both waves approached social identities as "static repositories of the social meaning of language." (Moore, 2011, p. 221). That is, socially embedded linguistic forms mirror static, pre-existing social aggregations. For instance, the centralization of (ay) and (aw) marks a 'Vineyarder identity', and the use of post-vocalic [r] reflects 'New York middle-class' group.

1.6.3 Third Wave

Within variationist sociolinguistic paradigm, the pendulum swung away from a perspective in which linguistic variables were treated as solely '*markers'* or *'reflection'* of socio-economic structures, towards a stylistic perspective whereby speakers '*actively'* employ socially embedded variables to index different stances and personae (Bucholtz & Hall, 2005; Eckert, 2012). Third wave studies, which flourished in late 1980s, were influenced by the work of many scholars in social constructivism theory (Bourdieu, 1977) and linguistic anthropology (Duranti, 1997). Identity, it is noted, is not conceptualized and operationalized as merely a static entity that echoes social groupings in the social map. Rather, it is a flexible, multilayered and multifaceted construct, which embodies an array of personae, stances and interrelated social meanings-e.g., coolness, masculinity, anti-authority, preciseness.

In arguing against the first two waves, Moore (2011) stresses that language and identity are co-constructive. To put it otherwise, language variation is a focal component in the social practice, whereby speakers are actively involved in the process of constructing and re-constructing social identities and stances. She adds that, in order to understand the dynamics of sociolinguistic variation and change, language should be examined in relation with other social practices. By way of example, American teens deploy some ways of speaking,

alongside other social practices, such as ‘tattoos’ and ‘drinking’, to construct a ‘*rebellious’* persona in society (Moore, 2011).

Ethnographically orientated studies revealed that speakers avail themselves of various stylistic speech segments to index certain ideologically related meanings (Eckert, 2008). Eckert (2012) notes that when speakers make social-semiotic shifts, for instance, moving from ‘coolness’ stance to ‘sounding masculine’, they tend to use certain socially embedded speech variables to index those stances. The Burnout girls, for instance, used the double negation form much extensively to index ‘anti-authority’ and ‘anti-school’ stances. By the same token, Cutler (1999) found that the Middle-Class white teen ‘Mike’ adopted some ethnically marked features from AAVE in attempt to express stances of ‘Masculinity’ and ‘Hip-Hop’ culture emblematic of the African American culture.

1.7 Contact-Induced Language Change

A plethora of research projects documented the dynamics of contact induced linguistic change and its social triggers in several bilingual and multilingual settings. Patterns of Language contact, whereby two languages converge, is more likely to lead to: borrowing, Codeswitching, code-mixing... Dialect contact, which involves contact between two varieties of the same language, is more likely to lead to dialect accommodation, style-shifting and Koineization (Auer, 2007).

1.7.1 Lexical Borrowing and Contact

Sociohistorical conditions, such as colonization, modernization and geographical mobility result in extensive contact between groups of different cultural roots and who use different languages and language varieties. In many case, thus, cross-linguistic contact may lead to a change in the linguistic system of one of the languages or both. Sociolinguists

distinguish between two different, yet related, contact-based changes: 'Borrowing', which refers to the use of foreign forms in one's native language (Haugen, 1950), and 'interference' (or transfer) which refers to the use of first language features in the process of Second Language Acquisition (Sankoff, 2013). Notwithstanding its ubiquity in enormous book-length introductions, the use of the term 'Borrowing' was highly criticized. Matras (2009) notes that "Not only is there no intention to return the 'borrowed' item to its rightful 'owner', but for most speakers its original 'ownership' may not always be traceable" (p. 146). Matras's (2009) avoidance of the term "Borrowing" suggests that it is not a matter of inserting foreign terms into one's native language, but also involves the act of using the loan forms in new social contexts.

Researchers from various strands of thought made attempts to define borrowing, identify its characteristics, and examine its relation with other contact-correlated issues. To begin, Winford (2010) defined Borrowing as "the transfer of linguistic materials from an SL into an RL via the agency of speakers for whom the latter is the linguistically dominant language, in other words, via RL agentivity" (p. 172). He states that borrowing and imposition crisscross with aspects of 'linguistic dominance'. In borrowing, speakers import features from the source language into the recipient language in which they are proficient, such as when a Berber speaker inserts words from Arabic varieties while interacting in Tachawit or Kabyle. In imposition, however, speakers would insert forms from the source language into the recipient language, in which they are *not* competent, such as Hispanic and French immigrants in the USA, who insert sounds and words from their heritage languages while talking in English.

Once borrowed, the loan form will be modeled on the phonology, morphology and syntax matrix of the recipient language. Kossmann (2013) notes that early Arabic loans into Berber, which took place in the first wave of the Islamic conquests, were Berberized, that is, modeled on the phonology and syntax of Berber-e.g., '*aẓumi*' comes from the word يصوم [jʌsˁɔ:m] (fasting) and *taẓallit* or *hẓallit* from the word الصلاة [ʌsˁʌla:t] (prayer). Equally, Sakel (2007) notes that speakers in the Amazonian tribe 'Piraha' borrowed several words and adopted them into their native language system: *paga* for pay (*paga*), and *kai* for house (*casa*) from Portuguese, and '*topagahai'* for 'tape-recorder' from English (as cited in Matras, 2009). Beyond phonological and morphological integration, loans lend themselves to semantic shifts as well, such as the term الخبزة [xʊbzʌ] which expanded its meaning from 'bread' to 'earn money' (e.g: نصور خبزتي [nsˁʌwʊər xʊbzti]). Kossmann (2013), also, notes that in some cases recipient language speakers tend to employ a preexisting meaning to name new concepts and objects, such as using the Berber word *'t̲aẓrut'* [tʌẓru:t], meaning a stone, to refer to a battery, as well.

One of the most intriguing questions posed by sociolinguists pertains to understanding the socio-cultural motives of borrowing. Researchers distinguish between two basic social factors of borrowing, namely: lexical gap and prestige. Matras (2009) states that when speakers are confronted with new concepts or objects, and to which they do not have exact linguistic equivalents in their native languages, they tend to import 'loans' from the donor language. In addition, cultural loans are loans that describe new technological innovations, artifacts, tools and concepts (Kossmann, 2013). Maghribian dialects have coined several loans, directly or indirectly-e.g., 'الخزناجي' [khʌzeʒi] and القهواجي [qʌhwʌʒi] from Turkish,

السيدي [əsi: di:] (CD) and اللاب توب [əlætɒp] (lap-top) from English through French, and البرتفاي [əlbərtfai], meaning 'the wallet' from French (portefeuille).

Prestige, like gap-fillers, may also play an essential role in the process of borrowing. Languages, associated with politically and socially powerful groups, serve as sources of borrowing for underprivileged varieties (Thomason, 2001). Prestige loans, unlike gap-fillers, do have equivalents in the source language. Yet, Speakers of the non-dominant varieties tend to use Prestige loans to index social meanings like 'modern', 'educated' and 'high class', which are associated with dominant groups (Matras, 2009; Winford, 2010). For instance, Algerian speakers, most notably women, are more prone to use French expressions, such as *rendez-vous* and exemplification markers, like *genre* and *par exemple*. However, minority groups can also be sources of borrowings. For instance, English borrowed the Islamic concepts: الحجاب [elḥiʒa:b] (the veil worn by Muslim women), البرقع [elbɒrqɒʕ] (a garment worn by Muslim women to cover the whole body) the and الجهاد [elʒiha:d] , meaning fighting in wars or struggling for self-improvement, from the Muslim minorities who live in the UK. Other examples of borrowings to English include the fruit name '*mango'* from the Tamil word '*mankay' (*Winford, 2010). Moreover, the long-term interethnic contact in Britain led native British people to borrow many Islamic terminologies from the Arab Muslim immigrants, such as حلال /ḥʌlʌl/ (lawful), حرام /ḥʌrʌm/ (prohibited) and شريعة /ʃʌrɪʌ/ (a set of Islamic law that Muslims are prescribed to follow).

Apart from the socio-cultural motives, linguistic constraints may also play a role in the process of lexical borrowing. The 'Stability gradient of language' principle, which was introduced by Coetsem (1988), posits that some linguistic aspects, such phonology and syntax are more resistant to change, whilst lexicon (and free function morphemes) is less stable, and

thus more amenable to borrowing. Along with the same line of thought, Winford (2010) adds that the degree of 'typological distance' between languages in contact may act as a hindrance and/or facilitator to lexical borrowing. The more donor and recipient languages are structurally similar, the easier borrowing may take place, and vice versa.

Politics, language loyalty and culture pride may act as 'norm-reinforcements' that hinder borrowing foreignisms. Several academies and national movements were established to seek ways of *'purifying'* languages from non-native words, making pronouncements as to what is 'native' and what is not. In France, L'académie Française urged speakers to substitute English loans with French words: *soutenir* instead of supporter (to support), *le meilleur de*... instead of *le best of*…, *passer une audition* instead of *casting*…etc. In 2003, the national Berber movements in Morocco suggested that Arabic loans must be cast aside from daily usage and be replaced by Berber native terms (Kossmann, 2013). Remarkably, Kossmann (2013) notes, some of these Berber terms spread in speech and ousted Arabic borrowings: *tinml* [tınməl] for school and *aslmad* [ʌsəlməḏ] for teacher.

1.7.2 Codeswitching and Contact

Code switching, like borrowing, is a possible outcome of contact between two linguistically distant varieties, which co-exist in one social milieu (Gardner-Chloros, 2009). Eastman's (1992) remark that "Efforts to distinguish code-switching, code-mixing and borrowing are doomed" (p. 1) echoes the ongoing debate and controversies surrounding the notion of Codeswitching. Enormous book-length introductions and books were devoted to discuss Codeswitching, its characteristics, and interplay with other sociolinguistic issues.

Milroy and Gordon (2003) note that "code-switching can describe a range of language (or dialect) alternation and mixing phenomena whether within the same conversation, the

same turn, or the same sentence-utterance." (p. 209). Troike (2003), however, distinguishes between Codeswitching which refers to a "change in languages within a single speech event" and 'Style-shifting' which refers to a "change in language varieties which involves changing only the *code-markers"* (p. 48). Myers-Scotton (1992), conversely, notes that a "continuum of relationships exists between borrowing and all forms of CS" (p. 21), such that imported linguistic features, be they words, morphological forms or syntactical structures, begin as codeswitches and, over time, become borrowings.

Myers-Scotton (1993) notes that research on Codeswitching falls within the scope of two diametrically opposing paradigms. *'Allocational Paradigm'*, which is based on the work of Fishman (1972), postulates that linguistic behavior is constrained by sociocultural norms (as cited in Milroy & Gordon, 2003). Researchers within this paradigm are concerned with the correlation between Codeswitching and various *Domains*-e.g, government, friendship, education,..etc. *Situational Codeswitching* falls within Allocational Paradigm and refers to language change which is associated with shifts in topic, addresses or context. Troike (2003) illustrates that teachers of Navajo-descent would use their heritage language *Navajo* to talk about their families and traditional norms. The same speakers, however, would find it more suitable to use English with their American colleagues in college. A speaker of Tachawit descent would make two distinct conversational moves, depending on the ethnic origins of the addressee(s): Dariğa (or Maghrebian dialect) with his Arab peers and Chaouia with his Berber friends. The same Berber speaker would find it more appropriate to use Chaouia at home and Dariğa variety in public interactions. Auer (1995) argues against the 'Allocational Paradigm', and notes that things become more problematic when two or more codes are used in a single domain. Adherents of the so called *Interactional Paradigm* seek to explore the

different ways in which speakers deploy certain conversational strategies to attain communicative goals. Milroy and Li Wei (1995) reported how Chinese immigrants in England switch from Cantonese to English to mark specific communicative goals in a single conversation-e.g., repair, pre-sequences, preference marking.

1.7.3 Dialect Accommodation and Contact

A glance over the long arc of history reveals that population movements, colonization and wars had, still, shaped many languages and language varieties which evolved in many parts of the world. Contact between migrants and speakers of the receiving speech community, along with other social motives, would lead to the emergence of the so called *'Long-Term Accommodation'* process (Trudgill, 2004). Auer (2007) defined accommodation as "the convergence which may occur in (groups of) speakers who change their place of living more or less permanently within the same language area." (p. 109). Accordingly, Dialect accommodation should not be confused with *Interpersonal Accommodation*, whereby interlocutors make deliberate minor changes to their linguistic habits to conform to their interlocutors in one speech event (Giles, 1973). In most cases, Auer (2007) adds, accommodation results from contact of varieties that belong to the same language. That said, migrant groups and speakers in the receiving speech community are intelligible to one another. Dialect accommodation, also, should not be confused with Koine, a new variety "which develops as a result of rapid population movement and mixing of speakers of different dialects in a new community" (Tuten, 2007, p. 185). Dialect accommodation, in contrast, is a *one-sided* gradual process, whereby migrant speakers tend to deliberately make minor changes to their speech habits in order to conform to those of the receiving speech community.

The question of whether some language features are amenable to accommodation has drawn a growing attention among many dialectologists (Kerswill & Williams, 2002; Trudgill, 1986). It has been argued that 'salient' forms which are highly stereotypical, socially and regionally, are good candidates for adoption. Nevertheless, Auer (2007) notes that attitudinal factors are also important such that positively evaluated and prestigious forms lend themselves to adoption, while negatively evaluated forms are not acquired. Apart from linguistic constrains, socio-cultural factors, such as language loyalty and network ties, represent possible triggers for dialect accommodation to take place. Nuolijärvi (1994), found that the stigmatized Savo varieties, compared to the positively evaluated Ostrobothnian varieties of Finnish, were more amenable to accommodation (as cited in Auer, 2007). In addition, the role of social networks in dialect accommodation is well attested in many contexts. As a rule of thumb, dense networks characteristic of isolated communities tend to support language maintenance (Milroy, 1980). Bortoni-Ricardo (1985) found that migrants, who maintained little contact with speakers in the receiving speech communities, are more likely to resist accommodation, lending themselves to preserve their native linguistic habits. Conversely, migrants, who assimilate to the new local social norms, tend to be more prone to accommodate to the local dialect patterns.

1.8 Conclusion

This chapter discussed the relationship between identity formation, linguistic variation and sociogeographical change in its social landscape. Linguistic variation, it was noted, is not random; rather, it is systematically conditioned by external motives, such as age, social network and regionality. Yet, recent sociolinguistic research, which is highly informed by the work of Eckert (2008), treats language as a social practice, whereby speakers deploy speech

forms to project not only social identities (e.g., age and ethnicity), but also personal stances (e.g., rebellion, masculinity, coolness). Likewise, sociolinguists stressed that the role of language use in shaping and constructing social identities is not only restricted to monolingual communities, but also to multilingual regions. It was noted that in predominantly contact situations, bilingual speakers may borrow words to mark affiliations (or distance) with socially dominant cultures, or may switch between codes to index 'ethnic membership' and solidarity.

2.1 Introduction

Arabic-Berber contact piqued the attention of many scholars and researchers from various strands of thought: sociology, linguistic anthropology, variationist sociolinguistics and language policy, to name but a few. This chapter sets the task to discuss Berber as a contact language from historical, sociolinguistic and sociopolitical angles. In essence, it is organized so that it progresses from a brief historical sketch of Berber during ancient and modern eras-e.g., Egyptian, Phoenician, Roman and Islamic-sociolinguistic overview of Arabic-Berber contact, to political and educational considerations of Arabization policies. Section two discusses the major Berber varieties spoken in Algeria along with their geographical distributions. The heart of the chapter, as indeed of Berber linguistics, is '*Berber as a contact language'* section, which seeks to tackle, thoroughly, the linguistic impact of many languages on the sociolinguistic profile of Berber dialects. Section four, entitled *'Diglossia and the Arabic Influence on Berber'*, is devoted to scrutinize the emergence and development of Diglossia in Algeria. The chapter ends up with section four, *'Arabization and Language Planning in Algeria'*, which addresses the issue of Arabization, its societal and educational implications and impact on local and social evaluations in the Berber speaking areas. In keeping with the main theme of this research study, this chapter touches upon many examples of lexical borrowing into Berber from various Ancient and modern language varieties, along with other contact-induced linguistic changes.

2.2 Geographical Distribution of Berber Varieties in Algeria

Algeria is a remarkably heterogeneous country, both culturally and linguistically, and is inhabited by people who differ on many sociocultural grounds-e.g, Arabs, Chaouia in the

Aurès region, Kabyle in the North, Mzab in the South. The sociolinguistic makeup of the country is so diverse that it consists of many Berber dialects, which are linguistically unintelligible to each other, such as Tachawit or Chaouia (Aures), Kabyle, Chenoua (Bni Menacer, Tipaza), Tagargrent (Ouargli) and Mozabit (Kossmann, 2012). Some other Berber varieties are also spoken in Beni Snous, a community which is situated between Tlemcen in the far west and the Algerian-Moroccan borders (Kossmann, 2013). In most interethnic contexts, Berbers use Dariğa or alāmiya with other speakers of Arab descent in daily social encounters and economic transactions. Figure 1.1 displays the geographical distribution of Berber speakers in Algeria:

Figure 2.1 Geographical distribution of Berber speakers in North Africa. Adapted from M. Brett and E. Fentress (1997), as cited in *Historical Dictionary of the Berbers (Imazighen)* (p. 160), by Ilahiane, H, 2006, USA: Scarecrow Press, Inc.

Kossmann (2012) noted that, because Algerian Berber varieties are structurally analogous to Moroccan Berber varieties, they are placed in the same language category, namely: Northern Berber. Berberologists disagree on the exact number of Berber speakers in

Algeria. Chaker (2001) and Benrabah (2007) reported that there are around 7 to 8 million speakers (25 %) of the whole population, whereas Kossmann (2012) reported that there are only 7 million (20 %) Berber speakers in the country.

2.3 Berber as a Contact Language

Historical linguists concur that there existed a *Proto-Berber* language, out of which all modern Berber varieties developed in many regions in North Africa. However, the exact period in which Proto-Berber emerged is still debated. It is reported that it emerged between the first millennium BC and the first millennium AD (Kossmann, 2012, 2013). Historically, various ancient civilizations had been settled in Northern African countries, ranging from Ancient Egyptian, Phoenician, Roman, Ottoman and Arabic, which changed both the social and sociolinguistic profile of North African languages. This section, then, sets the task to provide a brief historical sketch of four main eras, namely: Egyptian, Phoenician, Roman and Arabic, and discusses some basic epitomes of contact-induced lexical borrowing in Berber, along with its sociocultural correlates.

2.3.1 Berber-Ancient Egyptian Contact

Historical linguists and sociolinguists have long been interested in examining contact situations between Ancient Egyptian (Coptic) and Siwi, a Proto-Berber variety spoken by roughly 15.000-25.000 Berbers in Siwa Oasis, Egypt. The oft-cited epitomes of Coptic loanwords in Siwi pertain to agriculture. For example, the ancient Egyptian *bnr(.)* and Coptic forms bnne or beni for date are the etyma of the Berber term *te-ḇăyne* or *ti-βăyni* (Kossmann, 2002, 2013). Similarly, the Ancient Egyptian forms *šnj-bnr.t* and Coptic *šnbnne,* meaning *a palm fiber,* are etyma of the Berber term *a-sβan* (Kossmann, 2002; Souag, 2016). Souag (2016) notes that *a-sβan* was then borrowed from Berber to other African languages, such as

Hausa, a Chadic Afroasiatic language, and *Kanuri*, a Nilo-Saharan language spoken in many countries in Africa, such as Chad, Niger, Nigeria and Cameroon.

2.3.2 Berber-Punic Contact

Berber-Punic contact is traceable to the Phoenician settlements and establishment of Carthage as the capital city in Northern Africa in 814 BC. This era marked the spread of trade across the Mediterranean coast, and hence led to the geographical diffusion of Punic in several Northern African territories (Kossmann, 2013). Kossmann (2013) notes that, although Punic exerted a major linguistic influence on many Berber varieties, its impact on Zenaga variety is remarkably weak, due to the lack of contact between the Carthaginian settlers and indigenous inhabitants in Mauritania.

As a result of the long established Phoenician-Berber contact, both cultural and economic, a sizeable number of Punic loans was imported and diffused into several Berber speaking communities. By way of example, the word *i-nir* or *ener*, meaning a lamp was imported to Siwi dialect in Egypt and to Ghadames dialect in Lybia. Lexical borrowing was highly remarkable in the fields of agriculture and cultivated plants: azlim [ʌẓli:m] or ẓalim [ẓʌli:m] for onion vegetable in Tashelhiyt; '*armun'* for pomegranate fruit in Nefusa, Tunisia and Chaouia in Algeria; *ta-aɣəssim-t* for cucumber in Ourgala, Algeria, and in central Moroccan Berber, Morocco (Kossmann, 2013; Souag, 2016). In other cases, though, the origin of some Punic loanwords is still controversial. For instance, Vycichl (2005, as cited in Kossmann, 2013) notes that the verb *ălməd* [elmeḏ], meaning to learn, is of Punic origins, whilst Kossmann (2013) states that it was originally borrowed from Hebrew. Although Vycichl's and Kossmann's interpretations are plausible, the word *ălməd* might also had stemmed from the Arabic etymon *tatalmada* [tetelmʌḏʌ], meaning to learn, after the

establishment of education ever since the spread of Islamic conquests in North Africa. Chafik (n.d), further, states that the long-term Berber-Punic cultural contact in North Africa shaped the linguistic profile of Punic settlements. He notes that a new Berbero-Punic 'mixed' vernacular had gradually developed as the new means of communication between the Berber indigenous speakers and their Punic immigrant counterparts in active social encounters and economic transactions.

2.3.3 Berber-Latin Contact

146 BC marked the fall of the Phoenician Civilization in North Africa and establishment of the Roman Empire across the Mediterranean coast. The long-term military Roman settlement, which lasted from 146 BC to 533 AD, yielded pervasive sociolinguistic impacts on the indigenous Berber varieties. Classical Latin, which was emblematic of religion, politics and elitism, was founded as the official language in several territories. In the course of time, a Classical Latin-based variety, commonly labeled as *Romance Latin, African Romance* or simply *African Latin*, evolved and diffused across many territories, though it did not completely substitute the already established indigenous Berber varieties (Kossmann, 2013).

Contrary to Punic loans, the number of Latin loanwords in Berber is relatively high. Some of these borrowings are mainly related to plants, agriculture and religion-e.g., the Latin *pirus*, meaning a pear tree, is the etymon of the Kabyle word *ifires* [ɪfres] and the Chaouia word *a-firest* [efɪrest]; the Latin *i-suble*, meaning an awl, a tool used to make holes in the wood, was imported to some Berber speaking regions in Ourgala, Algeria (Souag, 2016). Several Latin loans underwent notable phonological changes, such as the replacement of the consonant [s] with either [ɣ] or [k̲]. By way of example, *falco* (falcon) and *celsa* (mulberry) are the etyma of the Chaoui words *felk̲u* [felk̲ʊ] and *t̲k̲ilsa* [tk̲lsʌ], respectively (Basset, 1961).

The Latin word ‘causa’ became *taɣawsa* (thing) in Ourgala and *tɣawsa* in Tashelhiyt and tɣawsa in Chaouia (Kossmann, 2013). Múrcia (2011) added that because African Latin sustained for a long period of time in the Aurés territories, possibly more than any other Roman province, and because of the long Latin-Berber contact, Chaouia preserved many Latin loanwords, which are entirely absent in other Berber varieties-e.g., *carduus*, meaning a pollinated fig fruit, *celsa* and *cydonia*, meaning a quince fruit (as cited in Kossmann, 2013). These latter loans are the etyma of the Chaouia words *ḵarḍus, tḵilsa* and *taktunya*, respectively (Kossmann, 2013).

Accordingly, indigenous Berbers imported a large body of lexicon from the speakers of other ancient languages, particularly those terminologies which pertain to agriculture. Ancient Berbers, despite the long interethnic contact with politically and socially dominant civilizations, fared well in preserving their heritage language, which has been transmitted orally across generations. Historically, however, it was the Islamic era that marked the major sociolinguistic changes in the Berber language and Chaouia in particular.

2.3.4 Islamic Period: Berber-Arabic Contact

The history of Berber-Arabic contact can be traced back to the period which lasted from the 7th century to the 11th century, and which witnessed massive immigration waves of Arabs into many Northern African territories. This era marked paramount sociolinguistic impacts, most notably the establishment of both Classical Arabic and Standard Arabic as official languages of education, administration and economic transactions. Berber-Arabic contact, likewise, led to the emergence of newly Maghrebian speech dialects, commonly known as Nomadic, Sedentary and Koine varieties.

2.3.4.1 Classical Arabic and Modern Standard Arabic

Classical Arabic belongs to the Central Semitic language family. It is also a part of the Afroasiatic Phylum (Kossmann, 2012). It developed from the pre-Islamic Arabic local varieties in the Arabian Gulf. Sayahi (2014) summarized the evolution of Classical Arabic and its geographical diffusion in North Africa in terms of three basic historical impetuses: 1) the linguistic divergence between earlier eastern and western varieties in the Arabian Gulf; 2) the linguistic divergence between sedentary and Nomadic varieties in the Arab world; and 3) the strong ties between the Islamic identity, Arabness and Classical Arabic, which resulted in the evolution of standard and non-standard varieties in the Maghreb.

Because Arabic was the language of the Quran, literary works and poetry, it gained a strong foothold as the most prestigious variety in the Arabic peninsula (Holes, 2004). Its linguistic developments are traceable to the long Islamic conquests in North Africa which, quite unequivocally, shifted the sociolinguistic situation of several Maghrebian territories from purely Berber dominant settings into predominantly multiethnic settings and Arabic dominant settings. After the Arab immigrants took over the political and administrative sectors, the indigenous inhabitants learned Arabic as their second language, along with their native Berber dialects. The religious preaching of the Quran, Hadiths and Islamic norms made it possible for Berbers to learn Arabic and import many words into their daily conversations. Unlike the non-prestigious Berber varieties, Classical Arabic has been and continuous to be previlliged and emblematic of prestige and socially dominant groups (Kossmann, 2013)

In line with the deep-seated ideologies about the high status of Arabic, several Academies were established in many Arabic nations, such as Syria and Egypt, to preserve Classical Arabic and MSA from the impact of lexical borrowing. Such academies and

scholars sought ways to tap into the most authentic and pure linguistic forms of Classical Arabic. In his book *Al-Kitāb*, the Persian grammarian Amr Sībawayh relied on religious texts and poetry as epitomes of correct Arabic forms and expressions, and discussed, in details, lexical borrowing and ways to avoid it (Holes, 2004; Sayahi, 2014) Several pronouncements were made to replace foreignisms with correct and pure Arabic equivalents, such as supplanting the loanword تلفزيون [tilivizju:n], meaning a television, with the alternative الرائي [ʔrraʔi:], and التلفون [tilifu:n], meaning a cell-phone, with هاتف نقال [hatif naqa:l] (Holes, 2004).

Scholars, also, used many strategies, such as coinage and calque to cope with the new technical and scientific terms. Sayahi (2014) notes that "This restrictive approach formed part of a long tradition among Arab grammarians, according to whom what was already present in Classical Arabic at the time of emergence of Islam was legitimate, whereas materials borrowed in later periods were considered unacceptable." (p. 152). Notwithstanding these *restrictive* tendencies, MSA, compared to Classical Arabic was less immune to lexical borrowing from other languages (Sayahi, 2014). The globalization processes and the new technological advancements made it possible for MSA speakers to import loanwords and technical expressions from different world languages, such as فايسبوك [feɪs.bʊk] (Facebook), تويتر [twɪt.ər] (twitter), and لاب توب [læp.tɒp] (laptop) from English.

2.3.4.2 Maghrebian Dialects: Sedentary vs. Bedouin (Nomadic)

Research on the Maghrebian dialects piqued the attention of many variationist sociolinguists (Dendane, 1994; Versteegh, 1997). A plethora of research projects and book-lengths were devoted to shed light on dialectal variation and change in the Arab world and North Africa (Holes, 2004; Sayahi, 2014). The evolution of the Maghrebian dialects, it must be noted, is traceable to the long interethnic contact between the Arab immigrants and Berber

indigenous inhabitants, which took place from the 7th century until the 11th century. Two consecutive and massive immigration waves settled in North Africa, commonly known as *Pre-Hilialian* and *Hilalian* settlements, and played a major role in changing the sociocultural and sociolinguistic fabric of North Africa (Hachimi, 2009). The former, Pre-Hilalian, immigration wave took place during the 7th and 8th centuries and set the stage for the development of the so called Sedentary (or Urban) dialects. The latter, or Hilalian, immigration wave took place from the 11th until the 12th century and set the stage for the development of the Beduin (or Nomadic or rural) dialects (Hachimi, 2009; Kossmann, 2013).

Sedentary, urban dialects evolved in the urban areas, such as Fes in Morocco and Algiers in Algeria. Beduin, rural dialects stemmed from the varieties which were spoken in many Arabic tribes in the Arabian Peninsula, such as *Banu Sulaym* and *Banu Maʕqil* who settled in eastern, rural areas (Hachimi, 2009). Sayahi (2014) adds that, after the fall of Granada city in 1492, a third wave of expatriate groups of Andalusian descent and from Cordoba, Spain, settled in many territories in Morocco, many western areas in Algeria and Tunisia. Though Classical Arabic, Sedentary and Beduin dialects are linguistically related systems and share some speech features, such as the use of the prefix n- feature to mark the first person singular (Ferrando, 1998), they, however, differ linguistically in many regards. For example, the consonant variant [g] is more associated with Beduin, rural speakers, whereas the variant [q] is more associated with sedentary dialects speakers (Versteegh, 1997).

These aforementioned clear-cut differences became increasingly blurred due to the long processes of migration, geographical mobility and urbanization, which influenced urban areas in the last four decades. Thus, as rural inhabitants migrated to the urban cities, they accommodated their speech habits to the sedentary vernacular speech norms. Hachimi (2009)

notes that the massive rural migrant waves to the urban areas resulted in the development of new Koine varieties in various new cities. She asserts that the recent sociolinguistic fabric of many North African countries is composed of three main interrelated varieties, namely: Old Urban, New Urban and Rural dialects. The Old Urban and new Koineized urban are spoken by the traditional urban elites and new immigrants, respectively. In his research on the Tlemcen dialect, Dendane (1994) found that males are at the leading edge of velar sound [g] use, whereas their female counterparts are conservative in the use of the old-urban sound [ʔ]. He explained this gender-based phonological difference with referenced to the local ideologies ascribed to both variants. He notes that, because Tlemcen dialect is locally stereotyped as feminine, the use of [ʔ] is less frequent in the speech of male speakers, who are more prone to adopt the rural, dialectal norms.

2.3.4.3 Maghrebian Dialects, Ethnic Contact, and Berber Substratum Influence

The geographical diffusion of Maghrebian dialects across several Berber speaking regions in North Africa set the stage for the development of Berber substratum impact on rural and urban dialects (Kossmann, 2013). In his classical book *El Muqaddima*, Ibn Khaldūn (1377/1958) described the Berber substratum's influence on Arabic vernacular speech:

> in Ifriqiyah and the Maghreb, the Arabs had contact with non-Arab Berbers who constitute the bulk of the population of these countries. Hardly any city or group was without Berbers. Therefore, the non-Arab element there gained preponderance over the language of the Arabs. Thus, there originated another, mixed language in which the non-Arab element was preponderant, for the reasons mentioned. The language spoken there is more remote from the ancient language than other dialects. (p. 352)

According to Ibn Khaldūn, most regions in North Africa were characteristically multiethnic, thus setting the stage for the development of Berber substratum influence on the linguistic system of Arabic dialects. In several Kabyle and Aurés regions, speakers of Berber descent tend to import features from their heritage varieties while speaking in local Arabic. They would, for instance, pronounce the Arabic loan verb رقد [rʌqʌdʌ] (he slept) as رقدت [rqədt] or رڤدت [rgədt] in the same way they pronounce the Berber equivalent يصمض [yəsməḍ], meaning *it's cold.* Beyond phonology, many Berber terms were imported into Arabic dialects, such as فكرون [fəkru:n] for *a turtle* and جغمة [dʒuɣmʌ] or جغيمة [dʒuɣi:mʌ] for drinking some water or juice (Souag, 2016). Young speakers of Arab descent and who live in urban areas tend to adopt words and expressions from Berber varieties while speaking Arabic local speech. Youngsters in Batna city engage in this linguistic practice, usually labelled Ethnic Crossing (Cutler, 1999), to index social and personal stances, such as the use of the salient word ارياز [erjez] or ارقاز [ergez] to mark *masculinity* and *toughness*, stances stereotypically associated with Berber local ideology, and the use of اني نترجيجي [ani: nəter ʒi:ʒi:] , meaning I am frozen!, by young Arab urbanites to *mock* their Chaoui counterparts.

2.4 Bilingualism across the Country

Sayahi (2014) distinguished between two different, yet interrelated, types of bilingualism in North Africa, namely: Societal Bilingualism and Educational Bilingualism. The first is associated with the sociolinguistic makeup of the Arabo-Berber interethnic contact landscapes, and the use of Berber varieties in daily interactions. The second, conversely, pertains to the role of education in the development of Berber/Arabic-French

Bilingualism across the country. Both types, albeit in a complementary distribution, differ in degree from one region to another.

2.4.1 Societal Bilingualism: Arabic-Berber

Berber varieties are still preserved regionally in several rural, close-knit areas. In many rural areas in Batna city, elders are monolinguals and tend to use Chaouia in almost all social domains and daily interactions. Conversely, rural youngsters acquired Chaouia as their mother tongue and use Dariğa as a second language variety. Sayahi (2014), however, stresses that:

> While high illiteracy rates in isolated areas continue to provide the safest environment for the maintenance of Berber, as the Arabized education spreads further, a rapid shift threatens the existence of these Berber-dominant communities, installing a pattern of subtractive bilingualism that is common in indigenous communities elsewhere. (p. 70)

In the last three decades, many rural regions shifted into predominantly Arabic-Berber bilingual settings. Adolescents and young adults became increasingly exposed to Arabic through formal schooling and interethnic contact, and hence became less immune to patterns of language shift and death. Furthermore, commuters, itinerant and rural adults, who work in urban cities, became more prone to acquire and use Dariğa in the workplace, while reserving their heritage Berber varieties to home and communal interactions. The sociolinguistic situation of Berber in modern, urban areas is even more complex. The massive modernization processes, along with migration and spread of education, made it possible for many villagers to move into urban areas. In the last two decades, a large proportion of Berber migrants acquired local, urban dialects through daily interactions with urbanites. This *'Transitional Bilingualism'* (Lambert, 1978) was

so detrimental that it set the stage for Arabic-Berber *'Subtractive Bilingualism'* among young migrants in urban cities. Said differently, while 'Dariğa' and 'MSA' codes are widespread in almost all public and political sectors in the social spectrum, the use of Berber is only limited to home interactions and between speakers of the same ethnic origins. The use of Berber varieties outside home is discouraged, and many migrant parents encourage their children to acquire Dariğa and French, instead (Sayahi, 2014). It is not surprising, then, that these socio-historical conditions, along with the negative social attitudes ascribed to Chaouia accelerated patterns of language shift and death among a large proportion of Berber speakers in urban landscapes (Kossmann, 2013)

2.4.2 Educational Bilingualism: Berber/Arabic-French

Contrary to Subtractive Bilingualism, which yielded gradual erosion of Berber varieties in urban areas, *Additive Bilingualism* is more associated with learning a second language, in this case French, without losing one's mother tongue; in this case Berber and Dariğa varieties. Because French was and continuous to be strongly associated with elitism, prestige and modernity, it was positively evaluated by most speakers in Algeria, regardless of their ethnic origins (Sayahi, 2014)

Since the early 1960s, fields such as Mathematics, Biology and Computer Sciences have been, and still, taught in French, whilst Arabic was taught as a subject or used to teach human sciences (e.g., history, philosophy and Islamic studies). Arabic is also used to teach pupils in primary and secondary schools. Graduates students sought ways to improve their bilingual competences and to learn French as a basic eligibility requirement for professional success- e.g., to get a job (Benrabah, 2007) However, while Sayahi (2014) associated French-Arabic with formal education, he did not foreground the role of daily social interaction in additive

bilingualism; many Algerian elders and middle-aged speakers, albeit illiterate, acquired French through face-to face interactions with French speakers in the colonial period.

Bilingualism, be it Berber-Arabic or Berber/Arabic-French, began to increasingly spread into several urban cities and interethnic contact settings. Both societal and educational bilingualism shaped the sociolinguistic profile of Berber varieties in Algeria and, by extension, North Africa. In predominantly urban areas, the transitional Berber-Arabic vernacular was a pathway to a progressive subtractive bilingualism, whereby Berber varieties, most notably Kabyle and Chaouia, were gradually cast aside from daily speech in favor of local Arabic dialects. On a more negative note, '*Subtractive Bilingualism'* received little interest in the social and political arenas. Educational bilingualism, which is a form of additive bilingualism, was one of the basic impetuses for the diffusion of Arabic/Berber-French Bilingualism across many North African speech communities.

2.5 Diglossia and Arabic-Berber Contact

Diglossia is one of the most remarkable outcomes of contact-induced linguistic change, and one which received a considerable amount of attention in Berber and Arabic sociolinguistic literature. A plethora of introductory books and research projects were devoted to tackle and demystify Diglossia construct, to identify its basic characteristics and to probe down its implications in all social and educational arenas (Holmes, 2013; Ferguson, 1959; Kossmann, 2013; Sayahi, 2014, 2017). Earliest scholars treated Diglossia as a stable sociolinguistic situation wherein two linguistically related varieties co-exist in one speech community (Ferguson, 1959). Both codes, commonly labeled as 'High code' and 'Low code', are in a complementary distribution. High codes, such as Classical and MSA, are positively evaluated, emblematic of educated groups and are used in highly formal settings. Low codes, such as

Dariğa, are less prestigious, emblematic of informal speech and are used in daily social contexts. High codes are standardized and learned through schooling, whereas Low codes are are acquired at home and through social interaction by all speakers, regardless of their educational backgrounds. Low codes are standardized in the traditional sense, such as advertising and dialect poetry (Schiffman, 1998). The concept of Diglossia, however, was revised and elaborated by many scholars to encompass both genetically and non-genetically related varieties, with each variety used in distinct social contexts, such Guarani and Spanish in Paraguay (Fishman, 1967). Sayahi (2017) also notes that this social distinction is blurred and it is easy to note situations wherein speakers mix between both Arabic and Dariğa, such as electronic chats, media and social spheres.

Algeria and other North African nations are characteristically diglossic, wherein Classical Arabic and MSA are essentially used in religious discourse, politics, administration and educational sectors, whilst Arabic vernaculars are used in daily interactions. Arabic is superimposed as the most prestigious High variety due its strong ties with the Islamic identity, whereas Dariğa or Low variety, is stereotyped as less prestigious. Some Berber-Arabic bilingual settings are characteristically Polyglossic (Holmes, 2013) in a sense that speakers use Standard/ French in formal contexts, Dariğa in public interactions and Berber varieties at home or with speakers of Berber descent. The development of Diglossia in North Africa, Sayahi (2017) notes, changed people's attitudes towards their ethnic heritage varieties. Many Berber youngsters in the Aurés regions stigmatize Chaouia dialect and perceive it as non-useful, backward and outdated, while ascribing education and prestige to Classical Arabic and MSA.

Dialectologists have long been interested in examining the sociolinguistic impact of Diglossia on Arabic and Berber varieties. In fact, a general consensus among fieldworkers is

one that sees Arabic having a great impact on Berber in almost all domains, most notably in religion, administration and politics (Chaker, 1984: Kossmann, 2013). In 1984, Salem Chaker noted that, except for numbers 1 and 2, all Kabyle numbers names eclipsed from daily usage and were substituted by Arabic alternatives. In Morocco, Sayahi (2013) notes that several Berber words in Tashelhiyt dialect-e.g., *new, dirty, to count*-were replaced by Arabic Loans, especially from MSA. Further, it was noted that Arabic-Berber contact along with other related issues, such as Diglossia, code switching and Arabization, yielded detrimental results on Berber language. In 1985, for intstance, Dallet found that Kabyle is undergoing *Relexification*, a process whereby a large number of French and Standard Arabic loanwords replaced Kabyle native terms in Great Kabylia. In Tunisia, Gabsi (2003) found that 35 % verbs, 52 % nouns and 62 % adjectives were ousted from Berber speech and were substituted by Arabic equivalents.

2.6 Arabization and Language Planning in Algeria

Language policy has always been and continuous to be one of the most debatable issues in North Africa in general and Algeria in particular. Berger (2002) noted that Arabization is ‘‘the most severe problem of Algeria in its present and troubled state’’ (as cited in Benrabah, 2007, p. 8). The issue of Arabization, as is often the case with other sociolinguistics issues, has become, unequivocally, a hot potato in public, political and educational arenas “due both to the extent of the legacy of the colonial rule and to the hasty ideologically driven full-Arabization efforts” (Sayahi, 2014, p. 53). A glance over the long arc of Arabization history and education policy reforms reveals that the pendulum swung far away from a postcolonial legacy to a restrictive perspective, whereby educational reforms were enacted in favor of complete Arabization policies, into a period wherein ‘less stringent’ policies were tolerated to conform to the recent socio-economic changes in the country.

2.6.1 Arabization and Berber Education

Prior to the Algerian independence, the country was culturally heterogeneous, wherein inhabitants varied on several sociocultural backgrounds and spoke different languages, such as Berber and Arabic, and language varieties, such as MSA, Chaouia, Kabyle, Tuareg…etc. However, the Franconizing policies marginalized Arabic and Berber varieties, and encouraged the use of French as the only medium of instruction in all educational sectors (Djité, 1992; Kossmann, 2013).

Since the early 1930s and 1940s, many nationalist movements have been established, such as the *Association of the Algerian Muslim* and *The Glorieuse Etoile nord-africaine*. Inspired by the European nationalist movements of the 19th century, the anticolonial movements spelled out their disagreement with the *Franconizing* plans and galvanized new Arabization policies in the country (Djité, 1992). In enacting restrictive Arabization norms, Arab nationalists sought different ways to eradicate the *remnants*, so to speak, of the French colonial legacy, be it cultural, ideological or linguistic, from all the social strata in the nation. Arabization rules, they believed, would strengthen the national unity and maintain their cultural and religious ties (Benrabah, 2007). Therefore, the ideological struggle to enact Arabization measures was not pursued for purely linguistic reasons, but also to sustain deep-seated ideological ends; that is, to revitalize the lost pre-colonial Arabic identity and cultural heritage. Since Classical Arabic, the Quran and Islamic unity were perceived as inextricably linked, Arabization proponents sought many ways to revive and preserve the use of Arabic language in all the political arenas and social spheres.

Language planners introduced new educational reforms, wherein Arabic would become the medium of instruction in both Primary and Secondary Schools, Administration and

Politics, while reserving French for scientific subjects, such as Medicine and Biology. Their aim, Sayahi (2014) adds, was to boost linguistic competence in the Arabic literacy among Algerian citizens. Arabization policies were meritorious such that Classical Arabic and MSA gained a foothold in all educational and social arenas. Arabic was successfully integrated into primary and secondary education and the publication of novels, academic books and newspapers written in Arabic flourished. However, the process of *De-Franconizing* the nation did not fare well completely, as French was, and is still, used in the administrative sectors and official documents (Djité, 1992), sustaining its currency as emblematic of prestige among many citizens in the country. However, Sayahi (2014) asserts that restrictive Arabization policies "led to a fracture in the educational system" (p. 53). By 'fracture', he means that Arabization did not match the socioeconomic needs of the citizens. He Adds that, because French was a basic eligibility requirement for highly qualified jobs in most institutions, parents would "often opt to teach their children French outside the public school system in order to facilitate their transition into higher education." (p.53). by the same token, because some modern careers, such airport services, tourism and translation, require a good command of modern languages, university students had to enroll in private schools in order to learn English and French.

The situation of Tamazight was one of *marginalization*, as Arabization measures fully eliminated its integration in the educational system. In the early 1980s and early 1990s, Arabization measures were met with language riots led by activists, who spelled out the need for a full implementation of Berber in education and the wider social spectrum more generally (Kossmann, 2013). Benrabah (2007) discussed the pitfalls of language policy and planning in

Algeria. He criticized the Arabization measures and described them as ‘‘*allergic to pluralism’’*, both social and linguistic. He asserts that language planners should “move in the direction of reforms, which support linguistic pluralism and abandon the policy of arabisation” (p. 248). However, while it is true that Arabization policies cast aside Tamazight from the educational system and did not echo the sociocultural reality of the nation, Benrabah’s (2007) appeal for a *complete abandonment* of Arabization in all sectors sounds to be completely *unrealistic*. We, however, advocate the adoption of a bilingual educational system that supports both Arabic and Berber in primary and secondary educational sectors. In so doing, language planners will account for all the sociocultural and linguistic backgrounds of speakers, be they Arabs, Berbers or otherwise. Also, the educational reforms should meet the contemporary economic changes in Algeria and worldwide more generally.

In the last twenty years, new language policies were adopted and phased out in favor of a more *modernized* educational system in order to conform to the current economic changes and technology advancements. Arabic–Berber education was reinforced in primary education and new Tamazight Departments were established in the Aurès Povince and Kabyle cities (e.g., the Department of Tamazight Language and Culture in Batna was founded in 2013). In 2018, it was reported that Tamazight was taught at primary schools in 44 cities (e.g., Tizi Ouzou, Batna, Bouira and Bejaia). New educational reforms were also enacted, such as openness to foreign languages-e.g., English, German and Spanish- to conform to the economic changes and transitions to the Free Market Economy (Benrabah, 2007).

2.6.2 Arabization and Berber Status: Ethnic Loyalty or Assimilation?

Prior to the French colonization, several Berber speaking blocks in Algeria have been Islamized and Arabized, as Classical Arabic became the dominant language in the administrative sectors and religious sectors. As of early 1960s, Berber varieties have been trivialized and marginalized in almost all social and educational arenas. In the 1970s, this marginalization, ushered from early 1960s until late 1980s, resulted in an ideological struggle between Arabo-Islamists (or nationalists), who advocated a full engagement in Arabization policy, and Berberologists or *Modernists*, who called for a full recognition of Tamazight cultural and linguistic heritage (Kossmann, 2013).

Proponents of Arabization managed to restrict the use of Berber varieties from almost all social domains in the society. As of early 1970s, by way of example, the Circle of Berber Studies and Chair of the Berber Studies were officially banned and the use of *Tifinagh* symbols was penalized and completely forbidden in all social and public arenas (Benrabah, 2007). Voicing their wrath, Berbers' reaction to these stringent norms took the form of a *passive resistance*, wherein parents discouraged their children from using Arabic vernacular speech, and encouraged them to use Berber varieties in all social encounters (Kossmann, 2013). In early 1980s, Berbers dissatisfaction with the oppression of Tamazight resulted in a series of Berber riots, calling for an official recognition of Berber cultural and linguistic legacy. In May 1995, the government managed to establish the High commission of Berber Affairs (Haut Commissariat à l'Amazighité, HCA), whose main aim is to revive the Tamazight culture, and to introduce Berber in the educational sectors (Benrabah, 2007). In 2002, Berber was officially recognized as a national language along with the official Arabic language. The political recognition of Berber boosted the linguistic and cultural pride among

many Berber speakers and Berber national activists in Algeria. Berber varieties gained a foothold, partially though, in the wider social spectrum. In the last two decades, Tamazight became the medium of communication in several national TV channels, such as Beur TV and Tamazight TV4, and the *Tifinagh* alphabets appeared in many advertising Banners and street banners, universities names and institutions.

2.8 Conclusion

This chapter discussed the main sociolinguistic issues related to Arabic-Berber contact in Algeria and other North African countries. A glance over the long arc of history elucidates the major role several languages-e.g., Coptic, Punic and Latin- played in shaping Berber verieties. That said, a recurring theme in this chapter is that lexical borrowing in Berber is attributable to many, interrelated, historical, economic, attitudinal and sociopolitical factors. Most imported loanwords were modeled on phonology and morphosyntax of the Berber linguistic system. The Arabic-Berber impact on the sociolinguistic makeup of many Algeria dialects is manifold. Many Berber regions shifted from predominantly Berber-dominant settings into Berber-Arabic bilingual settings or predominantly arabized settings. It, also, resulted in the emergence of new Maghrebian dialects, commonly labeled as rural, urban and koine varieties. In addition, the establishment of Arabization policies in the late1960s and early 1970s yielded two notable sociolinguistic outcomes. First, most Algerian cities became predominantly Diglossic, whereas other Berber regions became Polyglossic, with Berber, Dariğa and standard codes used in distinct social contexts. Second, many Classical Arabic and Standard Arabic words were borrowed to vernacular speech norms. Arabic-Berber contact was highly influential such that it resulted in the development of many ethnically marked varieties, known as Ethnolects, in many Berber speaking communities. Arabic-Berber

contact, also, led to the development of new linguistic phenomena, such as Relexification and language shift in many Berber regions (Kossmann, 2013). Many lay people and researchers perceived these linguistic outcomes as a threat to Berber identity and cultural heritage, and voiced their worries about the status quo of Berber language. In the last twenty years, nevertheless, the long Arab nationalism–Berber Nationalism ideological conflict ended with significant sociolinguistic outcomes for the status of Tamazight, which re-gained its currency as a second official language along with the official Arabic language.

3.1 Introduction

Individuals identify themselves with different units of organization, such as communities of practice, speech communities, and 'virtual' communities. Within these larger social communities, smaller units of organization, commonly labelled *Social Networks*, develop, change in structure, become strong or loose. Because social networks are strongly connected with individuals' identities and sense of belongingness, they shape and reshape their life perceptions, social behaviors and linguistic habits. This chapter attempts to shed light on this issue, addressing the intertwined link between speakers' personal ties and patterns of speech change and diffusion in rural and urban areas. In essence, it builds from basic constructs, research on network in variationist sociolinguistic paradigm, to network structures in bilingual and multilingual settings. It begins with a brief sketch of 'Social Network' notion, its basic dichotomies and application in variationist research. Section *'Milroy's Social Network Model: A Critical Perspective'* overviews, critically, Milroy's (1980) social network framework, theoretical contribution and drawbacks. Then, it attempts to overview two oft-cited groundbreaking case studies, namely: Holmquist (1985), and Cheshire (1982), highlighting their contributions, both theoretical and methodological, to the understanding of the impact of social network structures on linguistic stability and innovations transmission. Section 'Networks, Social Evaluations, and Dialect Loyalty' is devoted to discussing the ways in which evaluative norms and local ideologies play a significant role in preserving local dialect norms. Section 'The Power of Weak Ties' lies at the heart of this chapter. It elucidates how 'Weak ties' correlate with patterns of linguistic diffusion and how 'Brokers' adopt and transmit innovations into other groups and speech

communities. The chapter ends up with an examination of the role of speakers' personal networks in preserving heritage languages in multilingual contexts.

3.2 Clearing the Ground: Basic Concepts and Issues

3.2.1 Social Network Construct

Social network is, by its very nature, a set of social relationships individuals contract with other individuals in their speech community. It was defined as "the aggregate of relationships contracted with others, a boundless web of ties which reaches out through social and geographical space linking many individuals, sometimes remotely." (Milroy & Gordon 2003, p. 117). Social scientists concur that there exists no such a thing as independent 'social structures' in society. Rather, various social networks are formed through a set of interrelated personal relationships that connect individuals with each other. Thus, one can speak of *ethnic networks*, *friendship networks* and *business networks*. Social networks, it must be noted, are not fixed (or stable), but flexible, fluid entities that may change in the course of time (Daming, Xiaomei, & Wei, 2008). Two ways of thinking about the description and characterization of social network can be distinguished: *'the sociological approach'* and *'the anthropological (egocentric) approach'*. Daming, Xiaomei, and Wei (2008) note that the sociological framework focuses on the holistic picture of social networks, whilst the latter, the anthropological framework, sets out the task to examine the various mechanisms, properties and patterns of social ties contracted by individuals (e.g., connectedness and centrality measures). Though different in scope and focus, sociological and anthropological paradigms rely on qualitative and quantitative (statistical) analytical procedures to investigate patterns of social interactions.

Social network in the way it is operationalized and examined in variationist sociolinguistic inquiry was mainly influenced by social anthropological studies in 1960s and 1970s. Milroy and Milroy (1992) note that earlier social scientists "were dissatisfied with what they saw as an overreliance on highly abstract social, political, and economic frameworks in accounting for forms of behavior of individuals." (P. 2). They add that social networks were "*bracketed off*" for methodological purposes and were examined in less abstract, locally-based social groups. Yet, they assert that, in order to understand patterns of linguistic change, fieldworkers must examine social networks in relation with other social correlates, such as class and age, in smaller-close knit areas.

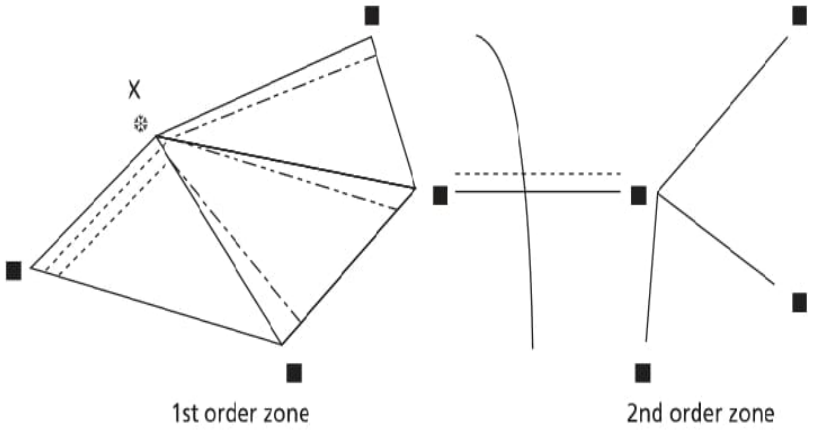

Figure 3.1 First order zone and second order zone in social networks. From "Social Networks" (p. 411), by Milroy, L., & Llamas, C. (2013). In Chambers, J. K., Trudgill, P., & Schilling, E. N (Eds.), *The Handbook of language variation and change.* Malden, MA: Blackwell.

Milroy and Gordon (2003) distinguish between two interrelated patterns of networks ties. *'First Order Zone'* ties comprise of the people with whom the '*ego'* directly contracts. An example of the First order zone would be the relation between close, intimate friends and

neighbors. *'Second Order Zone'* ties consist of the people with whom the ego is indirectly linked (see Fig. 3.1 above). Moreover, grouping egos into social networks is based on purely idiosyncratic criteria-e.g., with whom you interact, who your co-workers (or classmates) are, how much frequently you are in touch, who are you intimate friends...etc.

A basic tenet underlying social network theories states that "individuals create personal communities which provide a meaningful framework for solving the problems of daily life" (Mitchell, 1986, p. 74). That is to say, egos tend to construct and reconstruct their "personal communities" through a process of engaging in various relationships with different social ties and in varying strength degrees. Another related tenet states that the type and density of network ties is correlated significantly with linguistic variation and change. Thus, for instance, close-knit, "hard shell" networks act as a "reinforcement norms" that support and preserve local linguistic forms, thus resisting linguistic change, whilst loose networks, due to the lack of local 'reinforcement norms', are less likely to maintain social and linguistic dialect norms (Mullany, 2007).

Milroy and Gorden (2003) summarized some of the basic benefits of social network model in variationist research. Theoretically, sociolinguistic research on social networks yielded illuminating insights into patterns of dialect maintenance and trajectory of speech diffusion. Methodologically, fieldworkers use the so called *Snowball Technique* to gain access to a large number of participants in a relatively short period of time. Using ethnographic methods, such as participant observation and sociolinguistic interview, researchers were able to explore dynamics of language change and shift in speech communities, which are not stratified on the basis of social class, such as close-knit rural areas, aboriginal communities and ethnic enclaves. Contrary to the established Labovian

approaches, social network models cast light over the less abstract, localized social dynamic that trigger speech change and transmission. While Labovian approaches relied on *'social group'* as a focal point of analysis, social network framework focused on the '*ego'* as a starting point for examining how individuals contract different social and ethnic ties in a wider social spectrum. Speakers' countless social ties, be they weak or strong, entail various patterns of linguistic change and stability (Milroy & Gorden, 2003)

3.2.2 Types of Social Network

3.2.2.1 Loose vs. Dense

Density and Multiplexity are two key concepts in the structure of any social network. The former refers to the quantity of social ties in a network, usually measured by the number of links contracted by individuals. Accordingly, in a low-density, loose network, egos interact only with the core member(s) but not with each other. In a highly dense network, conversely, all members contract with each other (Meyerhoff, 2006). For instance, if one asks four people the question 'who are the people you hang out with in the neighborhood?' and each one of them named the other three people, then the network type is classified as characteristically dense.

3.2.2.2 Uniplex vs. Multiplex

Unlike Density, which pertains to network's *quantity*, Multiplexity refers to the *quality* of the social network, that is, how well egos know each other in a network. A network is said to be Uniplex if individuals know each other in only one way-e.g., close friends, co-workers, neighbors. Figure 3.2 illustrates the uniplex, loose network graphically. If the same individuals are linked on various levels, that is, they are co-workers, close friends and attend the same football club, then their social tie would be multiplex (Myerhoff, 2006). The

structure of their social relationship is determined by many factors: workplace connection, friendship, kinship system and sport.

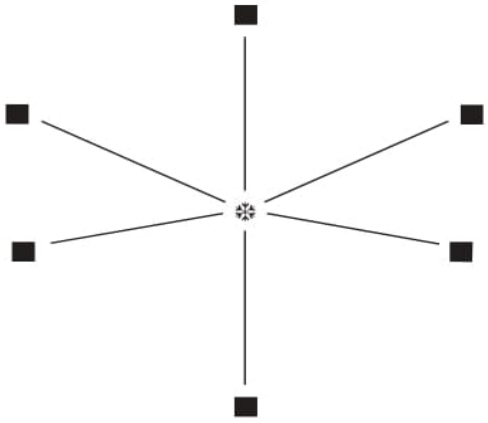

Figure 3.2 Loose, uniplex social network. From "Social networks" (p. 411), by Milroy, L., & Llamas, C. (2013). In Chambers, J. K., Trudgill, P., & Schilling, E. N (Eds.), *The Handbook of language variation and change.* Malden, MA: Blackwell.

Social Dialectologists concur that dense multiplex networks act as norm enforcements, exerting normative pressures on the behaviors of individuals, thus resisting all types of external factors (Mullany, 2007). Said differently, members in a dense, many-stranded network would monitor the behaviors of each other, both socially and linguistically. Therefore, if an individual is deeply integrated into one specific social group, such as that of high-density pattern, chances are he/she will conform to the social and linguistic norms of the group. He/she would act like, behave like and speak like all members of the social group. If, however, the same individual belongs to many loose, uniplex networks, chances are that he/she will be open to linguistic innovation and change. Milroy and Gorden (2003) note that social networks are not stable as they can be disrupted by many social and political forces, such as wars, mobility and urbanizations. Mesthrie, Swann, Deumert and leap (2009) add that

working class communities, political elites and predominantly rural communities are the epitome of dense multiplex networks, whilst upwardly mobile social classes are characteristically loose and uniplex. Because of their normative pressures, dense, many-stranded communities are more likely to resist linguistic change, supporting and maintaining non-standard speech forms, whereas loose uniplex groups are open to neologism and lexical borrowing (Milroy & Gordon, 2003; Milroy, L., & Llamas, C, 2013).

3.2.2.3 Interactive vs. Exchange

In 1992, the sociolinguist Li Wei coined the notions of *Interactive Networks* and *Exchange Networks.* Interactive networks "consist of people with whom the ego interacts frequently and perhaps over prolonged periods of time" (Wei et al., 2008; p. 269). *'Shop owner-customer'* relationship is the epitome of interactive network structures. However, individuals do not rely on interactive ties for sentimental or moral support. Wei et al. (2008) add that within any social milieu, Exchange contacts are so important for the ego, psychologically and socially, and with whom he maintains regular contact and exchanges advices. Li Wei (1992) adds that Interactive and Exchange ties correspond to Loose and Dense ties, respectively. Within first order zone ties, Passive networks can also be identified. Passive ties, notwithstanding the absence of regular contact, are considered as significant sources of emotional and moral support (Wei, 1994). Some relatives and friends, though geographically distant, are considered as significant sources of moral assistance.

That there is a one-to-one correlation between exchange ties, interactive ties and linguistic behavior is crystal clear. Exchange networks, like dense multiplex networks, are more likely to support stigmatized, local speech forms, resisting any type of linguistic change, such as lexical borrowing and dialect leveling. Speakers in interactive networks, however,

tend to incorporate innovative linguistic forms and new ways of speaking from other social groups (Wei, 1992).

3.3 Milroy's Social Network Model: A Critical Perspective

In social sciences and humanities, and in particular variationist sociolinguistics realm, social network has been, still, a cornerstone in studies of human relations, social and geographical aggregations and social change. Social network, a concept which is in many ways the offspring of a long-term anthropological enquiry, has been introduced to many groundworks on language variation and change, and has gained a strong foothold in the second wave of sociolinguistic variation studies and theories ever since the 1970s. Research on Network Density Theory represents a jump-off point in sociolinguistic history, not least because it challenged established ideas in the first wave variation studies, but also because it yielded scientific breakthroughs about dynamics of speech change and diffusion in monolingual and multilingual landscapes. The basic social network axiom, which has been foregrounded in many ethnographically and sociolinguistically orientated projects, postulates that: dense networks are resistant to linguistic change, whilst weak networks are more amenable to speech innovation and diffusion as amply developed by Milroy (1980)

James Milroy and Lesley Milroy were the first social dialectologists who used social network model in variationist sociolinguistic paradigm. The Milroys (1978), whose groundbreaking research was theoretically and methodologically informed by the works of Gumperz (1982), focused on three geographically isolated close-knit regions; namely: Ballymacaert in east Belfast, Clonard, and Hammer, west of Belfast in Ireland. Taken together, these three villages differ from Belfast urban city on many sociocultural grounds. Villagers belong to the working class stratum and have a strong affiliation and solidarity with

their local, rural culture. While men in Ballymacaert work in local dockyards, the unemployed men in Clonard and Hammer were obliged to seek new job opportunities outside their homelands.

The sociopolitical crises in Belfast made it impossible for the Milroys to randomly select their samples in the three villages. Because local inhabitants refuse to take part in their research, the Milroys opted for the so called *a friend-of a friend* or *Snowball* technique (Milroy & Gordon, 2003), using their personal networks to recruit pottentially more participants. They also relied on Participant-Observation method to construct and identify various social ties contracted by participants, and recoded a large amount of naturalistic, spontaneous dialect speech data. As it was predicted, network strength co-varies significantly with dialect stability and change in all three rural regions. Because speakers in Ballymacaert contracted comparatively denser ties, they retained their salient dialect features, such as the backing of low front [æ] (e.g., hat) and lowering of the front mid vowel [e] (e.g., hen). Although networks in Clonard and Hammer showed patterns of dialect stability, geographically mobile individual speakers, however, were more amenable to speech innovations. Thus, Milroys assert, dense networks serve as normative pressures of dialect maintenance and, by extension, strong affiliation with local life style. Though negatively evaluated by speakers in Belfast urban areas, the use of vernacular forms marks language loyalty, solidarity and local membership.

The Milroys crisscrossed social network with age and gender. Across all age-cohorts, males were at the leading edge of (th) deletion, a pattern attributed to their high orientation towards rural life style. Because women work outside homelands, they adopted and used more prestigious, standard features. The Milroys (1978), however, found notable exceptional cases

in Clonard, wherein vernacular forms like [æ] were found to be frequent in the speech of women. They concluded that Clonard women workers acquired non-standard forms through their extensive contact with customers who inhabit in other close-knit communities.

Milroy (1980) emphasizes the strong link between evaluation norms and social networks, noting that "complex attitudinal factors, in addition to more obvious ones such as upward mobility, are probably involved in the association between a loosened network structure and a movement towards a standardised norm" (p. 1980). Likewise, in arguing against Labov's Consensus Model, which states that all social classes have shared, positive evaluative norms towards the standard forms, Milroy (1980) proposed the Conflict Model, which postulates that in isolated, rural communities, speakers with dense networks tend to resist linguistic change and the adoption of standard forms, preserving their native speech forms, instead. Milroy and Milroy stress (1992) that Conflict Model accounts for dynamics of language change in communities which are characterized by sharp class and ethnic devisions, social inequality and segregation. However, we argue that both models can also be found in one community, with social groups having varying degrees of community integration and evaluative norms towards standard forms. The Consensus-Conflict opposition of the sort described by the Milroys raises some sociolinguistic issues related to the Arabo-Berber communities, such as Batna and Great Kabylia. One crucial issue pertains to the extent to which Chaoui migrant groups assimilate socially and linguistically to Batna mainstream local norms. This present research will examine whether ethnically based friendship networks will resist the adoption of Batna local norms or be more amenable for linguistic change.

Notwithstanding its influential empirical and theoretical contributions, Milroy's (1980) Social network model has been replicated and its veracity has been widely re-examined in

several small scale and large scale projects. Though a plethora of sociolinguistic research deepened our understanding of how speech change operates, Social Network received many tranchent criticism of its applicability along with other drawbacks. First, even though social network model of the kind applied by the Milroys casts light over speech network in dense working classes, its veracity in the case of socially and geographically mobile groups is far from obvious. Milroy and Llamas (2013) are careful to assert that Social Network Model cannot be implemented in a straightforward way for weakly nested groups. Second, earliest fieldworkers working within second wave paradigm foregrounded *'localness'* or integration to home/host communities and dismissed the importance of other layers of cohesiveness, such as ethnic cohesiveness. What about networks, real and virtual, which are comprised of members of dissimilar regional roots, or who live in different regions? In a world in which mobility lies at the heart of modern societies, connectedness and cohesiveness of social relations are not necessarily determined by social ties within geographically defined areas. Networks' connectedness can be measured with reference to not only *localness*, but also to *ethnic cohesiveness*, or other levels of community membership. Viewed in this way, one can talk of ethnic enclaves, ethnic gangs, and communities of practice, composed of members who inhabit in different localities. Face to face interactions aside, new virtual social networks develop vis-à-vis extensive contact among netheads who belong to distinct age cohorts, genders and, also, localities. Chahinaz's network, to take one example, comprises of social actors with dissimilar ethnic roots, and who inhabit in different localities. Convinced as we are, light must be shed on other levels of network cohesiveness. Third, social network composite used in earliest ethnographically framed works tapped into localized taxonomies among social groups, thus yielded whole-network analyses. Yet, they neither foregrounded

node network levels nor engendered detailed, qualitative and quantitative, descriptions of social and personal networks. Thus, Milroy's social network model does not provide a fully comprehensive, explanatory account of the locally based socioethnic taxonomies. Though Milroy's Social Network Model yielded insightful information on dynamics of language change in many Western communities, its veracity and feasibility in the case of the Arabo-Berber nations has never been fully tested. Moreover, earliest social network studies, albeit informed by anthropological and sociological theories and methods, disregarded the importance of multiple causation. It was until early 1990s that researchers called for an *Integrated Model* that accounts for the interplay of social networks, class stratification and mobility in sociolinguistic research.

In addressing these drawbacks and methodological concerns, Milroy and Milroy (1992) put forth the idea that "Sociolinguistics urgently requires a more accountable and integrated approach to the social variables which provide a means of understanding patterns of linguistic variation and the mechanisms of linguistic change" (p. 74). Researchers from different strands of thought adopted and integrated new social network models into their research studies: Kerswill and Williams's work on Milton Keynes (1999); Britain's (2010) work on superalocalization; Li Wei's (1992) work on Chinese immigrant families in England, to name but a few. These studies yielded methodological innovations and broadened our core understanding of the role of weak ties in speech diffusion. Other thorough, well conceived discussions of socially mobile categories are documented, quite comprehensively, in Labov (1980) and Chambers (2000, 2013).

3.4 Social Network and Language Change: Case Studies

Before variationist sociolinguistics gained a foothold in early 1960s, there has been a growing interest in the interplay between interpersonal relationships and language variation. For instance, Gauchat (1905) investigated aspects of sociolinguistic change in the Swiss village of Charmey. As of 1970s, however, a plethora of research projects, both large scale and small scale, were conducted to examine the correlation between linguistic change and network structures in urban and rural communities, such as Milroy and Milroy (1978) in Belfast, Ireland, Lippi-Green (1989) in Grossdorf, Austria, Edwards (1992) in Dertroi, USA, and Fought (1999, 2003) of Chicano in Los Angeles, USA. This section overviews two oft-cited projects (Cheshire, 1982; Holmquist, 1985). Predilection for these case studies reflects their great impact on subsequent studies on the one hand, and their significant theoretical breakthroughs and contributions in sociolinguistic knowledge, on the other.

3.4.1 Holmquist (1985)

Holmquist (1985) examined patterns of dialect change in Ucieda, a small rural village in the northern part of Spain. After the Spanish civil war, the social fabric of the village shifted radically from predominantly rural into predominantly urbanized. Ucieda witnessed many economic changes such that subsistence farming and shepherding disappeared in favor of dairy farming, and the village life style was remarkably influenced by many technological and transportation developments. Young villagers moved into other outlying areas to work in factories and media. In 1985, Holmquist plotted the use of the phonological variable (ʊ) against socio-economic integration factor in Ucieda region. Her study revealed that old villagers, who are highly integrated in the village local networks, retained the use of the salient variant [ʊ] in their speech, a pattern which echoes their strong solidarity with Ucieda village.

Youngsters, in contrast, were less orientated towards village life style and more integrated into the urbanized life style. They adopted the alternative, Castilian prestigious form [ɒ]. The replacement of [ʊ] with [ɒ] indicates a progressive linguistic change in the urbanized village. Holmquist (1985) concluded that youngsters' adoption of more standard features echoes their desire to distance themselves from the old fashioned life style of *La montaña*, meaning the mountain.

3.4.2 Cheshire (1982)

In 1982, Cheshire examined patterns of morphosyntactical change among working class teens in Reading, England. Some of the linguistic variables she analyzed are: subject-verb agreement as in *' I just think**s** it's useless!'*, the use of '*what'* instead of '*who'* and '*that'* before relative clauses, as in *'it's John **what** did it!'*, and the use of 'never' to mark negation, as in *' I **never** talk to him this morning'* (Cheshire, 1982). Using ethnography, Cheshire was able to explore how teens engage in *'Vernacular culture'* in terms of locally-embedded social practices, such as *'truancy', 'holding weapons', 'graffiti', 'fights'* and *'use of obscene'*, vulgar language. Using name elicitation technique, she also discovered that teens play different social roles, based on their position in adolescents' friendship networks. 'Core members' engage in many social activities related to vernacular culture, whereas 'Secondary' and 'Peripheral' members were less integrated in the vernacular culture activities. Adolescents' position in teens' network was found to be a strong sociocultural determinant of vernacular forms emblematic of working classes (Cheshire, 1982). At a closer look, the use of the stigmatized vernacular variants '*what'* and *'s'* marker were associated with core members. Conversely, the use of negative concord marker 'Never' did not pattern significantly with adolescents' social position in membership network.

Remarkably, the aforementioned case studies revealed consistent patterns: dense, multiplex ties are associated with dialect stability, whilst loose, uniplex ties are associated with dialect change. Socially and geographically mobile villagers tend to orientate themselves towards urban mainstream cultures, and thus are more likely to adopt standard, prestigious forms. Researchers in these three studies crisscrossed social network with an array of social forces, ranging from gender, age, social integration, the objective of which is to understand the complex processes of vernacular use and change. By examining Language as a *'social practice',* Cheshire's (1982) research in Reading, along with other groundbreaking studies (Eckert, 1989), foreshadowed the beginning of the third wave of variationist studies.

3.5 Networks, Social Evaluations, and Dialect Loyalty

That there is a link between attitudes, social perceptions and linguistic change is crystal clear. Social evaluations, be they positive, neutral or negative, serve as psychological *filters* that inhibit or facilitate the adoption of speech innovations. So intertwined are attitudes, identity, and language that individuals and social groups tend to adopt positively evaluated speech norms that reflect modernity, fashion and prestige, and avoid speech forms which are stereotypically stigmatized. In other cases, however, dialect norms and languages, which are stereotyped as backward and outdated by outsiders, are perceived as markers of language loyalty and culture pride by insiders (Milroy, 1980; Preston, 2013). Milroy and Llamas (2013) assert that local inhabitants, who live in close-knit regions, maintained their conservative forms, which they perceive as markers of local identity and avoid the use of incoming speech features. Local varieties, they add, embody a sense of belongingness and solidarity with their homelands.

The role of attitudes and perceptions in dialect change is well attested in variationist paradigm. By way of example, Szakay's (2008) perception experiment addressed two ethnolects in New Zealand, namely: Māori English and Pakeha English. In order to conduct the experiment, 20 participants and 107 listeners performed many dialect identification tasks. Intriguingly, listeners, in the absence of visual cues, were able to distinguish between speakers of Māori descent and those of Pakeha descent just by listening to some audio scripts. Further, she found that listeners with high Maori Integration Index into Māori networks relied on their rhythm patterns to differentiate between Māori speakers and non-Māori speakers. These findings confirmed that engagement in local networks plays a major role not only in voicing 'ethnic identity' but also in identifying the ethnic origins of other speakers. Marshall (2004) examined the ways in which social evaluative norms interact with other social factors in patterns of dialect stability and change in Huntly village, Scotland. He designed a *Mental Urbanization* questionnaire to gauge villagers' degree of engagement in Huntly local networks vs. Aberdeen mainstream culture. This sociological index addresses social aspects such as local values, local pride, career and views about modern life style. Marshall (2004), then, crisscrossed mental urbanization results with speakers' attitudes. His research revealed that local speakers who have high mental urbanization scores and positive attitudes towards urban life adopted more standard features associated with Aberdeen city. The same speakers, also, perceived their native dialect norms as old-fashioned and archaic. In contrast, speakers with negative attitudes towards the city and low mental urbanization scores retained many vernacular forms associated with their local networks.

3.6 The Power of Weak Ties

Research on network-induced linguistic change was motivated by dialectologists' desire to examine how speech forms vary and diffuse, socially and spatially, into different social groups and regions. Researchers working within the second wave of variation studies focused on the role of strong social ties in maintaining dialect norms, and disregarded the importance of weak, uniplex ties in urban and multicultural settings (Milroy & Gordon, 2003). In the last two decades, nevertheless, there has been a growing interest in the role of socially and geographically mobile speakers in language change. This section sheds light on this point and highlights the significant role of *weak ties*, *brokers* and *innovators* in the trajectory of linguistic transmission.

3.6.1 Weak Ties and Linguistic Change

Contrary to strong ties, weak ties are contracted by egoes whose relation is not intimate (e.g., acquaintances and co-workers) or egos with few connections in the social network. Weak ties, albeit remarkably important in dynamics of speech innovations, were untheorized, under-researched, and their role in speech innovation was trivialized. Milroy and Gorden (2013) explained that traditional dialectologists and earliest sociolinguists embraced an *isolationist* view of language change, foregrounding non-mobile social groups in well-defined isolated areas. Nevertheless, Cresswell (2006) remarks that mobility "is central to what it is to be human" (p. 1). In many countries, rural people tend to migrate from their homelands into new towns, cities and even countries in order to attain different social goals-e.g., looking for a jobs, going to school and college. Globalization, wars and urbanizations have always been basic impetuses for social and geographical mobility. Accordingly, the established, pre-immigration local networks become loosened as socially and geographically mobile speakers

form new relationships and contract weak ties with other social groups in urban landscapes. It is not surprising that changes in network structures and density would be, in most cases, accompanied by changes in speakers' speech habits (Tuten, 2007)

As of 1970s, the concept of 'Weak Ties' gained a foothold in sociolinguistic research. Many social scientists, sociologists and linguists, made attempts to theorize and explore the role of loose-ties in the social trajectories of innovations diffusion. In his agenda-setting article, '*The Strength of Weak Ties'*, the sociologist Granovetter (1973) notes that an ego, who contracts weak ties, acts as a 'bridge' ,so to speak, through which various information, ideas and linguistic forms are potentially transmitted into other social networks. Said differently, dense networks are indirectly connected by weak (*dyadic*) ties. Individuals who contract many weak ties, Granovetter adds, are less immune to *peer effect* and normative pressures of the social group, and thus are more amenable to social and linguistic innovation. Culturally diverse, Batna is inhabited by Chaouia speakers who tend to contract ties with varying degrees, ranging from weak to strong. We assume that Chaouia speakers, who contract weak ethnic ties, and who have many non-Chaoui peers in their personal networks, are more amenable to patterns of lexical change.

In variationist sociolinguistics realm, fieldworkers examined and discussed the role of weak ties in patterns of linguistic change among socially and geographically mobile speakers and immigrant groups. Trudgill's (1986) research on Norwich speech revealed that youngsters were at the leading edge of merging the voiceless fricatives [f] and [θ] with the voiced fricatives [v] and [ð]. Bortoni-Ricardo (1985) examined the speech of rural immigrants who moved to live in Brazlandia city, Brazil. After he measured the integration and urbanization degrees of immigrants, Bortoni-Ricardo was able to discover the different ways

in which network strength patterns with dialect assimilation. He found that migrants with weak ties lend themselves to acquire new standard features, dropping off their traditional, rural dialectal norms. Bortoni-Ricardo (1985) found that women adopted new speech habits of Brasilia dialect through extensive contact with their children, a pattern which emphasizes the significant role of weak ties in speech diffusion. In koineizing contexts, Tuten (2007) notes, immigrant families develop new weak ties with other immigrants, and adopt new frequent salient speech markers in the host community.

Research on *Weak* ties, though under-researched, provided new illuminating theoretical contributions about dynamics of speech change and diffusion in many close-knit and urban settings. Weak ties, it was noted, are *bridges* through which speech innovations diffuse not only between unrelated dense-networks but also into wider geographical and social spectrums.

3.6.2 Network Brokers, Weak Ties, and Linguistic Diffusion

Since the advent of variationist sociolinguistics, researchers proposed insightful generalizations about the role of social categories in the diffusion of speech innovations: stigmatized features are adopted by the youngest group in age spectrum (Boberg, 2010; Chambers, 1995; Eckert, 1989, 1997); sound change below social awareness is spearheaded by women (Eckert, 1989); weak ties are less immune to innovation transmission (Milroy, 1980). However, one of the most fundamental issues, under-researched though, is the role of sub-groups and individual speakers in trajectories of speech diffusion.

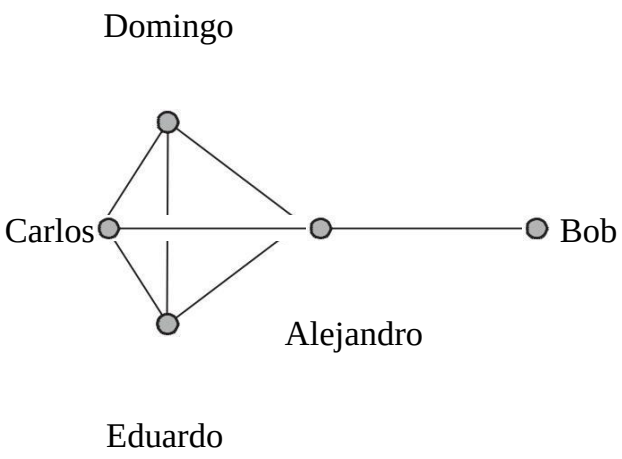

Figure 3.3 Brokers ties in a social network. From *Exploratory social network analysis with Pajek* (p. 168), by De Nooy, W., Mrvar, A., & Batagelj., B, 2011, New York City USA: Cambridge university press.

A large body of sociological literature emphasized the role of '*Brokers'* in the transmission of information and technological innovations across all layers of society. The social network analysts Nooy, Mrvar and Batagelj (2011) point out that the concept 'Broker' refers to the ego who contracts weak, loose ties and tends to link between many unrelated dense social networks. They also insist that "strong (i.e., frequent or intense) ties with people who are themselves related yield less useful information than weak ties with people who do not know one another" (p. 159). Said differently, because brokers belong to different networks, chances are that they tend to adopt and spread new information and ideas into various social networks. Figure 3.3 illustrates the role of 'Brokers' in social relationships graphically.

Figure 3.3 shows that Alejandro brokers between Domingo and Bob on the one hand, and between Bob and Eduardo on the other. Brokers, because of their weak ties, are less amenable to peer-effect and more open to acquire and spread innovations, be they social or

linguistic, to their contacts in other social networks. One way to chart the role of brokers is to look at commuters or villagers who work in urban areas, such as Batna and Oum El Bouaghi. Because villagers interact with other co-workers in urban cities, they are more likely to adopt and diffuse new speech forms to other speakers in their homelands. Contrary to the non-mobile rural youngsters, university students who live in rural regions, engage in new multiethnic friendship networks in Batna ville, and thus tend to be more prone to borrow new Arabic words and expressions and diffuse them into their homeland Chaoui networks.

In the last three decades, variationist sociolinguists investigated the role of *brokers* in the transmission of linguistic innovations in speech communities. In 1985, the Milroys found that some individual *innovators* contract loose ties and spread new phonological innovations into unrelated dense networks in Belfast. Eckert (1989) found that the '*Burned-out Burnout girls'* adopted the backing of the innovation [ʌ] (so 'run' is realized with the back low vowel [ɒ]), which was diffused into other Burnout male teens. Fox (2007, as cited in Britain, 2013) examined the social trajectories of phonological diffusion across teen networks in Britain. The two friendship networks, which consist of mainly Bangladeshi and Anglo-British teens, used to meet everyday in a youth club in London. Using ethnography, she was able to explore and investigate the interplay of friendship networks and speech dissemination. She found that extensive interethnic contact resulted in paramount speech changes, whereby Bangladeshi boys spearheaded and transmitted salient phonological innovations (e.g., the backing of [ei]) into their British peers. Tuten (2007), also, elucidated the crucial role of immigrant brokers in the emergence of new Koines. In a koineizing context, expatriate speakers are less amenable to the normative pressures of their homelands' networks and more likely to contract new, weak ties with other expatriate speakers. All things being equal, such inter-dialectal

contacts would entail, Tuten notes, a *peak* in linguistic diversity as speakers in contact would drop off their native marked speech features and acquire new alternative features. Thus, brokers, albeit under-researched, play a fundamental role in the propagation of speech forms across unrelated dense social networks. Researchers were able to draw connections between speech diffusion, global socio-demographic categories and local dynamics in monolingual and multilingual contexts.

3.7 Ethnic Ties, Code-Switching, and Language Choice

Sociolinguists from different strands of research have long been interested in the question of whether different ethnic networks correlate with patterns of code switching and code-choice. One of the most oft-cited studies in this field is Milroy and Li Wei' (1995) research on three generational families in Northern England. Using network questionnaires and participant-observation, Milroy and Li Wei identified three types of networks, which have different strengths of ethnic ties. Interactive and exchange networks correspond with Milroy's (1980) loose and dense networks, respectively. Passive networks consist of relatives and friends with whom the egos interact on a regular basis, notwithstanding the absence of face-to-face contact (Milroy & Gordon, 2003). In order to calculate the *social integration* of each network, Milroy and Li Wei (1995) designed an *Ethnic Index,* which gauges the extent to which participants interact with other friends with similar ethnic roots, while *Peer Index* gauges the extent to which participants' ties consist of speakers of the same age cohort-e.g., parents contacts and children contacts.

Milroy and Li Wei appealed to Auer's (1995) *conversation analytic framework*, which examines "the way conversationalists express and interpret the meanings of particular conversational moves locally … with reference to their sequential position in the discourse"

(p. 218). They note that Bilingual migrant speakers make conversational moves, switching from Cantonese to English to achieve specifiable communicative goals-e.g., repair, turn taking, pre-sequences and preference marking. These conversation strategies pattern significantly with age and network ties parameters. It was found, for instance, that young conversationalists do not switch from Cantonese into English, except to mark 'pre-sequences' functions. Intriguingly, it was found that speakers who contract with peers of Chinese descent tend to use Chinese much extensively, while those who interact with non-Chinese peers tend use English much frequently in their daily interactions.

Peer network, compared to ethnic ties, was found to be a strong social determinant of language choice. Children, who have interactive ties, tend to use English with their peers and parents. Grandparents, who have exchange ties, use Chinese with their peers. Parents use English with their children and Chinese with grandparents (Milroy & Li Wei, 1995). In her study of Puerto Rican groups in New York, Zentella (1997) studied patterns of language shift, wherein Spanish progressively shades off into English as one moves from the oldest generation to the youngest generation in age spectrum. Notwithstanding the apparent progressive language shift, youngsters mixed between the two codes to maintain their strong ethnic bonds with Puerto Rican networks and culture. Fought (2006) affirms that, despite the strong link between Spanish and Latino network groups, "little progress is being made in fighting the dominant US ideology that values English and associates Spanish with the poor and uneducated" (p. 77)

3.8 Social Network, Ethnic Enclaves, and Language Shift in Bilingual Communities

Studies of network-based linguistic change in monolingual contexts elucidated the strong interplay between patterns of language use and social network strength. Similarly,

social dialectologists working on migrant groups in bilingual communities found the same recurring patterns: in most cases studied, weak ethnic network ties are more amenable to linguistic innovation, whereas strong, ethnic networks are more resistant to language shift, preferring instead to preserve their ethnolinguistic speech habits.

Sociologists and sociolinguists were interested to explore the development of immigrant enclaves or ethnic enclaves in host societies. Ethnic enclaves emerge when immigrants move from their homelands into other, usually, economically powerful countries. Giddens (1989) notes that expatriate groups live in geographically isolated areas in urban cities and, in the course of time, tend to contract new social networks with other inhabitants with common social and ethnolinguistic backgrounds (as cited in Milroy & Gordon, 2003). Chinatown in New York, Chicanos, The Korean community of Los Angeles and Chinatown in London represent some of the well-known Ethnic enclaves in many English speaking communities. Despite the tendency of some immigrants to assimilate into the mainstream cultural norms, most ethnic enclaves "do not necessarily "melt" into the mainstream and that many groups seem not to want to do so, preferring instead to preserve their distinct ethnic identities" (Portes & D. & Manning, R. D, 2013, p. 204). Immigrant enclaves, Li Wei (1995) asserts, will have to struggle to maintain their social cohesiveness, cultural and linguistic norms against the established prejudice and racist practices of the host society.

Variationist sociolinguists concur that social networks play a significant role in language shift and maintenance in multilingual speech communities. In her research work to which subsequent literature refers, Gal (1979) examined the social trajectories of language shift in Oberwart, East Austria. Before the 16th century until mid-21st century, Oberwart was a bilingual community wherein local peasants used to speak Hungarian and used German with

outsiders. Hungarian, it is noted, was positively evaluated and stereotyped by many local peasants as the language of local identity and solidarity. After the Second World War, however, the village witnessed radical economic changes, shifting from a predominantly agricultural community into a predominantly industrial, urbanized community, and thus yielded paramount social and linguistic outcomes. Gal (1979) describes the new social fabric of the community as follows:

> It would not be too extreme to say that Hungarian spoken mostly by peasants and former peasants symbolizes the old ways of life, the old forms of prestige of the peasant community. These values are now being rejected by all but the oldest bilingual Oberwarters. In contrast, the educated upper class of Oberwart consists of German monolinguals. The world of schooling, of employment, and of material success is a totally German-speaking world. The language itself has come to symbolize the higher status of the worker and the prestige and money that can be acquired by wage work. While Hungarian is the language of the past and of the old, German is seen as the language of the future, of the young people who are most able to take advantage of the opportunities that Oberwarters feel exist in the German-speaking world. (p. 106)

Using ethnography, Gal (1979) observed the social dynamics and recorded the speech habits of 68 participants. On closer inspection, the sociolinguistic profile of Oberwart became almost German-dominant bilingual context, whereby German was the language of almost all formal and public spheres, whereas Hungarian was restricted to informal settings (e.g., home). German was emblematic of prestige and modernity, whilst Hungarian was stigmatized and stereotyped as obsolescent and old-fashioned. By the same token, Milroy and Li Wei (1995) investigated patterns of language shift among Chinese families in Tyneside, England. Old-parents, who are kin-orientated, preserved their Chinese language, whilst children, who

contract must extensively with non-Chinese peers, were at the leading of language shift into English. Intriguingly, Li Wei (1995) found that religious organizations, along with dense social network ties, played an important role in the mechanisms of language shift. He points out that the True Jesus Church organization exerted normative pressures on preserving the social cohesiveness and heritage Chinese language among British born youngsters.

3.9 Conclusion

Recent research on network-induced language change foregrounded the role of speakers' interpersonal relations in shaping local varieties and linguistic diffusion in different social contexts. Social dialectologists concur that dense networks in monolingual and multilingual settings favor vernacular norms, whereas weak networks support linguistic innovations and prestigious, standard norms. Contracting strong ties, it was stressed, marks a tendency towards preserving local varieties and, by extension, local identity. By contracting weak ties, speakers tend to adopt more innovative speech forms, a pattern which echoes their engagement in the urban mainstream cultures. Brokers, who are socially and geographically mobile, act as a *window*, so to speak, through which new forms and ways of speaking spread into various social groups and regions. Research on networks, immigration and multilingualism revealed parallel findings, elucidating the significant role of dense ties in maintaining ethnic identities and heritage cultures among expatriate speakers. The aforementioned insights are consistent with Eckert's (2008) view that identity is a fluid, multilayered entity, deployed by individual speakers and groups to project an array of personal stances, and to mark affiliations with local identities and/or distinctiveness from other social groups.

Milroy's (1980) Social Model, despite its high impact on subsequent second wave variation studies, has been criticized on several grounds. In keeping with Milroy and Milroy's (1992) call for an *'Integrated Model'*, we shall implement an extended version of Milroy's (1980) '*Classical'* framework, or what we call the 'Syncretic Social Network Model' (SSNM), which combines different methods to examine language variation in Chaouia speaking areas in Batna through synchronic and diachronic lens (see section 7.6 for a full discussion of the model). The next Chapter will attempt to overview the methods and research tools employed to collect the linguistic and ethnic network data.

4.1 Introduction

The present chapter is devoted to the methodology used to solicit socioethnic and linguistic information about participants. Basically, it is arranged into two main parts, which build from the theoretical underpinnings of sociolinguistic variation, to the description of the social landscapes, data collection issues and ethnographic fieldwork methods. A key theme in this chapter and, by extension, the whole study is that embracing an 'Interdisciplinary' approach is one of the best ways to investigate the complex interplay between linguistic variation in its sociocultural milieu from different angles. Section one, 'Research Design', considers the theoretical footings of modern sociolinguistic research and foregrounds its two basic hallmarks, namely: 'Quantitative' paradigm and 'Interdisciplinarity'. Section two, entitled 'Description of the Social setting', provides basic linguistic and geographical information about Batna speech community. The chapter gradually shifts to data collection issues-instruments, circumscription of lexical variables and sampling. Section 'Social Variables' casts light over the main social predictors which, it is assumed, may influence patterns of Arabic-Chaouia contact, their conceptual definitions and composite measures. Our motivation for highlighting both 'lexical variables' and 'external/social variables' is to examine the social embedding of linguistic variation, its relation with social motives, from both sociological and anthropological standpoints.The second part of the chapter is devoted to an overview of the ethnographic approach used in this study, its theoretical foundations, stages and ethical considerations. Finally, the chapter ends up with a discussion of the main statistical softwares/procedures employed in the variation analyses and data visualization.

4.2 Research Design

4.2.1 Quantitative Paradigm: Empirical and Theoretical Foundations

This research study is framed as variationist sociolinguistics and is deeply informed by theoretical and empirical underpinnings from other fields, mainly anthropology and sociology. At the heart of this study is the quantitative paradigm which will be embraced to gauge, statistically, the association between ethnic network strength and lexical change in various monoethnic and multiethnic settings.

As of 1960s, variationist sociolinguistics gained a strong foothold as an *autonomous*, *self-contained* discipline with its quantitative tenets and methods. One of its essential tenets is *Orderly Heterogeneity* (Weinreich, Labov & Herzog, 1968), which posits that linguistic variability is not random; rather, it is structured and systematically correlated with external factors. Using broad survey-instruments (questionnaires and sociolinguistic interviews), coupled with complex variation analyses, fieldworkers seek ways to examine the correlation between linguistic behaviors and various, interrelated social parameters. In stark contrast with qualitatively based disciplines, variationist sociolinguistics is a quantitative field of enquiry, which aims at probing down the proportions of certain socially embedded speech variants among social and regional groups (Milroy & Gordon, 2003).

4.2.2 Making Interdisciplinarity Connections

A major concern for all linguistic disciplines, despite their distinct empirical and theoretical foundations, is to fully understand, albeit so complex, how speech varieties vary, change and diffuse, socially and geographically, and across time axe. Contrary to ethnography of communication and other qualitatively orientated disciplines, variationist sociolinguistics is *quantitative* in nature and is essentially concerned with linguistic

variation and change in its social map (Schilling-Estes, 2013). A quick glance over the long arc of the history of sociolinguistics reveals that the pendulum swung far away from *Desciplinarity* to *Multidiscplinarity* and *Interdesciplinarity* approaches. Farr (2013) notes that *Multidiscplinarity* "integrates methods and underlying assumptions from diff erent disciplines to create a new discipline, whereas *Interdesciplinarity* uses methods or approaches from different disciplines to enhance research findings but does not attempt to create a new discipline out of the combination." (p. 17). Thus, variationist sociolinguistics, as it is often the case with all social sciences, became more open to adopt new concepts and methods from other fields of enquiry. Approaching language variation and change through Interdisciplinary and multidisciplinary lens became a preliminary task for fieldworkers who seek to gain a clearest image of the sociolinguistic phenomena under study.

In order to broaden the lens of our research study on Arabic-Chaouia contact, we adopted some anthropological methods, namely: participant-observation and name-elicitation. We, also, adopted new concepts from sociology and anthropology, namely: Ethnic Orientation, Homophily, Centrality, Betweeness and Connectedness, to seek how these constructs fit into our variation analyses. These social constructs, which have been proved to be strong indicators of network density (De Nooy, Mrvar & Batagelj, 2011), gained little or no interest in most early and recent sociolinguistic studies of social networks (e.g., Milroy & Milroy, 1978). To this end, we assume that the use of an *extended* version of Milroy's (1980) Model, which combines methods and constructs from Sociolinguistics, Historical-Sociolinguistics, Anthropology and Social Network theory is beneficial to understand how and why Chaoui words vary and change across

ethnic networks of varying density degrees. Likewise, adopting an interdisciplinary approach would, also, enable us understand how various ethnic networks preserve or diffuse Arabic loanwords into different networks in Batna community.

4.3 Description of the Social Setting

4.3.1 The Research Sites under Study

Batna is, by its very nature, a geographically and socioculturally heterogeneous landscape, whose continuous history is traceable to the establishment of the Numidian empire in North Africa. Contact between Chaoui groups with various ethnic groups, such as Romans, Ottomans and Arabs shaped the socioethnic fabric of the city, wich shifted from purely ethnically homogeneous Berber, into a multiethnic setting inhabited by Arabs, Chaoui and other groups, such as Beni Mzab and Kabyle who are engaged in the local business.

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Figure 4.1 Geographical distribution of the main areas in Batna city. From Batna (Algeria), boundaries, main cities, names (n.d.). Geographical distribution of the main regions [geographical map] in Batna city. Retrieved from http://d-maps.com/carte.php?num_car=176844&lang=ar.

Map 4.1 plots the geographical distribution of the main urban, outlaying and rural areas in Batna. Since the advent of independence, the majority of regional areas were autonomous, economically and socioethnically, and almost separated from each other (Bourdieu, 1958/1962). In the last two decades, however, the urbanization processes changed the social fabric of the city, especially rural areas and played a major role in connecting rural and urban areas by smaller outlaying regional blocks. Similarly, modernization processes, coupled with massive population movements, changed the ethnic profile of many areas, which shifted from being monoethnic into being multiethnic settings. Travelling from the central, sub-urban areas to the eastern counterparts of the city, one can simply notice the 'ethnic continuum' changing from multiethnic, Arab-Chaoui communities- Batna La Ville and Tazoult, and shading off into purely monoethnic Chaoui communities in Arris and T'Kout. In stark contrast with Timged and Tazoult, the isolated areas, such as tabeʕlīt and Tighanimīne, are mostly Chaoui communities.

Demographic characteristics, research questions and research style play a major role in determining the sampling strategies and sample size (Tagliamonte, 2006). Population's sociocultural characteristics, be they homogeneous or heterogeneous, must be reflected in the sample's composition and size (Cohen, Manion & Morrison, 2007). One of the most challenging tasks is to find an updated national census. Due to the unavailability of statistical census of the last five years, the demographic descriptions stated below are based on the recent updated censuses of 2008 and 2011. In the 2011 census, it was reported that Batna is the fifth most populated city in the whole country with 1.186.832 inhabitants ("السكان", 2012). It was estimated that 68.5 percent of the population inhabit

in urban areas-e.g., Batna ville, Merouana, Barika, Tazoult and N'Gaous. 13 percent of the population live in villages such as Madhar, Ras El Aioun and Bouzina, whereas 18 percent live in other outlaying, rural regions-e.g., Larbaâ, Kimmel, Maafa. The population density, it is noted, decreases as one travels from the urban areas to the outlying communities and close-knit, isolated regions. These differences in population density are attributable to the radical sociodemographic changes (e.g., urbanization), which influenced many villages in 1990s such as Arris and Barika, whose social profile became almost urbanized. By the same token, these social changes, coupled with the massive development of transportation means, were major impetuses for population movements from the rural into urban areas. According to the 2008 census ("Population résidente par age, par sexe et par wilaya", 2008), the inhabitants aged 15-19 (pre-adolescents), 19-25 (adolescents young adults) and 25-29 (adults) constitute the majority in the whole population. In stark contrast with the youngest age-chorts, speakers aged more than 54 are less represented in the population. As for the ethnic composition, it is impossible to hazard the exact number of all ethnic groups in the city, due to the fact that neither *ethnicity* nor *language use* sections were included in the national censuses. However, suffice it to say that Batna is a multiethnic landscape with Arabs and Chaoui inhabitants constituting the two major ethnic groups in all rural and urban areas. The city is, also, inhabited by a few Bni Mzab families, especially in the sub-urban areas.

4.3.2 The Linguistic Situation of Batna City

The sociolinguitic profile of Batna community, as it is often the case with its socioethnic fabric, is complex. Linguistically diverse, Batna is inhabited by groups who differ on many cultural grounds, and who speak different language varieties, such Dariğa

or alʕāmiya, an Arabic based dialect, and Chaouia, a Berber Variety. Figure 4.2 displays the geographical mapping of Chaouia speaking areas in the Aures regions:

Figure 4.2. Geographical distribution of Chaouia in the 'Aurés' province. From *Textes en linguistique Berbere (introduction au domaine Berbére)* (p. 28), by Chaker, S ,1984, Paris: Editions du CNRS.

Remarkably, the majority of Chaoui groups live in the 'Aures' region, which stretches from Barika (Batna) in the South to Oum El Bouaghi, Souk Ahras and Khanchla in the Eastern parts. Statistically, the exact reports on the Chaoui population in Massif du L'Aures, and specifically Batna, are not well-documented and disputable, because 'language use' was not accounted for in all the national and local censuses. The statistics used by researchers are just estimations (Chaker, 1984; Kossmann, 2012). In 2018, for instance, the 'Ethnologue' website reported that there are 2.130.000 Chaoui speakers by 2016 in all Aurés regions ("Tachawit", 2018). Granted that Batna is the most densely populated city in the Aures, it is safe to say that the number of Chaoui speakers would

constitute relatively 30 percent of all Chaoui speakers in the Aurés (650000-700000). The ethnolinguistic make up of Batna city is so diverse that some regions are Chaoui dominant (T'Kout and Ghoufi), while others are Berbero-Arabic speaking areas (Ain Touta). Contrary to the Chaouia-speaking areas, Barika and Bitam are mostly Arabic speaking areas, which are inhabited by a few number of Chaoui speakers. Briefly, the Ethnolinguistic profile of the city varies from ethnically Chaoui dominant, to Berbero-Arabic, to almost Arabic-dominant.

4.4 Data Collection Methods

4.4.1 Construction of the Questionnaire

We used Questionnaires to solicit information about participants' socioethnic backgrounds on the one hand, and to examine patterns of lexical change and stability in various areas, both urban and rural, on the other. The questionnaire addresses the following independent variables:

- Ethnic Network Strength (dense vs. loose ; uniplex vs. multiplex)
- Ethnic Homophily (Homophile vs. Mixed vs. Heterophile)
- Ethnic Orientation (High vs. Low)
- Regionality (rural vs. Urban)
- Other social variables: Age, gender and mobility.

In essence, the questionnaire consists of five main sections. It builts from general, social backgrounds to ethnic network information and linguistic tasks. The first section, entitled *Informant's Information*, seeks to solicit information about each participant's age, gender, ethnic affiliation and residential history. The latter, it must be noted, addresses the possible

role of geography (urban vs. rural), geographical mobility and commuting in determining lexical variation and change in different monoethnic and multiethnic settings.

'*Ethnic Network'* section tackles, in details, each participant's ethnic ties in various, interrelated, social domains, ranging from family, friendship, friendship, neighborhood and workplace/ education. In section three, participants were asked to list ten speakers with whom they interact on a regular basis, along with their ages and ethnic origins. The average of ethnic ties, calculated by dividing the total number of Chaoui ties by all ten possible ties, would yield the so called *Ethnic Homophily*, which ranges from a purely *Homophile* type, wherein most, if not all, participant's ties are of Berber descent, to *Mixed ethnic ties*, to a *Heterophile* type, in which most of his/her ties are characteristically non-Berbers. Homophily degree is predicted to correlate, statistically, with lexical borrowing and, by extension, with dynamics of dialect change and stability.

Section four, entitled *Ethnic Orientation*, and which is informed by the work of Walker and Hoffman (2010), addresses participants' perceptions and attitudes towards the Chaouia culture, and by extension, towards Berber identity. Participants' total scores are placed on an ethnic continuum scale, whereby a total engagement is assigned 2 points, whereas less engagement is assigned 00 to 0.99 points. Section five *Linguistic Tasks* is concerned with the lexical variables to be examined in the research study. It consists of 52 lexical variables which represent various social domains and folkways, such as weather, kinship, animals, verbs and adjectives. As noted in the questionnaire, participants are expected to opt for the variant(s) they actually use much extensively in their daily social encounters. The lexical choices of the whole sample will be, graphically, plotted against different social variables, such as Ethnic network ties, homophily and ethnic orientation.

4.4.2 Piloting the Questionnaire

In order to "to increase the reliability, validity and practicability of the questionnaire" (Cohen, Manion, & Morrison, 2007, p. 341), researchers are well served to conduct a pilot study prior to undertaking the research work. In most sociolinguistic large-scale projects, Milroy and Gordon (2003) note, piloting the questionnaire would be of great importance to fieldworkers who seek to minimize potentially practical difficulties and to enhance their research studies.

Before the final version of the questionnaire was administered, 20 Chaoui participants were selected to read and evaluate the items and to identify any ambiguous or misunderstood questions. They suggested new frequent lexical variables, most notably archaic Chaoui words-e.g., the corner (*aɣmərth* vs. *chukth*) and to sew (*ygeni* vs. *yətkhayāt*). Some participants suggested new lexical variants, which were not mentioned in linguistic tasks section, such as *miḡis* [mɪɣi:s], meaning smart, *aləmeʕ* [ɐləmeʕ], meaning mirror and *aɣmərth*, meaning corner. Furthermore, because participants differ on several sociocultural, regional and linguistic backgrounds, we wrote some lexical variants with different spelling forms-e.g., yizˤag [yɪzˤɑːg] ~ yizˤay [yɪzˤɑːg] and yezirəth [jəziːrərθ] ~ az*əgrer* [ʌzəgrer] ~ az*irer* [ʌzɪrer], which echo the regional variation in Batna speech community. Finally, the pilot study was, quite remarkably, an eye-opener in a sense that we were able to minimize some unexpected methodological difficulties and to improve the validity and external layout of the questionnaire.

4.4.3 Administration of the Questionnaire

The administration of the questionnaire to all participants lasted for approximately ten months. 400 printed copies were administered individually to speakers of Chaoui descent,

who live in different geographical areas: urban, rural and isolated blocks. The questionnaires were, also, administered to commuters and youngsters who inhabit in villages, such as Arris and Oued Chaaba, and work or study in Batna Ville. In addition, an online version of the questionnaire was sent via a Google-drive website to all participants who live in far-flung, isolated rural areas and who could not meet us in person. Thus, 800 electronic responses were received in roughly two months. On a more positive note, it must be noted, we opted for a 'self-administered questionnaire' technique because, with the absence of the researcher, participants would devote sufficient time to complete the questionnaire under relaxed, less stressful conditions. By the same token, the rationale behind the use of self-administered questionnaires was to minimize, if not to prevent, the possibility of 'Social Desirability Bias' (Bucholtz, M., Bermudez, N., Fung., V & Vargas, R, 2008; Fisher, R., J, 1993). That said, participants would opt for the words which they actually use in different social encounters and not the ones which the researcher would approve of. The researcher, however, used 'face-to-face' questionnaire with illiterate participants and elderly people in different public spheres-e.g., houses and gardens.

4.5 Locating and Circumscribing the Linguistic Variables

This section is devoted to locating and delimiting the lexical variables and a discussion of their categories and competing variants. It, also, addresses the practical considerations of 'Functional equivalence' criterion in data collection, analysis and interpretation of lexical change.

4.5.1 Accountability Principle

The principle of *Accountability*, a hallmark construct in variationist methodology, postulates that reseachers must account for all the *possible* and relevant competing variants

in the variable system (Milroy & Gordon, 2003; Tagliamonte, 2012). All the 52 lexical variables under study, it should be noted, comprise of Arabic loanwords, modeled on the morphological and phonological system of Chaouia, and Chaoui variants which are frequently used in many close-knit, regional, and urban areas in Batna. For instance, the lexical variable *orphan* consists of one loanword *litim* [lɪti:m] and one Chaoui variant, along with its different phonetic realizations *ayuğil* [ʌjʊğil] or *aguğil* [ʌgʊğil]. The number of alternations, be they Chaoui or Arabic loans, varies from one lexical variable into another. By way of example, the variable 'to pay someone a visit' consists of two competing variants (*yərzəf* vs. *yzur*), whilst the variable salt consists of three variants (*hisenth* vs. *lməlḥ* vs. *rəbḥ*).

The variables under study reflect various semantic fields, ranging from weather, kinship, and human body alongside other types of content words, such as verbs and adjectives. This study seeks to examine which social domains and categories are more prone to lexical borrowing and which are relatively retained. Some of these words, it must be noted, are also mentioned in the Swadesh (1971) list of basic vocabulary, which are considered to be highly immune to dynamics of linguistic change. Some of these terms involve: verbs (*yərɣa*); colors (*azizaw*) and nouns (*elgarəth, asləm, hamәthna*). Because basic vocabulary represents concepts, objects and cultural aspects which are shared by all cultures and speech communities, it is more resistant to lexical borrowing and change (Kossmann, 2013; Swadesh, 1971). Hence, one of the main objectives of this study is to investigate the extent to which basic vocabulary, compared to other culture-specific exclusive words, are amenable to patterns of dialect convergence in Batna speech community. Likewise, we opted for only lexical features which are frequent in speech and used much extensively in daily usage.

4.5.2 On Functional Equivalence

It is straightforward to delimit and identify the variants of one phonological variable, since both alternations refer to different "ways of saying the same thing" (Labov, 1972, p. 323). That is, phonological variants are semantically equivalent and are used interchangeably to mean the same thing. Each variant, however, is ascribed to distinct social meanings and evaluative norms.

Beyond phonology, however, identifying the exact lexical variants turns to be, as it is often the case with morphological and grammatical features, a hard endeavor. Contrary to phonological variants, lexical and syntactic variants do not have identical meanings; rather, they share relatively the same functional equivalence. Tagliamonte (2006) states that "In theory, no two forms can have identical meaning, but in practice two different forms can be used interchangeably in some contexts even though they may have distinct referential meanings in other contexts." (p. 73). In keeping with the same 'Functional equivalence' axiom, we set the task to identify the lexical variants which, though semantically different, are used in similar social contexts, for relatively the same communicative ends, and which are ascribed to distinct social meanings. The examples below illustrate the use of different competing variants in different social encounters:

English translation	Examples
…put some salt on it!	سرس فلاس قيتش ***انتيسنث***..... sərs fəlles qitʃ ənti:sənθ
Where is the salt shaker?	مالي هلا هيقرعت ***لملح***.... Meli həllʌ hiqərʕt lməlḥ
I am going to buy a salt shaker…	اذروحغ ادسغغ ***الربح*** ... ʌḏru:ḥəɣ edəsɣəɣ rəbḥ

By way of example, for the variable salt, while the variants *hisənth* and *lməlḥ* mean relatively the same thing (salt substance), the third variant *rəbḥ* is originally an Arabic word which literally means '*winning'*. Speakers in all these examples, however, use all the variants to refer to 'salt'. Chaoui speakers who inhabit in rural areas in Oum Elbouaghi and Batna tend to avoid the use of *lməlḥ* because it is, it is believed, 'jinxed' and brings bad luck to people, adopting the incoming Arabic loan *rəbḥ* instead. Likewise, the variants *hisith* [hɪsi:θ] and *lemri* [lemri] are commonly used to describe a mirror. The Arabic loanword *aləmeʕ* [eləmeʕ] which means *shiny* or *glossy*, went through a 'semantic expansion' process, broadening its meaning to refer to a 'mirror'. All terms, though they have different semantic identities, are used interchangeably to attain the same function and communicative goal. Speakers, regardless of their socio-ethnic and regional backgrounds, use one of these terms in the same social contexts and to refer to relatively the same referent.

4.6 Participants Selection

4.6.1 Sampling Procedures

This research work sets out the task to recruit informants by means of '*Judgement'* or 'Quota' sampling strategy, whereby predetermined socio-demographic 'cells' are identified beforehand and then, through making contact with different networks, fieldwokers recruit those participants who are well-suited for the research objectives (Milroy & Gordon, 2003). Though random sampling is indisputably the best workable strategy to ensure generalizability, it is nevertheless not well suited for this study due to many reasons. First, it does not guarantee that the sample characteristics would represent the social categories under investigation; rather, it may lead to sampling other social categories which might not be suitable for this study, most notably non-Chaoui speakers and those who lived most of their

lifespan in other cities in the country. Thus, we opted for 'Judgement sampling', recruiting only speakers of Chaoui descent and bi-ethnic individuals who live in predominantly monoethnic and multiethnic areas in Batna. Speakers, who belong to other ethnic groups, be they Arabs, Kabyle or Bni Mzab, were not selected for this study. Across age spectrum, all age cohorts, be they young adults, adults or elders, were recruited, except for children and preadolescents. Our motivation for excluding children and preadolescents from the research is to avoid any "possibility of confounding phonological or grammatical development with local variation" (Feagin, 2013, p. 28). The aforementioned social categories were crisscrossed with gender, mobility, regionality, homophily, mobility and ethnic orientation (see section 4.7)

In attempt to easily gain access to the sample, we used the Snowball or a friend of a friend technique characteristic of many ethnographically and quantitatively orientated studies (Eckert, 1989, Milroy, 1980). In so doing, we sampled participants from our personal network and then asked the same participants to recommend other speakers, such as their friends or siblings, with similar sociocultural backgrounds, and so forth. On a more positive note, using snowball technique proved to be very beneficial in that we were able to recruit a large number of Chaoui participants in a relatively short period of time. Also, using our personal networks, we were able to recruit potentially new participants who might otherwise refuse to take part in the study. We sent an electronic version of the questionnaire via email to many respondents and designed a web-based Google-drive questionnaire to be posted on many social media group pages. Accordingly, the use of judgment sampling, along with snowball technique and online questionnaires, yielded a large amount of data in a relatively short period of time.

4.6.2 Sample Design

The data gathering process began in March 2017, and lasted for roughly 10 months. By the end of January 2018, we received 1090 questionnaires, both electronic and printed versions. Incomplete questionnaires, such as those in which crucial (social) information are missing or contain contradictory answers, were not accounted for in the study. 87 incomplete questionnaires were excluded, and so we were left with 1003 responses for the variation analysis. Table 4.2 displays the social characteristics of all Chaoui respondents. With regard to gender distribution, 39 % of the whole sample are females (414), whereas 61 % are males (596). As for age distribution, 0.07 % and 0.01 % represent adolescents and elders- the two-extreme points in age spectrum- respectively. 0.60 % are in their twenties, 20 % are in their thirties, 0.06 % are in their fourties, 0.03 % are in their fifties and 0.005 % are in their sixties. Remarkably, the proportion of each age cohort decreases rigorously as one moves from the oldest generation to the youngest generation.

Table 2

Stratification of Participants by Age Cohort and Gender

	Gender	
Age cohorts	Female	Male
Teens	40	40
Twenties	275	332
Thirties	47	160
Fourties	25	25
Fifties	7	29
Sixties	2	4
Seventies	1	1
Sub-total	395	608
Total	**1003**	

A quick glance over 2008 census ("Population résidente par age, par sexe et par wilaya", 2008), indicates that age proportions and characteristics are, to some extent, echoed in the sample's age composition, with young adults as the most represented cohort and elders as the least represented cohort. Hence, with respect to gender and age stratification, the social parameters of the sample mirror, to some extent, those of the population. The geographical distribution of the 1003 respondents is represented graphically in the pie chart below:

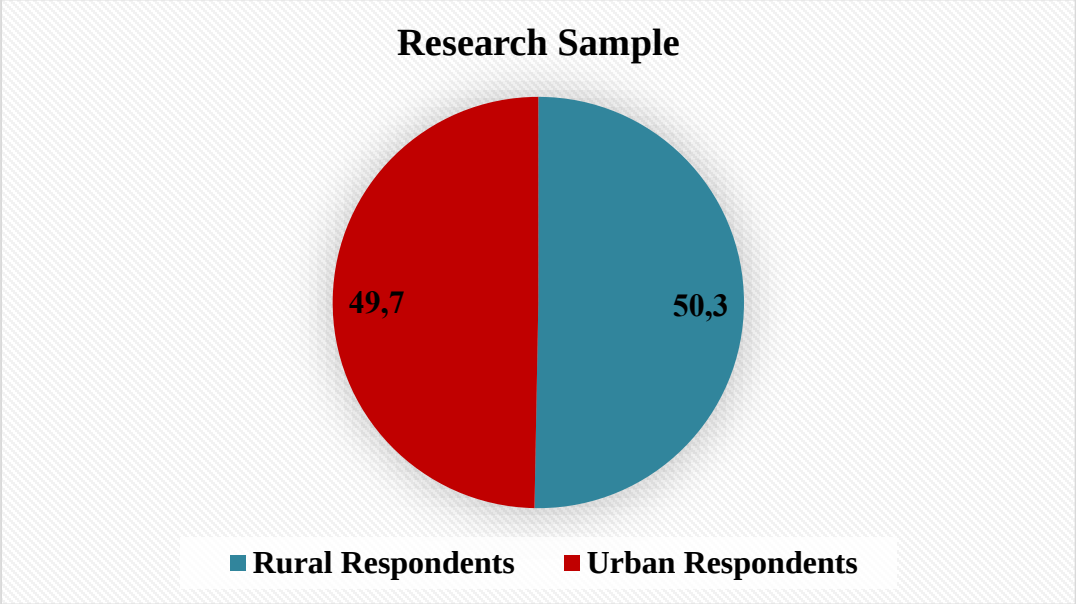

Figure 4.3 Regional distribution of research participants.

The proportions of rural and urban Chaoui respondents are comparable. Urban respondents make up 49.7 % of the whole sample, whilst their rural counterparts make up 50.3 %. It is worth noting that all respondents live in 43 urban, rural and isolated villages in Batna city. The number of respondents differs variably from one area into another. In stark contrast of the close-knit, isolated areas, eastern and central parts are highly represented in the sample. The ethnic composition, likewise, varies considerably across regions. The number

of Chaoui respondents decreases in the urban, multiethnic contexts and gradually increases in the rural ,monoethnic settings. At its core, the research sample makeup mirrors the broad socio-ethnic and geographical characteristics of the whole Batna speech community.

4.7 Social Variables

This section overviews the major socio-ethnic variables to be examined in the research project. It sets the tasks to discuss the composite measure of the main external variable, ethnic network strength scoring (ENSS), along with other related ethnic constructs, mainly: 'Homophily' and 'Ethnic Orientation'. Other social external variables, such as age, gender, mobility and regionality which, it is assumed, play a major role in Arabic-Chaouia contact, are also tackled.

4.7.1 Ethnic Network Strength

The social network index is a modified version of Milroy's (1980) social network strength grid, and subsequent network composite measures. Contrary to Milroy's (1980) Network Strength Scoring (NSS), which addresses the extent to which speakers are integrated in social networks in their homelands, the Ethnic network strength scoring (ENSS) used in this study seeks to measure speakers' ethnic density and ties with Chaoui contacts. This is quite conceivable, granted that many ethnically dense and weak networks comprise of members who live in different regions and cities Thus, while Milroy's NSS foregrounds *localness*, ENSS focuses more on *ethnic cohesiveness* across various social and personal networks.

The ENSS used in this study addresses five main components which comprise 'ethnic cohesiveness', mainly: Family, kinship, friendship, neighborhood, and education/workplace. All these domains pertain to speakers' ethnic ties degree regarding different, interrelated,

social domains. It must be noted that question 2 in 'Workplace/ School Network' section (see Appendices A and B) aims at gauging speakers' multiplexity (multiplex vs uniplex) of ethnic ties, while the remaining questions address ethnic strength (strong vs. weak):

- Strong ethnic ties: participants contract strong ties with Chaoui contacts in all social domains.
- Weak ethnic ties: participants' ethnic networks consist mainly of non-Chaoui contacts or of both ethnicities: Chaoui and non-Chaoui peers.

It is worth noting that the ENSS rubric was modified to adjust to the sociocultural folkways of the networks under study. For instance, we foregrounded 'kinship' and 'friendship' as strong indictors of ethnic network strength among ethnic groups, such as Berbers in the Aurés regions. Nevertheless, other domains, such as voluntary association, were not accounted for in this research, due to the fact that the majority of people in Batna are not involved in any local organization or cultural association. Also, while Milroy's (1980) model focuses more on '*localness'*, our ENSS model addresses the degree of ethnic integration in Chaoui networks.

In essence, our ENSS model, an extended version of Milroy's (1978) model, is based on a systematic scoring rubric of 20 points for all the 10 items. The scoring scale for each item ranges from 00 to 02 points. For instance, 'only Chaoui' or 'yes' responses are assigned 02 points; 'only Arabs' or 'no' responses are assigned 00 points, and 'Arabs and Chaoui' responses are assigned 1 point. The ENSS mean score for each participant is counted by dividing the total number of points by the number of questions (10). All things being equal, speakers' ENSS means would co-vary, significantly, with their lexical variation distributions. Therefore, it is assumed, the use of Chaouia words is associated with speakers whose ENSS

is high (1 point – 2 points), while the use of Arabic loanwords is associated with speakers whose ENSS is low (00– 0.99).

4.7.2 Ethnic Homophily

'Homophily' has been, still, one of the most researched and discussed notions in sociological literature (Borgatti, Everett & Freeman, 2002; De Nooy, Mrvar & Batagelj, 2011). It has, however, gained little or no interest in variationist sociolinguistic research (Wassink, 2016) In essence, it postulates that "a contact between similar people occurs at a higher rate than among dissimilar people" (McPherson, Smith-Lovin, & Cook , 2001, p. 416). The underlying tenet of homophily, then, posits that 'egos' contract much extensively with other egos with whom they share analogous socio-cultural, linguistic backgrounds, life expectations and beliefs. In addition, McPherson et al. (2001) note that network connectedness is more remarkable and prominent in race and ethnicity than other social categories. Thus, African Americans prefer to interact with African American peers and Berber people prefer to socialize with Berber friends, and so on. For each participant, the ethnic homophily index (EHI) is calculated by dividing the number of Chaoui peers by the total number of his/her close friends:

$$ethnic\ homophily\ index\ = \frac{\text{ethnically homophilous peers}}{\text{total number of friends}}$$

Informants' scores are placed on an ethnic homophily continuum, which ranges from strongly homophilous network, wherein most of their peers are characteristically of Chaoui descent, ethnically mixed network, to strongly Heterophilous, wherein most of their peers are non-Chaoui. In order to investigate the interplay between homophily and linguistic change

and stability, we set the task to examine the correlation between each informant's EHI and his/her lexical choices.

4.7.3 Ethnic Orientation

The construct of 'Ethnic Orientation' was first employed in socio-psychological studies (Keef & Padilla, 1987), and was then introduced into variationist sociolinguistic research by Hoffman and Walker (2010). Conceptually, ethnic orientation (EO), by its very nature, refers to speakers' "attitudes and degrees of orientation toward the values and characteristics associated with their respective ethnic group" (Hoffman and Walker, 2010, p. 40). To put it otherwise, it refers to individuals' empathy/or antipathy for their ethnic and cultural heritage. Though ethnic orientation was found to be a strong correlate with phonological changes (Hoffman and Walker, 2010), its veracity in the case of lexical variation and change in multilingual landscapes is far from obvious. Furthermore, the extent to which individuals' EO scores are consistent with their ethnic network density is untested and underresearched in sociolinguistic research. Therefore, we set the task to gauge participants' views and perceptions about Chaouia identity and, by extension, Berber cultural heritage. In essence, the easiest way to examine their EO scores is in terms of two basic thresholds, namely:

a. Low ethnic orientation score (LEO): ranges from 00 to 0.99 and mirrors negative attitudes towards/ and less engagement in Chaouia Culture.
b. High ethnic orientation score (HEO): ranges from 1.00 to 2.00 and echoes positive attitudes towards/ and strong empathy for Chaouia cultural heritage.

LEO and HEO, then, represent two extreme points in ethnic orientation spectrum, which ranges from a complete engagement in Chaoui heritage to the least engagement. We focused only on those interrelated aspects which are considered to be strong indicators of Chaouia

ethnic engagement, such as language use, neighborhood, linguistic and cultural pride. Research participants are asked specific questions about each of these components (see Appendix A and Appendix B). The overall mean scores would yield the extent to which ethnic engagement degrees co-vary, statistically, with lexical variation and, by extension, dialectal change and convergence in Batna. Thus, low ethnic orientation indexes, it is assumed, correlate significantly with high degree of Arabic lexical borrowing, whilst high ethnic orientation scores correlate significantly with linguistic conservatism.

4.7.4 Regionality

With regard to regionality, this study considers all Chaoui speakers who live in predominantly rural and urban areas. In essence, it addresses monoethnic, rural settings, such as T'Kout and Ghoufi, wherein Chaoui speakers constitute the majority ethnic group, and wherein Chaouia is the only variety used in daily social encounters and economic transactions. It, also, focuses on many multiethnic regions, such as Batna Ville and Ain Touta, which are inhabited by speakers of different ethnic origins. Compared to monoethnic settings, these multiethnic settings represent the focal points not solely of high ethnic contact, but also for the development of weak ethnic networks and contact-induced speech change.

As for dialect acquisition, we seek to solicit information about Chaoui speakers who acquired the dialectal speech patterns associated with Chaouia variety in Batna speech community. Hence, any speaker who grew up in another city, say, Oum El Bouaghi, he/she will not be recruited, simply because he/she, it is assumed, uses the dialectal features characteristic of Oum El Bouaghi city, and hence is not well-suited for this research project.

4.7.5 Other Social Variables: Age, Gender and Mobility

In keeping with Young and Bayley's (1996) principle of 'Multiple Causes', age, mobility, gender and regionality are also examined along with ethnic network strength variable. To begin, we consider consecutive groups in the age spectrum, devided into five age decades; namely: teens (17-19), twenties (20-29), thirties (30-39), fourties (40-49), fifties (50-59), sixties (60-69), and seventies onward (70 +). These divisions mirror different consecutive life phases in one's lifespan-adolescence, young adulthood, adulthood and old age. Age construct has been, still, widely discussed in sociolinguistic literature (Eckert, 1997, Llamas, 2007), and was found to be a strong correlate of linguistic variation and change (Labov, 1963, 1966; Trudgill, 1974). In keeping with the 'Apparent Time' hypothesis (Bailey, Wikle, Tillery & Sand, 1991), it is assumed, younger generations are at the leading edge of Arabic loanwords use, while older generations retain their native Chaoui words. Following Guy's (2011) *Incrementation* tenet, we argue that the use of Arabic loans would increase as one moves from the youngest group to the oldest group, and then would propagate into other social groups. Such lexical differences would echo ongoing dialect changes in Batna city.

In addition, we shall examine the role of gender and mobility variables. Contrary to the earliest Labovian research projects, we examined the correlation between mobility and interdialectal change, foregrounding not only non-mobile Chaoui speakers but also geographically mobile counterparts, be they Chaoui migrants, interlopers or commuters. These social groups, compared to non-mobile speakers, are agents of speech diffusion and tend to be more prone to adopt Arabic loanwords. The rationale behind crisscrossing ethnic and social factors stems from the idea that in order to fully understand the dynamics of Arabic-

Chaoui contact, one must account for multiple external variables. This, then, would yield a clearest image of dynamics of lexical change and diffusion in Batna speech community.

4.8 Ethnographic Fieldwork

In this section, we shall consider the theoretical footings and methodology used to examine lexical change and stasis in two ethnic networks. In so doing, we shall try to shed light on the main steps followed to *enter* into the research settings and to gain access to the networks under investigation.

4.8.1 Foregrounding the Ethnographic Enquiry

That linguistic diversity and social context are inextricably linked is crystal clear. Farr (2013) asserts that fieldworkers need to develop a deep, grounded ethnographic understanding of language behavior and its culturally ingrained aspects. Ethnography, an anthropological approach, became the cornerstone of fieldwork research in several disciplines, such as sociology, sociolinguistic, social anthropology, ethnography of communication, to name but a few. Embracing ethnographic methods, such as participant-observation, in sociolinguistics echoes not only the need to establish an interdisciplinary framework, but also to enrich research with qualitative and qualitative data, and to broaden researchers' investigation lens about the issue under study (Shilling-Estes, 2013). Duranti (1997) defined ethnography as "the written description of the social organization, social activities, symbolic and material resources, and interpretive practices characteristic of a particular group of people" (p. 85). To put it otherwise, researchers engage in a long term 'participant-observation' process, whereby they participate in the local activities and, simultaneously, observe the cultural mores, social life and folkways. They take notes of all the cultural components, ranging from demographics

and beliefs to daily social habits and natural speech practices. In so doing, the pendulum swings between an *insider* standpoint and an outsider standpoint (Shilling-Estes, 2013).

We shall approach Arabic-Chaouia contact from two different, yet interrelated, angles. From an *Emic* standpoint, we shall try to explore and uncover the perceptions and linguistic ideologies associated with the Chaoui youngsters' friendship networks. From an *Etic* standpoint, we shall try to analyze the sociocultural and attitudinal motives correlated with those linguistic practices and patterns of lexical change. Since this study draws on the social constructivist's theory of identity, we shall be investigating the ways whereby youngsters, Chaoui and non-Chaoui, construct their ethnic identities through language use. In keeping with Wallace's (1961) view that culture is an *"organization of diversity"* (as cited in Duranti, 1997, p. 32), we shall account for the *sociocultural diversity* among Chaoui and non-Chaoui speakers more than their *shared* cultural norms (e.g., Dariğa). Our motivation for giving more weight to *differentiation* stems from our belief that it is ethnic diversification and cultural heterogeneity that best characterize multiethnic communities, and Batna city is a case in point.

Shilling-Estes (2013) discussed three advantages of ethnography. First, as participant-observers, researchers can probe into the daily folkways as understood by the community members. Second, ethnographers gain access to new linguistic events and practices, which go unnoticed to lay speakers, and which cannot be uncovered by means of quantitative methods. Three, Ethnography, albeit time and energy consuming, enables researchers to understand why and how certain speech habits are used in certain sociocultural contexts. Notwithstanding its benefits, ethnography is without its drawbacks. Chief among these are the fact that many fieldworkers might not be welcomed to 'enter' into the community due to several social, racial and political considerations (Li Wei, 1992; Shilling-Estes, 2013). Wei (1992), however,

suggests some practical tips that may assist novice researchers gain easy access to the community members. Shilling-Estes (2013), further, notes that ethnographers are not devoid of their cultural biased feelings and that achieving a full 'objectivity' is a far-fetched idea. Book-length introductory books and ethnographically orientated sociolinguistic projects discussed the implementation of ethnographic methods in various social landscapes (Duranti, 1997; Milroy & Gordon, 2003; Milroy & Milroy, 1978; Spradley, 1980). The sections that follow address the use of ethnography in this research study and its main stages.

The rationale for using ethnography in this research study is threefold. First, fieldworkers will be able to solicit information about the structural properties of the two ethnic friendship networks under study. Second, the use of Participant-Observation would make it possible for fieldworkers to observe and write down the interactional norms which are rarely used or not frequent in conversational and *naturalistic* speech-e.g., Ethnic Crossing, questions. It is quite impossible, in practical terms, to obtain such infrequent features by means of sociolinguistic interviews or questionnaires (Feagin, 2013). Third, one of the basic goals of this study is to examine the extent to which ethnographic results are consistent with quantitative findings (Triangulation).

4.8.2 Entering the Community: Making Contact with the Networks

We set the task to explore two distinct fieldwork settings, with dissimilar particularities and cultural backgrounds.

Cultural Landscape I

The first ethnographic fieldwork began in the late November 2017, and lasted for relatively four months. With the benefits of hindsight, the fieldworker conducted the fieldwork in a small neighborhood in Batna urban city, which is inhabited by many migrant,

Chaoui families. This 'hard-shelled', so to speak, Berber neighborhood, distinguished by its high ethnic concentration, is inhabited by roughly 550-600 native born and migrant Chaoui speakers, most of whom migrated from villages of the eastern parts of Batna, such as Arris, Ghoufi and T'Kout. Because of its high ethnic concentration, the neighborhood serves as an interesting cultural setting for exploring dynamics of ethnic distinctiveness, assimilation and sociolinguistic stability/change.

The Fieldworker grew up and lives in the same neighborhood under study. He spent most of his lifespan-childhood, adolescence and adulthood- in the neighborhood, and still maintains contact with its members. Such strong social ties set the stage for the fieldwork research, and made it possible for the reseacher to *easily* enter the community under investigation. Because of his familiarity with the cultural setting, it was not difficult for him to enter the community under study. The inhabitants delightfully agreed to cooperate, simply because of the long-term social bonds they contracted with the fieldworker. In hindsight, the inhabitants welcomed the idea of the ethnographic study because, they believe, it addresses their Berber heritage and history.

As a life-long insider ethnographer, the fieldworker opted for an *overt* entry strategy (Jorgensen, 1989), in which case he directly demanded for the consent of neighborhood inhabitants to conduct the research study. A key issue in this ethnographic study is the amount of information to be disclosed about the research project. Indeed, disclosing all miniature details about the research may possibly run the risk of affecting the social behavior and linguistic responses of participants. Said differently, members may, deliberately, alter their behaviors, both social and linguistic, in a way to please the fieldworker. Hence, in order to obliterate any signs of 'Social Desirability Bias' (Bucholtz, M., Bermudez, N., Fung., V &

Vargas, R, 2008; Fisher, R., J, 1993), the fieldworker informed the participants about the general goals of the study, and deliberately avoided discussing every miniature detail about the research project. He, also, told them that he plans to conduct a four months research on Chaouia identity and communal ethos.

Cultural Landscape II

Contrary to the first ethnically dense-neighborhood, the second research fieldwork was conducted in Batna University, wherein students of different regional and ethnic roots interact on a daily basis. Educational institutions (e.g., universities, high schools), unlike the relatively homogenous ethnic enclaves and close-knit regions, are characteristically heterogeneous, attended by groups and individuals who are dissimilar on several sociocultural backgrounds, and thus setting the scene for the development of dense, multiethnic and weak networks. Batna University is a case in point. It is, unequivocally, the epitome of an 'interethnic' contact milieu, wherein Arab, bi-ethnic and Chaoui peers communicate on a regular basis. Compared to the first fieldwork, the researcher is a complete stranger to university students in the second setting. Therefore, a 'trained fieldworker' was assigned to carry out the participant observation task. It is worth noting that using trained fieldworkers was characteristic not only of traditional approaches to dialectology (Jules Gilliéron, 1896, as cited in Chambers, & Trudgill, 2004), but also of recent sociolinguistic studies (Edwards, 1986). Li Wei (1992) reminds us that, though employing one or more fieldworkers can assist in recruiting many participants in a short period of time, it is without its drawbacks, most notably in issues that pertain to data comparability and interpretation. On a more positive note, however, employing different fieldworkers would yield rich and insightful data about the cultural scene under study. In addition, employing trained fieldworkers would solve many methodological

problems, especially those related to ‘entering the community’ and making contacts with the networks. The trained fieldworker assigned to work on the second cultural landscape in this project is a 21 years old Chaoui ungraduated student who lives in Batna city. She was instructed all the essential steps of the fieldwork observation and was also provided with specific observation guidelines.

In both cultural scenes, fieldworkers were well served to use the snowball or a friend of a friend technique associated with the second wave of variation studies (Milroy, 1980). In keeping with the ‘ego-centered approach’, fieldworkers selected one core member or a gatekeeper (Clark & Trousdale, 2013), who is asked to identify other members in their networks. Friend of a Friend technique, Milroy and Gordon (2003) note, has the advantage of being able to recruit potentially new participants, and also to convince those members who refuse to be observed and to cooperate with fieldworkers. Tagliamonte (2006) and Shilling-Estes’s student (2013) were able to ‘enter the community’ through contact with gatekeepers. Based on a short field observation, fieldworkers made contact with those members who act as gatekeepers, so to speak, who occupy focal positions in their social networks, and who contract many ties with other members in social settings. The next step is to address the essential steps undertaken in participant observation in both cultural settings.

4.8.3 Field Observation

After the entering the community stage took place, the next step was to conduct a field observation of the two cultural settings, their distinct cultural features and speech habits. The observation and, by extension, ethnography is a continuous process whereby fieldworkers participate in the social activities of the cultural/ethnic group, describe their sociocultural characteristics and document what makes them similar and dissimilar, culturally and

linguistically, from other social groups (Duranti, 1997). Participant observation, a cornerstone in anthropological research methods, has been, and still, employed in several ethnographically based variationist studies (Eckert, 1989, 2000; Milroy & Milroy, 1978). The field observation adopted in this fieldwork research is arranged in three stages, known as *Descriptive observation, Focused observation* and *Selective observation.* These three stages were first introduced by Spradley (1980) and then downplayed in subsequent ethnographic studies (Ihemere, 2007, Eckert, 1989, Li Wei, 1992). In descriptive observation, we set the task to gain a holistic picture about the two cultural scenes-e.g., physical characteristics, local history, demographics, social system (patriarchy),…etc. In focused observation, we narrowed down the observation lens, paying a close-grained attention to the folkways (eye contact, parents/uncles-children relationship), beliefs, taboos and casual speech interactions between community members. In selective observation, we focused more on one social category in both cultural scenes: Friendship network. Our keen interest in these vital, social networks is motivated by two main reasons. First, youth age-cohort is considered the most populated social category and a focal point of speech innovation and diffusion (Eckert, 1997), and so it was crucial to examine how Chaoui lexical items are variably used, preserved or ousted from the speech of young Chaoui groups in totally urban, multiethnic contexts. The ethnic density of these friendship groups, monoethnic or multiethnic, is assumed to be a major factor in marking or maintaining Chaoui identity and speech features. Second, youth networks are in the front stage, so to speak, meaning, they are visible to the community, and so it was possible to observe their social dynamics, identity formation and daily linguistic habits. One of the reasons for why it was impossible to observe Chaoui families, such as elderly women and female adolescents, is due to their stringent, conservative life style and cultural mores.

Spradley (1980) asserts that ethnographic research, along with its three stages, is by no means sequential but cyclical in order. That is, fieldworkers can move back and forth from descriptive observation, selective observation to research questions. Our close-grained focus on smaller social groupings does not mean that we neglected the importance of the social contexts. In fact, all observations phases were carried out simultaneously in order to explore the social embedding of Chaoui youth networks. During the participant observation, we refined and modified the research questions of the study and used specific ethnographic questions in each observation stage (Spradley, 1980). A key issue in this ethnographic work is the degree of participant observation in the fieldwork under study. As native inhabitants of the Chaoui neighborhood, we fared very well to carry out a complete participant observation in the neighborhood (Shilling-Estes, 2013) as we engaged completely in the local activities. In so doing, we hanged out with, interacted with the community members (insider), and at the same time observed their social practices and daily social encounters (outsider). In the second cultural scene, the trained fieldworker also used a complete participant observation, because she is familiar with all female members of the network (they are classmates and intimate friends). In some cases, though, fieldworkers entered the community unobtrusively, adopting a passive/ marginal participation, devoting the whole time to fieldwork observations and setting descriptions. The ethnographic fieldwork is represented in the cycle graph below:

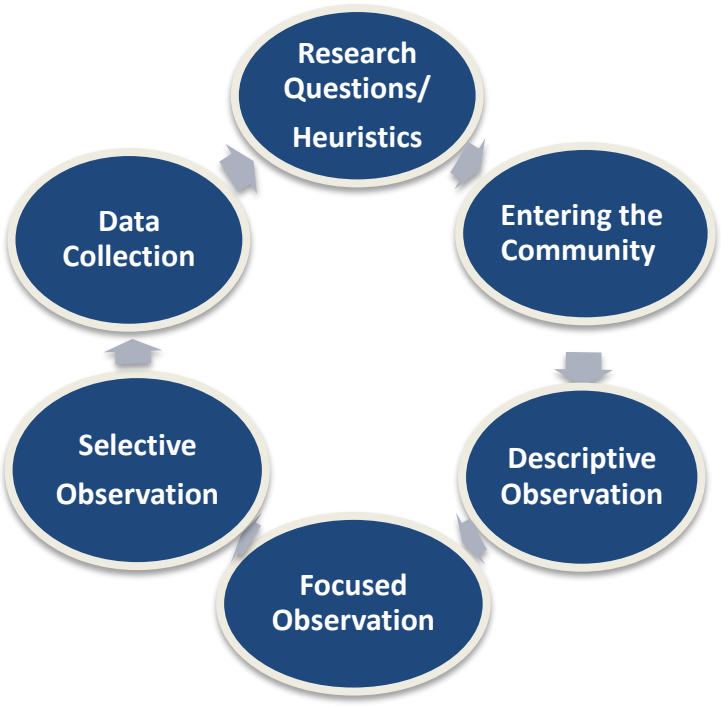

Figure 4.4 Ethnographic research design (Cyclical Model).

At the heart concern of this ethnographic research are issues of *observer's paradox* (Labov, 1972) and authenticity of the social and linguistic behavior. The quest to attain objectivity has been, still, a debatable issue in all human sciences. Fieldworkers developed methodological innovations-e.g., sociolinguistic interview, group interviews- to reduce the *observers' paradox* effect, wherein speakers pay less attention to their linguistic (and social) behaviors. Fieldworkers, thus, can record the most authentic, naturalistic vernacular data (Milroy & Gordon, 2003). Yet, the quest for authentic linguistic behaviors in ethnographic studies, and which involves complete-participant observation, seems to be a very hard endeavor. Shilling-Estes (2013) asserts that "there is really no such thing as linguistic data devoid of context, and it is inevitable that humans doing research on other humans will affect the research participants in some way." (p. 115). To put it otherwise, the quest to achieve objectivity and authenticity is, albeit an important requirement for the success of any

ethnographic enquiry, is a far-fetched idea. Indeed, the presence of fieldworkers may somehow affect participants' behaviors and speech habits. Yet, while this is true, Duranti (1997) stresses that "most of the time people are too busy running their own lives to change them in substantial ways because of the presence of a new gadget or a new person." (p. 118). During the participant observation phase, youngsters in both friendship networks took no notice of the fieldworkers' presence, who acted as social beings who talk with, eat with and communicate with all members. Because of their familiarity with the ethnic networks under investigation, the presence of the fieldworkers did not influence the behaviors of the participants.

The aforementioned observation stages were not carried out in a linear order, but rather in a concurrent way. The fieldworkers built from basic heuristics and questions (Shilling-Estes, 2013), whereby they engaged in a process of context discovery, meaning, exploring every social and linguistic aspect in the social groups and cliques, documenting the ways in which young adults and youngsters contract ethnic ties, and use words to index ethnic affiliations and to construct their identities and group membership. Fieldworkers were interested to examine the local evaluative norms held by youngsters about positively evaluated varieties, such as local Arabic, and negatively evaluated varieties, such as Chaouia. Participants were also delighted to tell fieldworkers many local stories about Chaouia history, kinship system and even popular adages and proverbs. The fieldwork observation used in this study follows Saville-Troile's (2003) guidelines of fieldwork research, as summarized below:

a. Demographics, historical backgrounds, physical characteristics…etc;
b. Cultural mores, folkways, customs and traditions;
c. Social organizations-political and educational institutions;

d. Stereotypes, prejudice, local ideologies and common sense;

e. Texts and documents-e.g., historical documents, journals, letters..etc;

f. Gender roles, social structures and relationships;

g. Perceptions and attitudes towards languages and language varieties;

h. Code choice, speech habits, speech events,…etc .

The guidelines suggested by Saville-Troike (2003), quite remarkably, touch upon all the cultural aspects, moving from broad sociohistorical backgrounds, cultural mores, social organizations, local ideologies and stereotypes, to language environment. Fieldworkers working on this research used note taking as strategies to document the field notes. They also conducted 'Ethnographic Interviews', which are based on Labov (1984), Spradley (1980) and Tagliamonte (2006), to solicit cultural information about the landscapes under study. Using ethnographic interviews in relaxed settings, fieldworkers' role was that of a conversationalist, whereby they engaged with participants in free, semi-structured conversations and discussed several social and local issues (see Appendices E and F). When appropriate, fieldworkers used both linguistic codes-Chaouia and Dariğa when communicating with participants. Fieldworkers availed themselves of their personal histories and prior knowledge as sources of factual information about both networks and cultural scenes. When appropriate, they would return to the neighborhood members for backgrounds' check and feedback about the collected ethnographic information. Fieldworkers, also, availed themselves of some documents and books, which provided insightful information about the history of Chaoui ethnic tribes and migrants ever since the French colonization (Basset, 1961; Bourdieu, 1962/1958; Tillion, 1938). Finally, the aforementioned observation phases, along with the reported observation

fieldnotes and textual data, yielded a clearest image about the sociocultural profile of the two cultural landscapes.

4.8.5 Collecting Ethnic Network Data

Fieldworkers working on this research study used participant-observation, name elicitaion and ethnographic interviews in both settings to solicit information about participants' ethnic ties. Basically, they observed who the participants interact with, hangout with, where and when. The fieldworkers, also, observed the ethnic ties contracted by participants in relatively relaxed and informal settings, such as cafeterias, restaurants and neighborhood. Based on fieldworkers' prior knowledge of the setings' cultural conditions, they found it quite suitable to observe their social encounters in the evenings and weekends, periods during which most networks' members meet. Using 'name elicitation', fieldworkers asked participants to name some of their intimate friends with whom they interact on a regular basis. At the end of participant-observation phase, fieldworkers set the task to double-check the final version of the network composition by showing each member a hand drawn network to assure that this is her/her personal network ties. The final version of the two ethnic friendship networks were then represented graphically in circle and random UCINET network graphs (see sections 4.7.8.1 and 4.7.8.2)

Field-observations were coupled with two index measurements devised to gauge participants' 'Ethnic homophily' (EHI) and 'Ethnic orientation' (EO). Measurements of EO and ENSS were based on Milroys' (1978) advice that fieldworkers must foreground the essential components and indicators, which would, at best, predict the normative enforcements and local ethnic cohesiveness in the social milieu under study. Moreover, it was based on fieldworkers' lifelong understanding of the local Chaouia culture and folkways. By

way of example, fieldworkers focused on ‘kinship’ and ‘language’, which play a major role in shaping, maintaining and determining Chaouia cultural mores more than any cultural aspect in Batna speech community.

The next decision to be made is when to proceed gathering the linguistic data. In fact, there is no clear-cut answer to this issue as fieldworkers decide upon data collection depending on many methodological and practical considerations. In some research studies, data collection was carried out right from the beginning of the study (Zentella, 1997), while in other studies it was proceeded at late stages (Clark & Trousdale, 2013). In this research, fieldworkers proceeded data collection at the end of the participant-observation stage. Our motivation for doing so stems from our belief that fieldworkers should first identify and locate the ethnic networks and then proceed to solicit linguistic information for each member in the networks. The resulting ethnic network data, along with EO and homophily scores will be plotted against the ethnic network’s lexical choices.

4.8.6 The Social Context of friendship Networks in Batna City

This section addresses two cultural landscapes in Batna city and overviews the results of intensive and garnered ethnographic observations of two diametrically different friendship networks. Albeit localized in the same geographical setting, Batna city, the two ethnic networks vary in their ethnic structures, community integration, life expectations and language ideologies. It is, however, worth noting that this section does not tackle all the garnered fieldnotes; some of the collected information about the networks are discussed elsewhere in other chapters.

Ishawiyen in the Neighborhood

The first cultural landscape, called Hchachna, is a local neighborhood inhabited by approximately 550 to 600 migrants in the southern parts of Batna ville. There are, also, other migrant groups in different neighborhoods, especially in the newly established neighborhoods in southwestern suburban parts and fringes of the city. Yet, this neighborhood is distinguished by its high ethnic concentration; it is inhabited by families who share similar ethnic and geographical roots. Before the 1990s, it was inhabited by only citizens of Arab descent and few Chaoui families, whose origins root back to *Maafa*, *Chaaba* and *Seriana* regions. As of 1990s, however, dozens of *Ishawiyen* families in Ouled Abed, Tifelfel and Ghassira (East of Batna) migrated in successive waves to Batna urban areas, and most of them inhabit nowadays in Hchachna neighborhood. These massive migratory processes were motivated by the fact that their traditional economy-mainly agriculture and crop farming- has been gradually cast aside by the industry and service occupations in the urban and rural regions. Thus, many of those rural families moved to the city to look for more job opportunities and better social conditions. Migration flights into the urban areas, such as Batna ville and other conurbations in the country, were also caused by the political and social unrest in early 1990s.

Social Organizations and Cultural Folkways

Of interest in the social fabric of Ishawiyen migrant families is their tight kinship roots. The majority of these migrants' kin ties root back to the so called 'Extended Families' (Bourdieu, 1958/1962), such as khadri, ʕamari in Tifelfel, Ath Hlel (Ben Salem and Athmani) in Arinech, Ath Abed, Ath zerwal and Ath Meddour in Ouled Abel, Ath Rahmoun, Ath Khellaf, Ath Bousseta and Ath Hammada in TaabaʕIit. These Genealogically related and

agnatic groups used to inhabite in scattered villages and far-flung blocks in the Eastern parts of Batna, such as TaabaʕIit, Ghassira and Ghoufi.

Young male migrants, like Issam, Abd El Hadi and Boha, are the second generations of the rural mirgants in Batna. They were born and spent most of their infancy period in rural villages. As of 2000 onward, they migrated with their families to Batna ville. All of them are illiterates who engaged in workforce from an early age. Yet, Issam and his friends did not fully engage in any local occupation services or industry jobs in the city. Rather, they made jewelry and silver business the basis of their lives. In fact, these traditional jobs were inherited from one generation into another in these migrant families. Further, apart from their closed economy and similar sociohistorical roots, kinship ties have been and continue to be an essential impetus for their sense of ethnic membership and belongingness. Indeed, any member in Issam's network hangs out, interacts and socializes with peers with whom he shares similar kin and ethnic origins. Kinship system is a determining factor of their friendship, and all the members in the group tend to minimize contact with outsiders, most notably *IʕIraben*, meaning Arabs and sedentary neighbors, except for occasional economic transactions. Moreover, even though they spend the whole week in Batna ville, Issam and all members in his friendship network maintain their pre-migration network ties and rural life modes. Issam, to take one example, noted that he and his family members pay their rural relatives weekly visits, and that he still farms lands and occasionally practices agriculture in the countryside. In this regard, there are four preponderant sociohistorical conditions which moulded 'Ishawyens' migrant communities in Batna ville, and which played a major role in their sustainability, social and linguistic isolation:

a. Most Ishaweyen migrant families live in specifiable geographical locations in the Batna Ville.
b. migrant families, most notably youngsters, work in similar jobs and local workplace (jewelry and silver business)
c. They belong to similar ethnic groups and share analogous kin relations.
d. They share the same heritage language (Chaouia)

Language component is probably the most defining characteristic of belongingness in the migrant Ishawyen families. Attachment and affinity to their heritage language, Chaouia, was inherited from one generation into another. For many male migrants in the neighborhood, Chaouia is dovetail with their sense of solidarity, loyalty to their pre-migration networks and ethnic identity. It is not surprising, then, that, of all the cultural aspects of Chaoui culture- clothing, food, music- it is Chaouia that makes them *real* and *genuine* members of the Ishawyen community. Interestingly enough, in a community wherein Dariğa (an Arabic–based local variety) is the most privileged vernacular in daily social encounters, young male go at great length to preserve their Chaoui ways of speaking and, by and large, their cultural folkways. Even though most of them acquired Dariğa as their second variety, they mostly prefer to use Chaouia in most social contexts, in in-group discussions, neighborhood, restaurants, home, and other public avenues. So affiliated are they with Chaouia that they perceive mixing codes, Arabic and Chaoui, as a symbol of disloyalty to their ethnic identity and a *contamination* of their culture. Issam, for instance, asserted that: *"the responsibility of preserving Tachawit has been, still, carried on our shoulders ever since we moved down to the city".*

Ethnic Tensions: Ethnic Pride or Assimilation?

Massive population movements to Batna ville gave rise to ethnic tensions between young Ishawyen migrants and their urbanite counterparts in the neighborhood. Interethnic communication in Batna ville and, by extension, in other cultural contact situations engenders ethnic conflict between distinct ethnic groups. Likewise, Ishawyen migrants maintain their Chaoui cultural norms as a reaction against the broader Batna mainstream culture. The use of Chaouia is a marker not solely of their resistance to the pervasive, local urban Arabic norms, but also an index of their sense of ethnic membership. For many young urbanites in the neighborhood, both Arabs and sedentary Chaoui citizens, the massive migration waves represent a *threat* to their urban life mode and a contamination to their *own homeland*. Even though many of these stereotypes and local ideologies faded away in the last few years, deep-seated ethnic tensions still persist in the neighborhood, making their way in occasional discussions about ethnicity-exclusive topics-Chaoui identity, Arabness, Chaouia and Arabic contact- in interethnic situations. Chapters five and six are devoted to the analysis and discussion of these contact-based practices, especially those which pertain to ethnic crossing and prejudice.

Female Friendship Networks in Batna Ville

The second ethnographic fieldwork was carried out in the University of El Hadj Lakhdar, Batna ville. Located in the southern fringe of the city, the university represents a focal point of interethnic contact and cultural assimilation. Educational institutions, be they universities, high schools or otherwise, represent the focal points of new socioethnic relations, that is, a cultural landscape wherein new youth sub-cultures and social groupings emerge and evolve. Provided that Batna ville is, by its very nature, a bicultural community, El Hadj Lakhdar is

attended by thousands of college students who differ on several regional and cultural grounds. Thus, students form new ethnic networks of all sorts-Arab dominant, Chaoui dominant and multiethnic. Our observation fieldnotes indicated that college students who inhabit in villages and rural areas vary in the degree of their integration to Batna mainstream cultural norms. While many of them maintain their village contacts in the university, others '*broker'*, so to speak, their past, dense networks, and engage into new friendship networks, contracting new relations with urbanites and other new rural contacts.

Chahinaz met her female freshmen peers at Batna University by September 2017. Ethnically heterogeneous, their friendship network is comprised of female members of distinct ethnic and geographical identities. Some of them identify themselves as ethnically Chaoui, while others identify themselves as bi-ethnic or Arabs. University, for most of them, represents a preponderant cultural landscape wherein female youngsters meet, interact and socialize. Provided that most of them aspire to be future teachers (or any other blue collar jobs), they made the university the center of their social identity, engaging in weekly communities of practice and extracurricular tasks. In predominantly urban settings, as in Batna ville and, by and large, other conurbations (e.g., Algiers), Arabic vernaculars and French are associated with prestige and elitism. They are, also, emblematic of intellect and modernity. Thus, Chahinaz and her friends go at great length to master Standard Arabic and French, not least because of their socioindexical functions, but also because they are crucial eligibility criteria to engage in the wider workforce. In stark contrast with Issam's close-knit kinsfolk, Chahinaz and her friends orientate themselves towards not only urban life mode, but also towards the wider Batnian mainstream norms, maximizing their interactions with contacts outside and inside educational avenues. They adopted salient symbolic markers

emblematic of Batna life styles, such as fashionable clothes, modern haircuts and listening to modern local music. Linguistically, a deep-seated belief in Batna urban local ideologies is that the use of Dariğa is a marker of urbanity and being a sedentary urbanite (*El Beldi*). Our observation fieldnotes indicate that Chahinaz's close rural female peers, Ghaydaa, Fatima and Belkis, went at great length to acquire Dariğa through their extensive social interactions with their urban friends. Thus, Chaoui females' adoption of symbolic sources and socially embedded linguistic markers echoes their strong desire to express different social identities-e.g., urban, Ichawiyen, Beldiya, Bi-ethnic.

4.8.7 Friendship Networks: Data Visualization

This section considers the visual representations of the two friendship networks under study. The plotted graphs are the results of extensive 'field observations' (description, focused and selective) and ethnic gathering stages.

In order to graphically plot the friendship networks, we proceeded a series of calculations using the UCINET program (see section 5.5), which works in tandem with Excel and Netdraw. Our motivation for doing so is to gauge the social cohesiveness of both networks, their cohesive measures (node and network levels) and their basic properties-e.g., multiplexity, centrality and connectedness. Our keen interest in examining various multiple measures is to understand the complex social structures of the networks, which have been untested and untheorized in earlier sociolinguistic studies (Milroy & Milroy 1978). Each of these properties, it is assumed, casts light over the complex ways whereby Chaoui native words are adopted, compete with Arabic alternatives, and propagate across ethnic networks. In the social network analysis, we proceeded by calculating the relations between actors in terms of a binary system. That is, any relation in the network is assigned 1 point if both actors

consider themselves as close friends, and 00 points of they do not. Matrices 1 and 2 demonstrate some relations in the ethnic network data:

Table 3

Three-by-Three Binary Matrix

	Chahinaz	Soulef	Malek
Chahinaz	0	1	1
Soulef	1	0	0
Malek	1	0	0

Table 4

Five-by-Five Binary Matrix

	Issam	Fateh	Ammar	Raouf	Selman
Issam	0	1	1	1	1
Fateh	1	0	1	1	0
Ammar	1	1	0	1	1
Raouf	1	1	1	0	0
Selman	1	0	0	1	0

In Matrix 1, 'Soulef' and 'Malek' relation is assigned 00, because they do not see themselves as intimate friends, whereas 'Fateh' and 'Ammar' in Matrix 2 are assigned 01 point because both reported that they are mutual friends.

4.8.7.1 Dense Ethnic Ties: Issam's Friendship Network

The circle graph below illustrates the ethnic composition of Issam's friendship network. The network seems to be, unequivocally, structurally cohesive, simply because every actor contracts at least three ties (or edges) with other actors in the group.

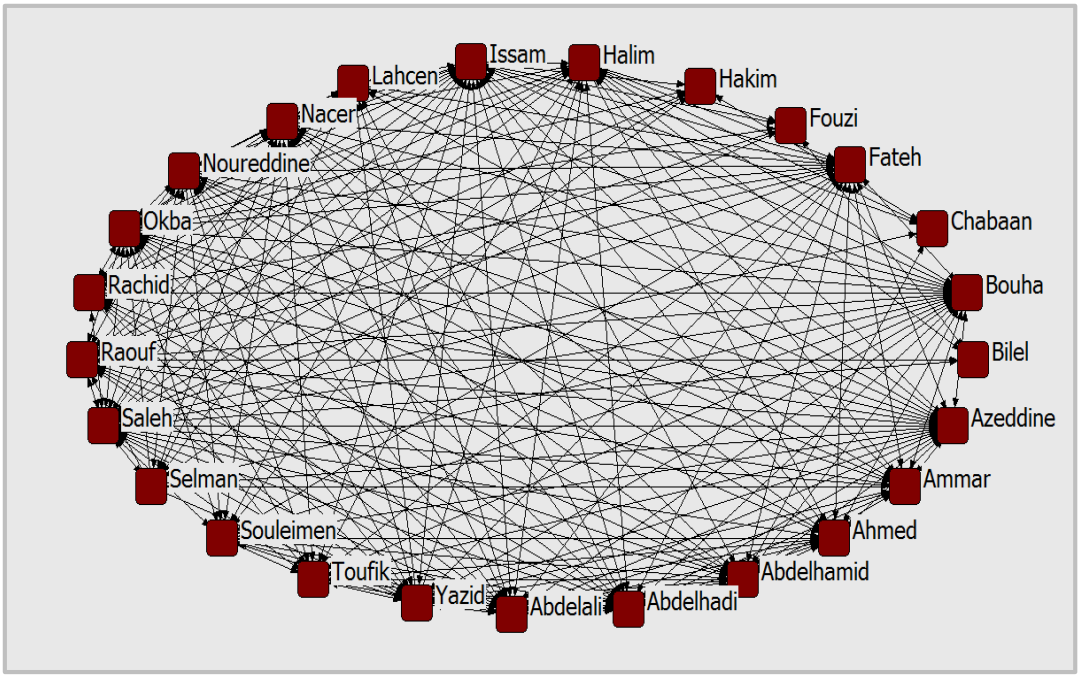

Figure 4.5 Issam's friendship network (Circle Model).

In addition, the graph structure indicates that all network's members are of Chaoui descent. These patterns corroborate the fieldworker's field observations in the neighborhood (see section 4.8.6) that most Chaoui speakers tend to socialize mostly with Chaoui peers.

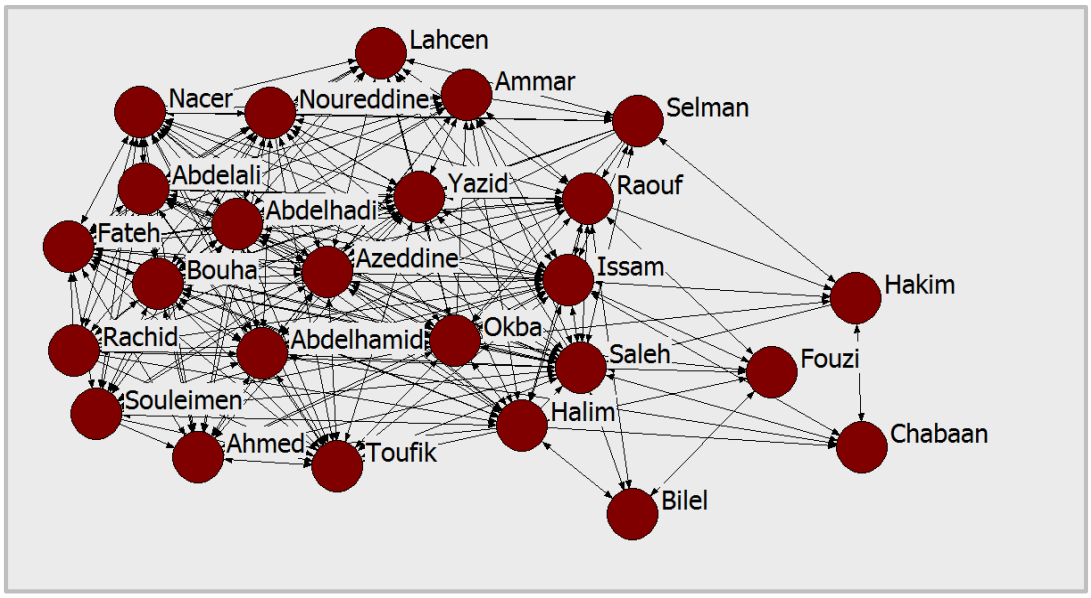

Figure 4.6 Issam's friendship network.

The second graph illustrates the complexities of ethnic ties in Issam's friendship network. On closer inspection, almost all of the ethnic ties in the graph are characteristically direct, meaning that actors in every edge are directly connected and are considered to be mutual friends. For instance, the arrow directions in 'Selman-Hakim' edge indicate that both actors are close friends. Further, Issam and Salah are the most central members in the whole network because they have the largest number of 'in-degree' and 'out-degree' ties (centrality in-degree is 23 points for each). Depending on their positions in the whole ethnic network, the other members in the network can be classified as either 'peripheral' or 'secondary' actors.

4.8.7.2 Weak Ethnic Ties: Chahinaz's Friendship Network

The ethnic composition of Chahinaz's friendship networks, compared to Issam's network, is weak and multiethnic. On closer examination, it is less cohesive because not all actors in the network know or befriend one another and the number of ties vectors (or actors) contract varies from only one (e.g., Abir) to three, except for Chahinaz, the core member, who contracts ten ethnic ties. The graph type is that of a 'non-direct' (or indirect), whereby many vectors are indirectly connected through other vectors. For instance, Chahinaz links between Soulef and Abir and between Nasrin and Malak. This eye-catching pattern indicates that Chahinaz tends to act as a 'broker' or a 'boundary spanner', so to speak, who connects between different sub-groups or cliques in the network. With regard to ethnic density, her friendship structure is relatively weak and characteristically multiethnic, consisting of nine Chaoui peers and twelve Arab peers.

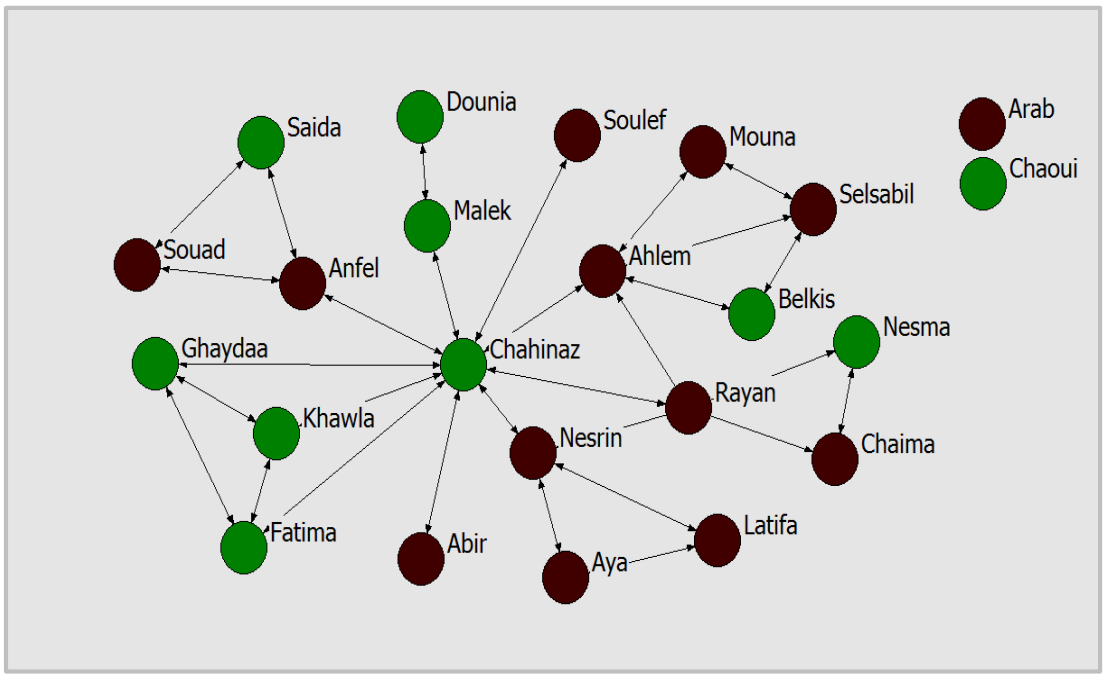

Figure 4.7. Chahinaz's friendship network.

A quick glance over both ethnic networks indicates that Issam's and Chahinaz's networks are diametrically different in terms of Cohesiveness, ethnic density and, by extension, social structure. In keeping with Milroy and Milroy's (1978) 'norm enforcement' axiom, it is assumed that Issam's ethnically dense network resists the adoption of Arabic loanwords, whilst Chahinaz's ethnically loose network is prone to lexical change. To put it otherwise, because all members in Issam's network contract ties only with Chaoui peers, they are more resistant to lexical borrowing. Conversely, participants in Chahinaz's network, who contract ties with Arabs and Chaoui peers, are more amenable to adopt Arabic loanwords.

4.9 Linguistic Backgrounds of the Researcher

The linguistic backgrounds of the researcher play an important role in the success of any sociolinguistic study. Researcher's sociodemographic backgrounds have been widely discussed in the sociolinguistic literature-e.g., Rickford and McNair-Knox's (1994) research

on the impact of fieldworkers' race on interviewees' speech responses; Bailey and Tillery's (2004) in-depth discussion of the influence of interviewer's gender, ethnicity and research experience on the 'authenticity' of the speech data. However, little interest has been paid to fieldworkers' competence in local community speech norms. By way of example, the sociolinguist Li Wei (1992), who is a native speaker of Mandarin, a Chinese-based variety, reports that he learned how to speak 'Cantonese', another mainstream Chinese dialect in order to communicate with Chinese expatriate families in Tyneside region, London. Fieldworker's linguistic backgrounds, albeit underresearched, are highly important in any sociolinguistic enquiry, be it quantitative or qualitative.

During observation and data collection phases, the fieldworkers used both varieties, Chaouia and Dariğa, with participants in the cultural landscapes under investigation. The benefits of their competence in both codes are manifold. First and foremost, it helped fieldworkers maintain an 'insider'-'outsider' perspectives in the ethnic networks under study. To put it otherwise, because their linguistic backgrounds are analogous to those of the local speakers, fieldworkers were able to easily engage themselves in the ethnic networks, and hence to observe, in details, the different social relations and ethnic networks formed by participants. Second, because fieldworkers understand and speak Chaouia, they were able to observe and report many fieldnotes of speech patterns and lexical segments used in natural, relaxed social contexts. Hence, researchers' good command of Dariğa and Tachawit, unlike in many research projects, was not a barrier (or hindrance), but rather a *gateway*, so to speak, to develop a clear, ethnographic understanding of the ethnically-based networks and to gain fruitful insights into the ways in which Chaoui speech patterns are used.

4.10 Fieldwork Ethics

During data collection stage, we explained the general objectives of the study regarding our keen interest to explore the inextricable link between Chaouia and its social context. We, nevertheless, avoided discussing the research details lest the participants may, consciously or subconsciously, over/under report their answers or opt for lexical choices which, they believe, are accepted by the fieldworkers. In attempt to minimize, if not overcome, this 'Social Desirability Bias' (Bucholtz, M., Bermudez, N., Fung., V & Vargas, R, 2008; Fisher, R., J, 1993), we adopted a 'self-administred' technique, wherein most participants in both networks filled in the questionnaires in the absence of the fieldworkers. We instructed them to select only the words they *actually* use in daily social encounters.

We also went to great lengths to guarantee participants' anonymity and confidentiality. In fact, we used pseudonyms for all participants in the two ethnic networks and numbers (codes) for every participant in the whole sample. During observation stages, participants recalled personal information and stories about their families, which served as valuable data to uncover some locally based social structures. We assured them that these information and the observed cultural and linguistic practices will be archived and be used only for educational and research purposes.

4.11 Statistical Analyses

In order to probe into the ethnically based ethnic networks and contact-induced lexical changes, we were well served to use UCINET and Rbrul (Johnson, 2009), two of the most widely used softwares in variationist sociolinguistic research. UCINET, a software developed by Borgatti, Everett and Freeman (2002), is mainly used to measure and visualize social networks strength. Operating in conjunction with Netdraw, UCINET can generate data

visualizations and run complex statistical tests of many ethnic networks' properties, ranging from Homophily, Network Cohesion, Centrality to multiple measures of the whole networks.

We also made use of Rbrul program (Johnson, 2009) to gauge the interplay between lexical variation and various, interrelated, social variables. In so doing, we built Logistic Regression *runs* to identify the best model(s) that describe(s) the correlations between lexical variation and their social determinants in Batna speech community. In Stepwise Regression Analysis, we built a Step-up run to gauge the logistic regression of all the 52 lexical variables under study. With a 0.05 adjusted as a threshold of statistical significance, 'Step-up' analysis would calculate *only* the statistically significant predictors and arrange them from the most statistically significant predictor to the least significant. The model fit automatically factors out any social predictor which is statistically insignificant and whose statistical significance level is under 0.05. R-studio, which works in tandem with R-console, plots the research results, graphically, and gauges the distributions of lexical choices with regard to two or more, interrelated, social factors. These logistic runs, coupled with social network and regression analyses models, would yield fruitful insights into dynamics of interethnic contact, dialectal change and trajectories of speech diffusion in Batna.

4.12 Conclusion

This chapter provided an overview of the fieldwork methods (quantitative and qualitative) employed in this research, and highlighted issues related to sampling and data collection. In essence, it addressed its theoretical backgrounds and the research instruments used to solicit information about respondents' ethnic, regional and linguistic knowledge. At the heart of the chapter, as indeed of the whole study, is its interdisciplinary tendency, exemplified by collecting quantitative data by means of a survey questionnaires and

qualitative data by means of fieldwork observation methods. Our motivation for doing so, as it was repeatedly noted in this chapter, is to account for the complex connection between the sociocultural triggers and dynamics of Arabic-Chaouia contact induced lexical changes. In addition, basic ethical and practical considerations surrounding the fieldwork research were also discussed.

5.1 Introduction

Chapter Five addresses the main research findings of the survey and ethnographic fieldwork. In essence, it is divided into two main parts. Part one is devoted to the analysis and interpretation of lexical variables under study, along with their socioregional distributions in Batna speech community. It considers the dynamics of lexical variation and change, Arabic-Chaoui interethnic contact and diffusion of lexical features, socially, spatially and diachronically. Section one *'Analysis of Ethnic Network Strength'* tackles the overall ethnic network strength that pertains to all research respondents. Section three, *'Ethnic Density across Space: Monoethnic vs. Polyethnic Settings',* addresses the geographical mapping of respondents' ethnic network indexes in different rural and urban areas in Batna. Section four, *'Stepwise Logistic Regression Analyses',* is devoted to the socioethnic conditioning of all the 52 lexical variables under study. The distributions of Lexical variants, both loan and Chaoui, are graphically presented, and their statistical associations with potential external variables are fully discussed. Using Rbrul Stepwise logistic regression analyses, we set the task to investigate the statistical correlations between Chaoui lexical features and all potential predictors in the model fit, be they spatial or social. The second part of the chapter is devoted to the analysis of lexical change and language use in two friendship networks; namely: Issam's friendship network and Chahinaz's friendship network. Using UCINET program, we set the task to examine, statistically, the structural complexities of each network, measuring the ethnic ties contracted by each participant in the network. Section *'Multiple Cohesion Measures: Whole Network Level*' adopts a socio-centered approach and considers the social cohesiveness and ethnic strength of each friendship network. Section *'Multiple Cohesion*

Measures: Node Network Level' adopts a more ego-centered approach and casts light over the ethnic strength of each participant's ties in the network. Section *'Friendship Networks, Ethnic Contact, and Lexical Change'* addresses all the lexical variables under study. It gradually moves to consider the analysis of some language practices through linguistic anthropological lens, examining the different ways whereby youngsters employ speech features and expressions to index ethnic styles, personal stances and affiliations.

5.2 Analysis of Ethnic Network Strength

5.2.1 Overall Ethnic Strength Scores

In stark contrast with Milroy's (1980) social network model, which addresses integration to locally based social networks, the ENSS used in this research accounts for 'ethnic cohesiveness' across networks and its relation with dialectal change (or stability) in interethnic settings, inhabited by Chaoui and Arabs, and in predominantly Chaouia speaking regions. In so doing, we measured the strength of each respondent's Chaoui ties in terms of five basic, interrelated, domains. The ENSS of each respondent would fall into one point along the whole ethnic cohesiveness spectrum. Their scores reflect the strength of their ties to Chaoui networks. As a rule of thumb, ethnic ties to Chaoui contacts become more ethnically dense and multiplex as one moves from 0 point to 2 points in the ENSS scoring rubric (see Chapter four). The overall ethnic density means of the whole sample are graphically plotted in Figure 5.1 below:

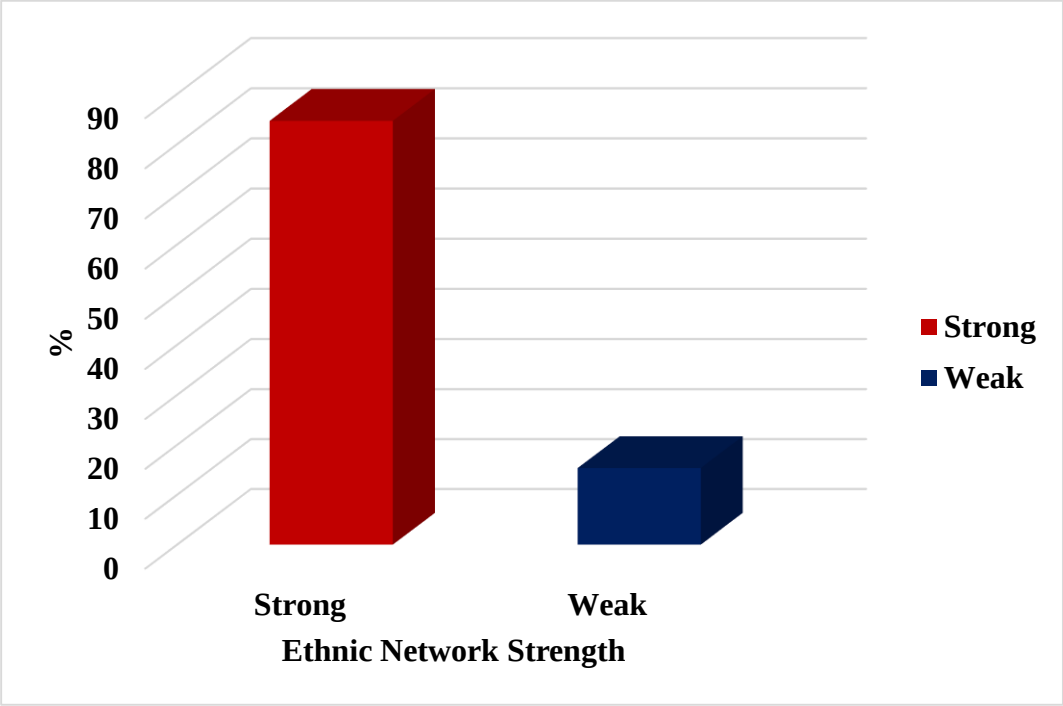

Figure 5.1 Overall ethnic strength means of the whole sample.

Figure 5.1 displays the distribution of all the strong and weak ethnic scores in the sample. We used the so called '*Jenks Natural Breaks optimization*' method to split all the 1003 ethnic density values into two diametrically distinct categories, namely 'weak' (or low) and 'strong' (or high). In so doing, we adopted the *'classIntervals'* function (*'classInt'* package in R-Studio) to arrange all the numeric data in the sample into two classes (or groups). The results indicated that strong ethnic strength ties range from [0.16] to [0.99], while weak strength ties range from [1.00] to [2.00]. It appears that strong ethnic ties outnumber weak ethnic ties in the whole research sample: almost 85.65 % (849) of the whole sample scored high ENSS, whereas only 15.35 % (154) scored relatively low indexes. With the wisdom of hindsight, one can induce that most research respondents maintain strong relations with their Chaoui contacts, be they peers, siblings or relatives. Almost 80 percent of the research sample reported that they contract ties with their Chaoui contacts in many social

domains; that its, they are not only close friends, but also co-workers (or classmates) and in most cases, neighbors. This, then, indicates that Chaoui respondents with high ethnic density scores contract multiplex ties (as opposed to uniplex) with their Chaoui contacts. Ethnic density degree, along with multiplexity and other network properties would, at best, account not only for dynamics of cultural assimilation but also for the ways in which dialect norms (in this case Chaoui and Arabic variants) propagate regionally, socially and across time axe. Using Rbrul statistical analyses, respondents' ethnic density scores were crisscrossed with other six socioregional determinants.

5.3 Ethnic Density across Space: Monoethnic vs. Polyethnic Settings

As noted in the previous section, most participants contract ethnically dense relations with Chaoui contacts. Equally, it was also noted that 49.7 % of the research sample inhabit in urban areas, while 50.3 % inhabit in the outlying areas and rural communities. That said, it is enlightening to cast light over the geographical distribution of the 1003 respondents across 43 regions under investigation. Based on the geographical information reported in the questionnaires (Place of Residence, see appendices A and B), we made use of 'ArcGIS' online Website to visualize, spatially, all respondents' ethnic strength scores across Batna community. Map 5.2 plots all ethnic strength scores in the sample, whereas map 5.3 represents different Monoethnic Chaoui regions across the Eastern parts of Batna community, such as Arris, Inoughissen, T'Kout and Bouzina.

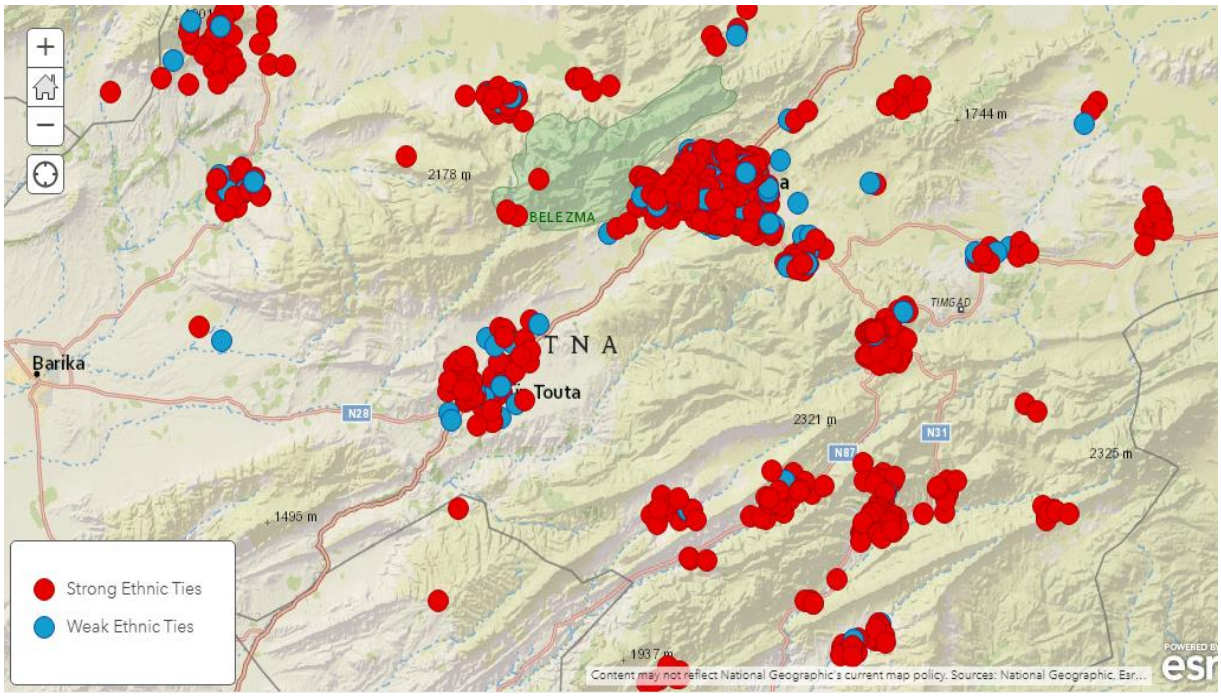

Figure 5.2 Dialect map of Batna community showing the distribution of strong and weak ethnic indexes.

Geographically, polyethnic communities are highly represented in the central regions of the city. However, polyethnicity decreases and gradually shades off to monoethnicity as one travels from the urban areas, such as Batna ville, through Tazoult to predominantly Chaoui communities in the eastern and northeastern regions-e.g., Ichemoul and T'Kout. In contrast, polyethnicity becomes even more prominent as one travels westwards and northwards. A quick glance over map 5.2 elucidates, unequivocally, the ways in which strength scores, both strong and weak, are scattered across all rural and urban regions. Interestingly enough, Batna ville, in addition to its high population density, seems to be highly represented by respondents with varying degrees of ethnic density. Weak and strong Chaoui ties, likewise, make a fair showing in the outlying eastern areas like Tazoult and in some southern areas like Aïn Touta.

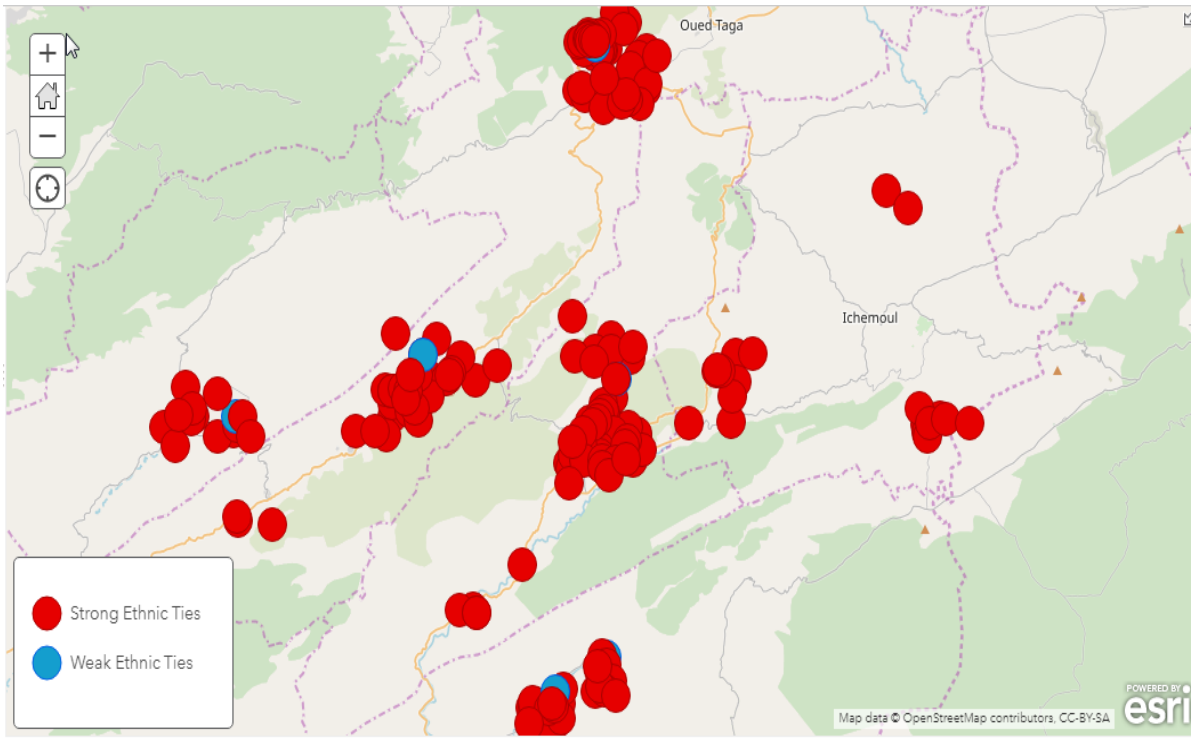

Figure 5.3 Distributions of strong and weak ethnic scores in monoethnic, eastern regions.

Maps 5.4 and 5.5 display all respondents' density types across polyethnic and monoethnic (Arab-dominant) areas, respectively. While the highest ethnic scores (strong) are highly remarkable in rural monoethnic settings, such as Arris, T'Kout and Ghassira, the lowest ethnic density scores (or weak) diffuse more consistently in polyethnic areas in the central, urban parts (Batna ville) and across polyethnic, countrysides in the south-e.g., Aïn Touta and N'Gaous-and northwards (Aïn Yagout). Also, individual respondents who inhabit in predominantly monoethnic, Arabic dominant regions (e.g., Barika) scored the lowest ethnic strength mean scores in the sample.

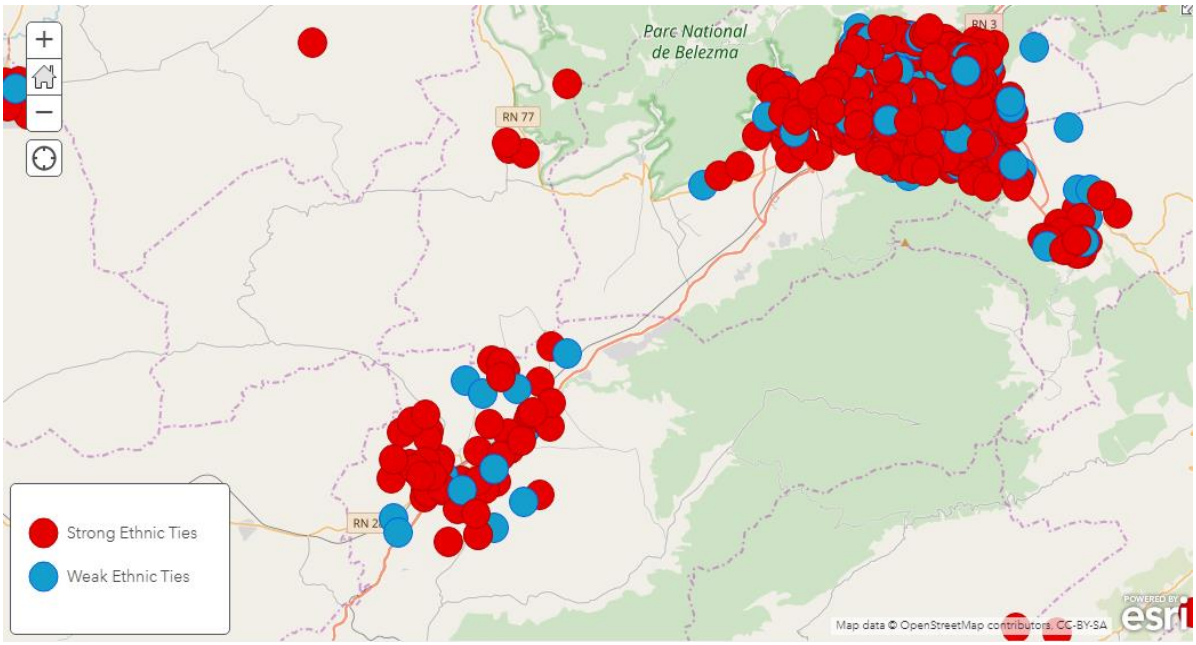

Figure 5.4 Geographical distribution of speakers' ethnic scores in Batna ville, Tazoult and Ain Touta.

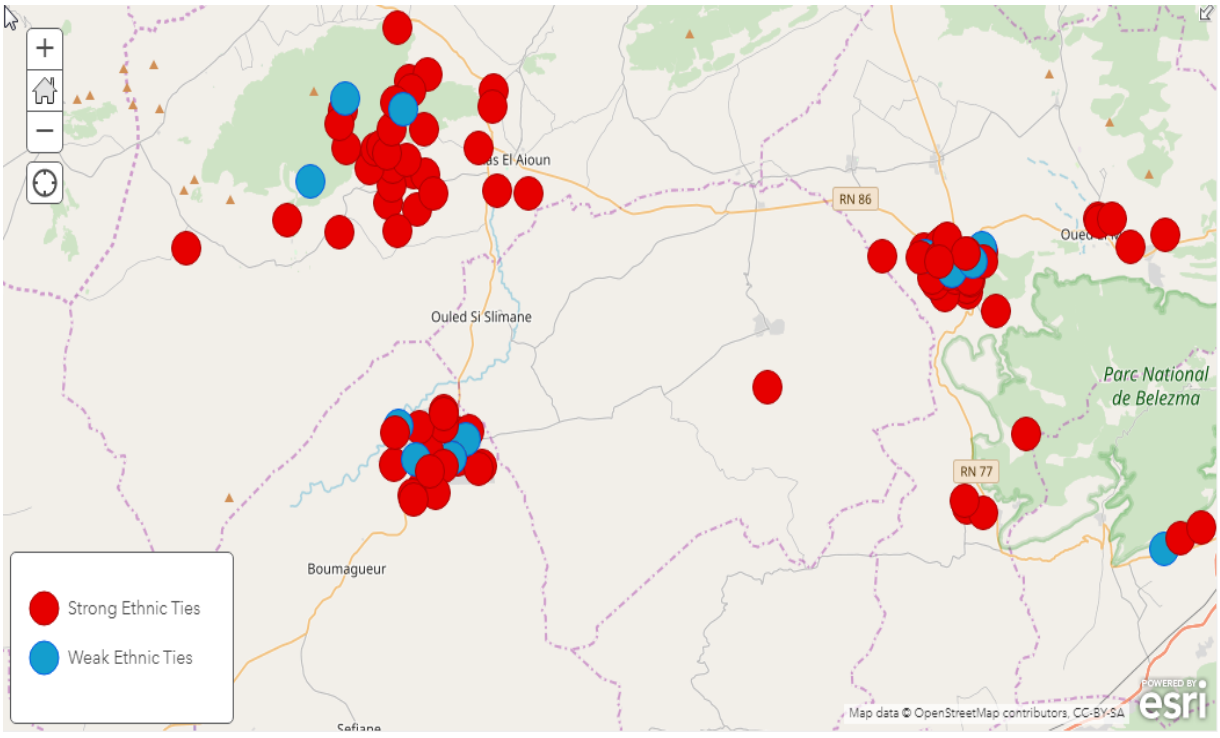

Figure 5.5 The geographical distribution of ethnic means in some villages in the west.

One can easily notice the one-to-one link between ethnic composition of each region and the spatial distribution of respondents' ethnic ties means. It seems that weak ethnic means are, to a great extent, associated with polyethnicity and exclusively Arab-dominant areas in the central, southern and northern parts, whereas strong ethnic ties are associated with monoethnically Chaoui areas in the East.

Table 1

Polyethnic and Monoethnic (Arab-Dominant and Chaoui Dominant) Regions in Batna Speech Community

Polyethnic Areas	
Regions	**Ethnic Strength**
Batna (ville)	1.31
Tazoult	1.25
N'Gaous	1.36
Aïn Touta	1.16
Monoethnic Areas (Arab Majority)	
Regions	**Ethnic Strength**
Barika	0.90
Aïn Djasser	1.39
Aïn Yagout	1.37
Monoethnic Areas (Chaoui Majority)	
Regions	**Ethnic Strength**
Ghassira	1.68
T'Kout	1.61
Arris	1.61
Oued Taga	1.67
Theniet El Abed	1.66

Interestingly enough, it appears that extremely monoethnic Chaoui regions are represented with the highest ethnic strength scores. Respondents in rural areas such as Ghassira, T'Kout, and Oued Taga seem to be the most conservative speakers, both ethnically

and linguistically. Chaoui respondents in other isolated areas-e.g., Chir and Tigharghar, also, scored relatively high ethnic strength scores. These hard-shelled, so to speak, countrysides are inhabited by the majority of Chaoui citizens whose ethnic networks are characteristically Chaoui, and who use Chaouia much more frequently in their daily encounters and economic transactions. The use of Chaouia in these communities is emblematic of language loyalty, local identity and ethnic membership. Most speakers in these communities have positive attitudes towards Chaoui language and, by extension, Tamazight culture. Therefore, it is not surprising that speakers in these regions are socially, ethnically and linguistically, highly resistant to cultural assimilation and change. All things being equal, monoethnically, 'hard-shelled' landscapes will be more immune to patterns of lexical obsolescence and language shift in the coming decades. In contrast, respondents who live in polyethnic and Arab dominant areas are more prone to the influence of Arabic-Chaouia interethnic contact. One can easily notice the relatively low (weak) ethnic strength means in such polyethnic settings, e-g., Batna, Aïn Touta and N'Gaous. The scores fall quite considerably in regions which are dominated by more Arabs than Chaoui people (e.g., Barika). It is enlightening, then, to examine the extent to which ethnic composition of each region co-varies with lexical change in Chaoui dialectal norms.

5.4 Stepwise Logistic Regression Analyses

This section considers the stepwise regression analyses of all the 52 lexical variables under investigation, their etymological roots and socioregional motives. As a rule of thumb, Statistically, the statistical significance threshold was adjusted at 0.05 for building the logistic model. In addition, if the Centered Factor Weights, which are displayed in cells, are higher

than 0.50, the factors will favor the use of the application value in the model fit (Bayley, 2013).

5.4.1 Colors

Colors-yellow and green-seem to be the least affected by lexical borrowing. Plotted graphically in figure 5.6, Berber choices, unlike their competing Arabic equivalents, appear to be the dominant and general preferences in both categories, that is, among respondents with strong Chaoui ties and respondents with relatively weak ethnic ties. Arabic loans are used with extremely low proportions, especially among speakers with strong ethnic ties (assəfri [ʌsˁəfṛi:] 4.35 %, akhəðˁri [ʌxəðˁri] 7.06 %, aqsili [ʌqsili] 8.12 %).

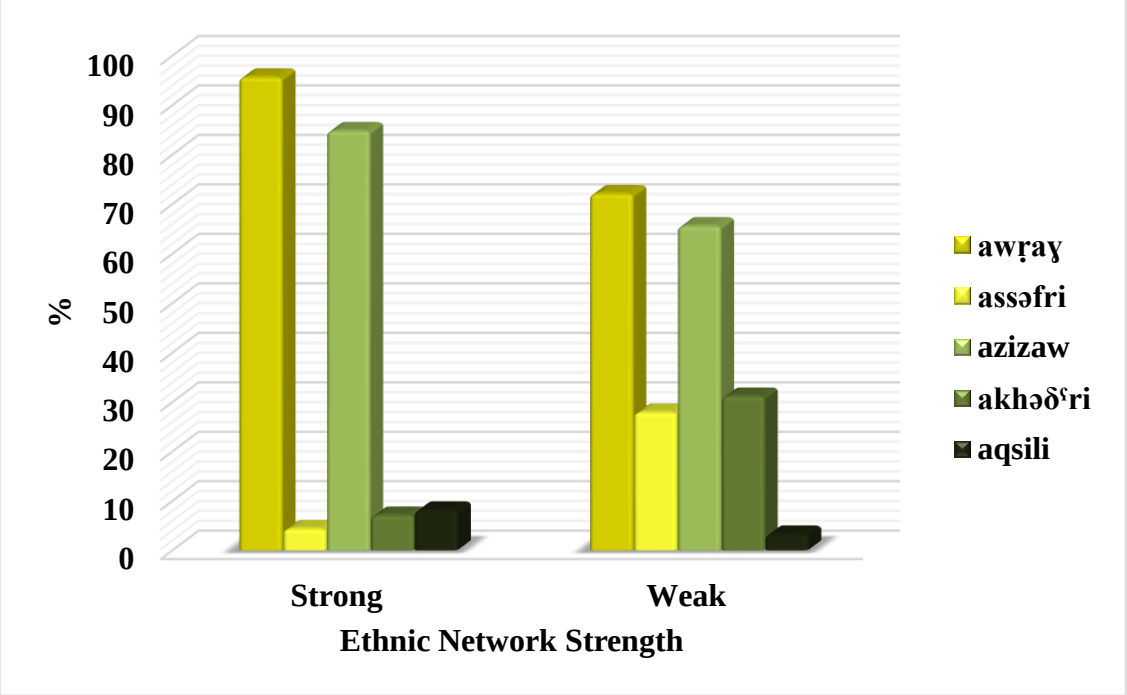

Figure 5.6 Overall distribution of *awṛaɣ*, *assəfri* and *azizaw* vs. *akhəðˁri* vs. *aqsili* by ethnic network strength.

Tables 5.2 and 5.4 show the most significant predictors of the application values *awṛaɣ* [ʌwṛɑːɣ] and *azizaw* [ʌzizaw] in the variation analysis. Of all the seven potential predictors, age,

ethnic orientation, gender and regionality correlate significantly with the use of *awṛaɣ*, and only two predictors, ethnic orientation and homophily, correlate with the use of *azizaw* [ʌzizaw]. For both application values, ethnic strength was excluded from the model analysis due to its high P-values (> 0.05), whereas Ethnic orientation appears to be the most significant social factor in the model fit.

Table 2

Stepwise Logistic Regression Analysis of awṛaɣ Social Distribution in Batna Speech Community (Fixed-effects Model)

Model Basics:	Input Probability: 0.98		Intercept: 3.873	
Model Fit:	Deviance: 432.16		$R^2 = 0.364$	
Factors	Log-odds	Respondents	Proportion	Factor Weight
Ethnic Orientation (p= 1.38e-15)				
High	1.032	816	0.964	0.737
Low	-1.032	187	0.727	0.263
Age Group (p= 4.65e-03)				
Seventies	9.668	2	1.000	>.999
Forties	0.147	65	0.985	0.537
Thirties	-1.091	207	0.952	0.251
Fifties	-1.187	36	0.972	0.234
Twenties	-1.595	607	0.918	0.169
Teens	-2.646	80	0.788	0.0662
Sixties	-3.296	6	0.833	0.0357
Gender (p= 5.69e-03)				
Male	0.361	608	0.947	0.589
Female	-0.361	395	0.878	0.411
Regionality (p= 2.61e-04)				
Rural	0.502	504	0.958	0.623
Urban	-0.502	499	0.882	0.377

At a closer look, the use of *awṛaɣ* [ʌwṛɑːɣ] seems to be high among males, rural respondents, speakers in their sixties and forties, and those who scored high ethnic orientation indexes. By the same token, the Berber *azizaw* [ʌzizaw] is favored by respondents who are

strongly engaged in Berber culture and whose friendship networks are characteristically homophilous. Respondents whose ties are mixed (or heterophilous) and who are less engaged in the Chaoui culture, tend to use the Arabic loan *assefri* [ʌsˁəfṛi:] to express yellow color, while using *akhedhri* [ʌxəðˁri] and *aqsili* [ʌqsili] to express green color.

Table 3

Stepwise Logistic Regression Analysis of azizaw Social Distribution in Batna Speech Community (Fixed-effects Model)

Model Basics:	Input Probability: 0.819	Intercept: 1.296		
Model Fit:	Deviance: 443.153	$R^2 = 0.11$		
Factors	Log-odds	Respondents	Proportion	Factor Weight
Ethnic Homophily (p= 2.25e-07)				
Homophilous	0.414	567	0.885	0.602
Heterophilous	0.135	49	0.776	0.534
Mixed Ethnic	-0.549	387	0.726	0.366
Ethnic Orientation (p= 9.05e-07)				
High	0.491	816	0.854	0.620
Low	-0.491	187	0.663	0.380

Interestingly enough, Rbrul analysis revealed that the Berber term awṛaɣ [ʌwṛɑːɣ] is widespread in the eastern, monoethnic regions, such as Arris (Log-odds= 7.531), Ichemoul (Log-odds= 7.531) and Foum Toub (Log-odds= 7.531). However, its use decreases as one moves to the central, monoethnic regions (Batna ville, Log-odds=-10.027) and to the extremely Arab-dominant areas, such as Seriana (Log-odds= -10.649) and Barika (Log-odds= -12.035). As a check against our intuition, we searched for all the possible, frequent variants which have been, still, used to describe green and yellow colors. Only few books and dictionaries (both new and old) provide a textual evidence for the general preference of the Berber terms, both regionally and historically. It appears that *awṛaɣ* [ʌwṛɑːɣ] and *azizaw* [ʌzizaw] have been, still, the most preferred color terms in most Berber-speaking

communities ever since the late 19th century. In 1883, René Basset reported that *awṛaɣ* [ʌwṛɑːɣ] and *azizaw* [ʌzizaw] were the general preferences in the Aurés (Batna), Aït Khalfoun (Tizi Ouzou), Mzab, Gourara oases, Touat, Tamentit and Timimoun. Kossmann (2013) agrees with Basset, and adds that the use of both variants roots back to old Berber and they are nowadays the most used lexical choices in almost all Berber speaking areas, including the Aures. Both Berber terms made their ways as dominant choices in Nefoussa in Lybia and Ouargla and Mzab in Algeria (Haddadou, 2007) and the Aures province (Berdoudi, 2017; Tibermacine, 2009). Therefore, *awṛaɣ* [ʌwṛɑːɣ] and *azizaw* [ʌzizaw], notwithstanding the extensive Arabic-Berber contact in the Aures province, were immune to patterns of language change and obsolescence, persisting in daily usage in many Chaouia speaking regions.

5.4.2 Human Relations and Kinship System

Statistical analyses of kinship exclusive terms, as evidenced in the graphs below, revealed relatively similar patterns as those found in color exclusive terms. Three kinship lexical variables; namely: grandson, orphan and guest, were accounted for in the regression analysis. The first variable has three competing variants, whilst the last two variables have two variants. The variant *ayaw* [ejaw] is almost common in almost all Berber varieties (Chafik, 1990; Saâd, 2013; Tibermacine, 2009). It is, Haddadou (2006) asserts, a Berber derivation of the words *iwi*, meaning to be born or naitre, *tiwitin*, meaning birth. The alternative way *memis n memi* [məmiːs nməmi], which literally translates to 'the son of my son', is not reported in all Berber and bilingual dictionaries. Arguably, however, this expression made its way as a new way of describing the notion of *grandson* across some social sub-groups in Batna, like young adults and teens. The Berber terms *ayuğil* [ʌjʊʒil] and *aniğiw* [ʌnɪʒɪw] are also commonly used in Chaouia (Timbermacine, 2009) and other Berber

varieties, such as Ouargla, Bni Mzab and Central Morocco (Chafik, 1990; Haddadou, 2007). The words, however, are commonly realized such as *igigil* [ɪʒɪʒi:l] and *ingbi* [ɪnəgbi] (or *anbeyi* [ʌnəbji]) in Chlouh-speaking areas, south of Morocco (Haddadou, 2007)

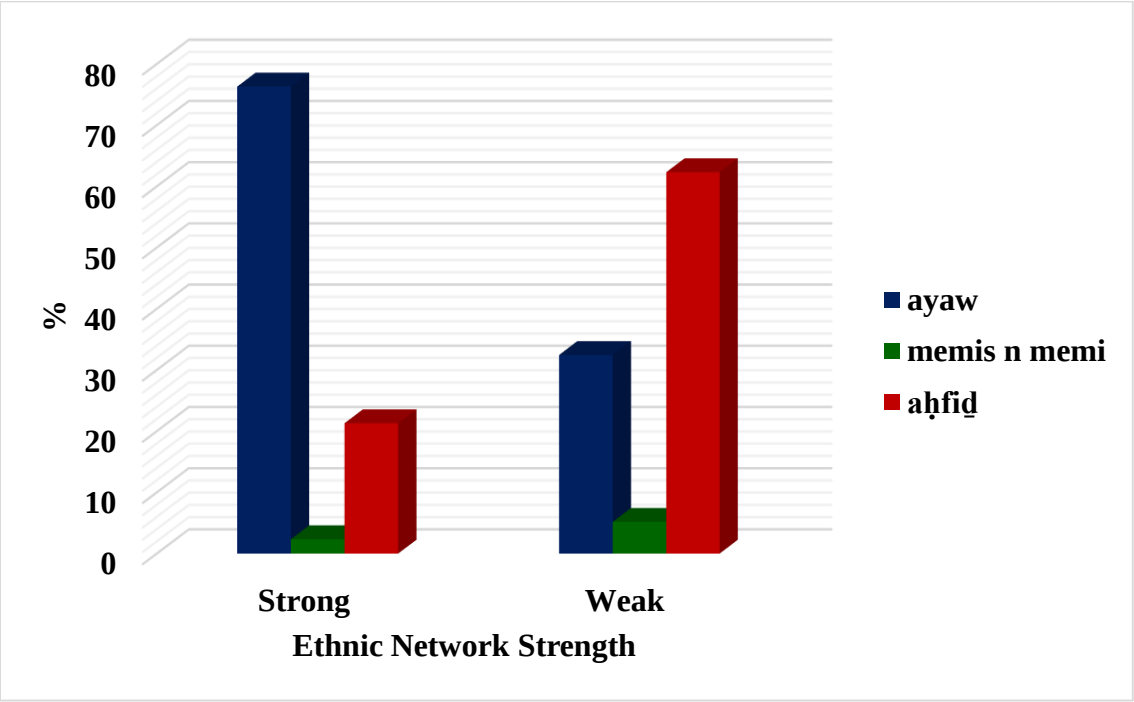

Figure 5.7 Overall distribution of *ayaw*, *aḥfiḏ* and *memis n memi* by ethnic network strength

Figure 5.7 indicates that the ethnic conditioning of the Chaoui word *ayaw* [ʌjaw] contrasts, diametrically, with the Arabic loan *aḥfiḏ* [ʌḥfiḏ]. The former is strongly associated with high ethnic strength indexes (76.32 %), whilst the latter is strongly associated with low ethnic strength indexes (62.33 %). The third alternative *memis nmemi* [məmi:s nməmi] is adopted by relatively a few number of respondents (high ES scores: 2.35 %, low ES scores: 5.19 %). Albeit low in frequency, it is more favorably used by younger generations than older generations. Interestingly enough, memis nmemi [məmi:s nməmi], progressively and

continuously, made its way to Chaouia daily usage in the last few years. It was first adopted by many Chaoui youngsters who do not know an exact word for the concept grandson. Indeed, this is a part of the so called imperfect learning, whereby speakers, in this case youngsters, acquired Chaouia as a second dialect, or who are ascribed as characteristically semi-native speakers, avail themselves of Chaouia expressions or semantically related words to describe concepts and objects to which they do not have exact words in Chaouia. By way of example, they would use the expressions *hemaṭouth numa*, meaning my brother's wife, and *aryez nwətma* for my sister's husband, instead of *alust* and *alus*, respectively. Due to its extremely low proportions in the sample data, *memis nmemi* is unlikely to propagate, spatially or socioethnically, to other social groups or regions. Other things being equal, its low frequency in data increases the likelihood of its erosion (obsolescence) from Chaoui dialect norms.

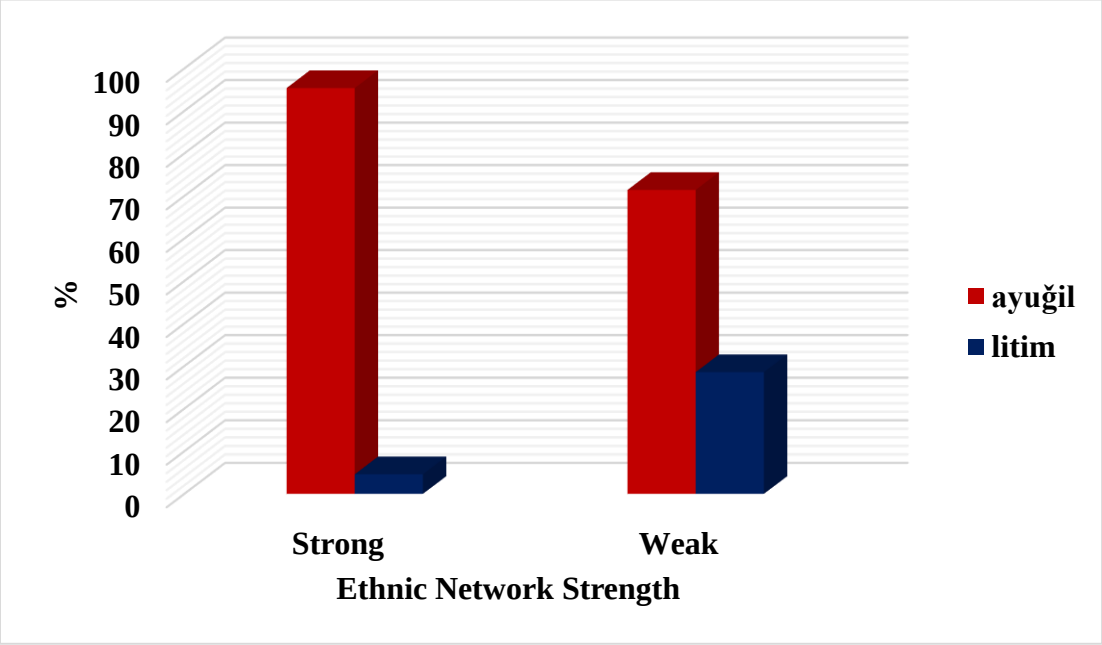

Figure 5.8 Overall distribution of *ayuğil* and *litim* by ethnic network strength

The variants *ayuğil* [ʌjʊʒil] and *aniğiw* [ʌniʒiw] are, quite remarkably, major choices for most Chaoui respondents in the study. As shown in figures 5.8 and 5.9, the former is adopted by 95.4 % of respondents who scored high in ENS scale and by 71.42 % of respondents who scored low in the same scale. The latter is adopted by 93.05 % of respondents who scored high in the ENS scale and by 56.49 % of respondents who scored low indexes in the same scale.

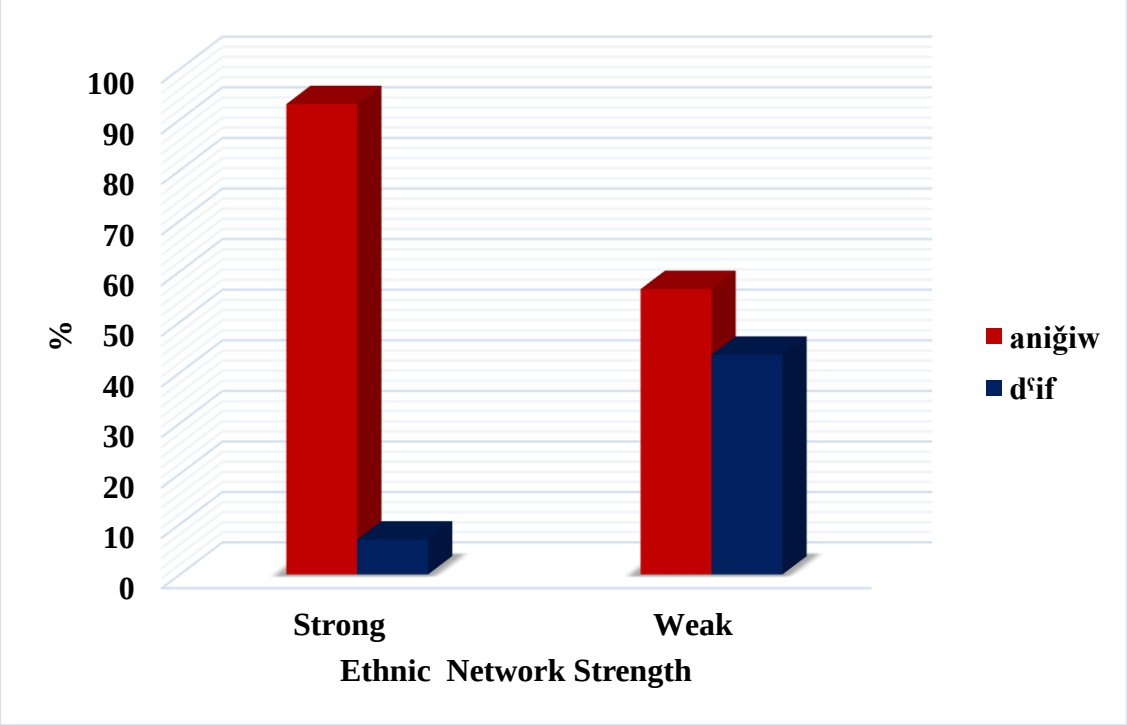

Figure 5.9 Overall distribution of *aniğiw* and *dˤif* by ethnic network strength.

It stands to reason that *ayuğil* [ʌjʊʒil] and *aniğiw* [ʌniʒiw] are still preserved in the speech of the majority of research respondents. Arabic loans *litim* [lɪti:m] and *aḥfiḏ* [ʌḥfiḏ] appear to be almost ousted from the speech of most research respondents, except for *dˤif* [dˤɪf] which makes a relatively fair showing among speakers with low ethnic strength scores (43.51 %). As shown in table 4, all predictors, expect for Ethnic Homophily, pattern significantly

with the use of the variant *ayaw* [ʌjaw]. Ordered in statistical significance (≥ 0.05), regionally and gender are the most significant predictors, whereas mobility and ethnic strength are the least significant correlates. The centered factor weights are remarkably high among rural speakers, males, oldest age cohort and respondents with high EO scores and ES scores in the data.

Table 4

Stepwise Logistic Regression Analysis of ayaw Social Distribution in Batna Speech Community (Fixed-effects Model)

Model Basics:	Input Probability: 0.838	Intercept: 1.64		
Model Fit:	Deviance: 1029.552	$R^2 = 0.30$		
Factors	Log-odds	Respondents	Proportion	Factor Weight
Regionality (p=1.23e-06)				
Rural	0.382	504	0.780	0.594
Urban	-0.382	499	0.611	0.406
Gender (p= 1.31e-05)				
Male	0.343	608	0.760	0.585
Female	-0.343	395	0.597	0.415
Ethnic Orientation (p=2.25e-05)				
High	0.585	816	0.776	0.642
Low	-0.585	187	0.348	0.358
Age (p=4.54e-04)				
Seventies	10.961	2	1.000	>.999
Thirties	-1.046	207	0.763	0.26
Forties	-1.168	65	0.738	0.237
Twenties	-1.237	607	0.700	0.225
Fifties	-1.949	36	0.667	0.125
Teens	-2.198	80	0.488	0.0999
Sixties	-3.363	6	0.333	0.0335
Mobility (p=2.48e-03)				
Mobile	0.254	345	0.759	0.563
Non-Mobile	-0.254	658	0.663	0.437
Ethnic Strength (p=8.91e-03)				

Strong	0.391	849	0.763	0.597
Weak	-0.391	154	0.325	0.403

The geographical distribution of the Chaoui variant *aniğiw* [ʌniğiw] indicates its strong correlation with rural and close-knit villages (0.574). It is equally represented with high factor weights among respondents with strong Chaoui ties (0.585) and positive ethnic engagement in Berber culture (0.585). As a check against our intuition, we set the task to examine all the possible interaction effects on the application value under examination *aniğiw* [ʌniğiw]. The results showed that high factor weights (and Log-Odds) of *aniğiw* [ʌniğiw] distribution co-vary with high EO and high ENSS (Factor Weight = 0.711, Log-odds= 0.9). Again, these findings suggest that respondents, who contract ethnically dense Chaoui ties, have positive ethnic orientation towards Berber identity, and vice versa. Sociolinguistically, it was noted, they are at the leading edge of maintaining their native Chaoui lexical features, and aniğiw [ʌniğiw] is a case in point.

Table 5

Stepwise Logistic Regression Analysis of aniğiw Social Distribution in Batna Speech Community (Fixed-effects Model)

Model Basics:	Input Probability: 0.824	Intercept: 1.54	Difference: 4	
Model Fit:	Deviance: 597.405	$R^2 = 0.251$		
Factors	Log-odds	Respondents	Proportion	Factor Weight
Ethnic Orientation (p=1.16e-08)				
High	0.967	849	0.931	0.585
Low	-0.967	154	0.565	0.415
Regionality (p= 7.60e-03)				
Rural	0.297	504	0.923	0.574
Urban	-0.297	499	0.826	0.426
Ethnic Strength (p=0.0358)				
Strong	0.344	849	0.931	0.585

Weak	-0.344	154	0.565	0.415

Ordered in terms of statistical significance, ethnic orientation, regionality, age, mobility and gender pattern with *ayuğil* [ʌjʊʒil] distribution. As shown in table 6, respondents with high EO indexes favor the application value more than those with low EO indexes. By the same token, older respondents in their sixties and seventies tend to use *ayuğil* [ʌjʊʒil] much extensively. Younger age cohorts, who use the same variant at low rates, are more amenable to use the Arabic alternative, *litim* [lɪti:m], instead. Males, mobile speakers and rural speakers, also, scored higher factor weights than females, non-mobile and urban speakers, and thus are less influenced by lexical borrowing and more likely to preserve the variant *ayuğil* [ʌjʊʒil] in their speech habits.

Table 6

Stepwise Logistic Regression Analysis of ayuğil Social Distribution in Batna Speech Community (Fixed-effects Model)

Model Basics:	Input Probability: 0.998		Intercept: 6.325	
Model Fit:	Deviance: 418.435		$R^2 = 0.505$	
Factors	Log-odds	Respondents	Proportion	Factor Weight
Ethnic Orientation (p=1.29e-20)				
High	1.192	816	0.969	0.767
Low	-1.192	187	0.690	0.233
Regionality (p= 9.72e-04)				
Rural	0.456	504	0.954	0.612
Urban	-0.456	499	0.880	0.388
Age (p=3.66e-03)				
Sixties	9.132	6	1.000	>.999
Seventies	9.066	2	1.000	>.999
Forties	-2.139	65	0.985	0.105
Thirties	-3.497	207	0.947	0.0294
Fifties	-3.551	36	0.972	0.0279

Twenties	-3.892	607	0.914	0.020
Teens	-5.119	80	0.775	0.00595
Mobility (p=9.54e-03)				
Mobile	0.388	345	0.948	0.596
Non-mobile	-0.388	658	0.901	0.404
Gender (p=0.0328)				
Male	0.281	608	0.941	0.570
Female	-0.281	395	0.881	0.430

5.4.3 Time

Figures 5.10 and 5.11 foreground three time-related notions; namely: month, morning and evening, respectively. Notably, the sociolinguistic patterns of the three variables vary, diametrically and quantitatively, across ethnic network categorization. Across both ethnic categories, it appears that most research respondents (893 out of 1003) opted for the Chaoui lexical variant *yur* [ju:r]. The competing Arabic variant *chəhər* [ʃhər] is, conversely, a minor lexical choice in both ethnic groups, strong and weak.

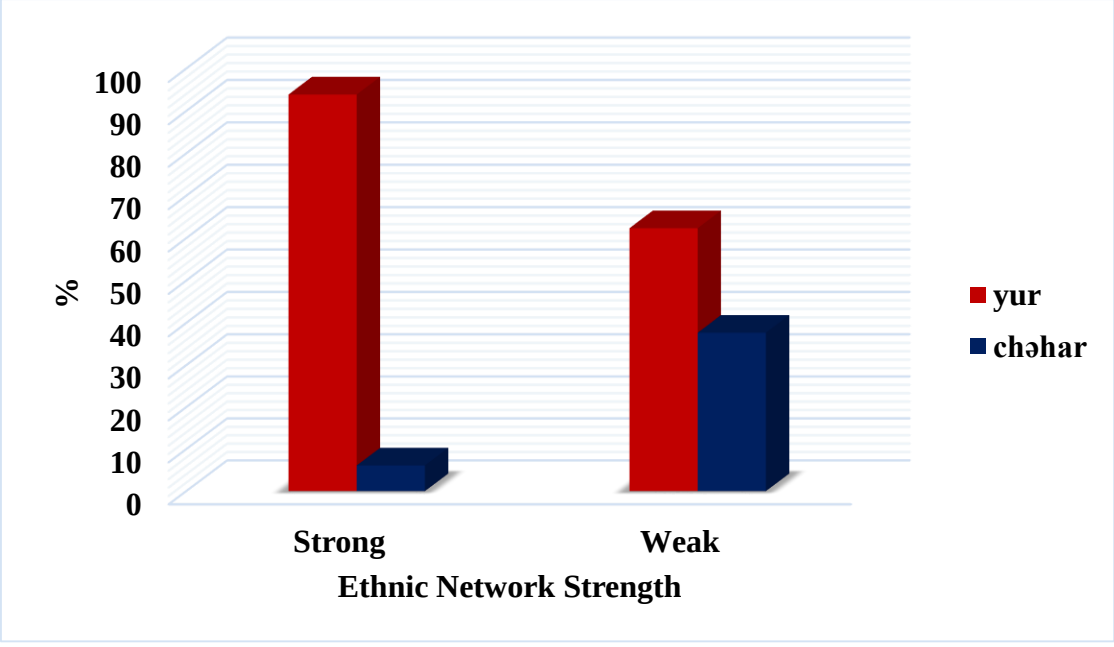

Figure 5.10. Overall distribution of *yur* and *chəhər* by ethnic network strength.

The stepwise regression analysis in table 7 indicates that ethnic orientation and gender are the only significant predictors which pattern, statistically, with the use of the Chaoui variant *yur* [ju:r]. Ethnic strength, along with age, EO, homophily, mobility and regionality, were excluded from the step-up model, due to their high P-values ($p > 0.05$)

Table 7

Stepwise Logistic Regression Analysis of yur Social Distribution in Batna Speech Community (Fixed-effects Model)

Basic Model:	Input Probability: 0.865	Intercept: 1.859		
Model Fit:	Deviance: 551.335	$R^2 = 0.262$		
Factors	Log-odds	Respondents	Proportion	Factor Weight
Ethnic Orientation (p=6.46e-26)				
High	1.163	816	0.951	0.762
Low	-1.163	187	0.626	0.238
Regionality (p=9.62e-05)				
Rural	0.461	504	0.944	0.613
Urban	-0.461	499	0.836	0.387

The regression analysis shows that high centered factor weights (and Log-Odds) are associated with high ethnic engagement scores, whereas low factor weights are associated with low ethnic engagement scores. The term *yur* [ju:r] made its way as the favored choice for rural respondents. The same application value, conversely, is disfavored by respondents who inhabit in the urban regions. Therefore, the use of Chaoui term seems to be not only associated with strong attachment with Berber culture, but also with rural, close-knit areas. We can deduce from table 7 that the alternative Arabic form *chəhər* [ʃhər] is more adopted by speakers with the lowest EO indexes and those who live in the urban regions. The best model fit, also, indicates clear-cut regional differences between regions in the east, central

and southern parts. By way of example, *yur* [ju:r] is more favorably used in Foum Toub and Ghassira and less used in Batna ville, Ain Touta and N'Gouas.

The ethnic distributions of the variables morning and evening contrast with that of the variable *month*. The Berber variants *anezayth* [ʌnəzeiθ] and *amədith* [ʌmədi:θ] are almost disfavored by most respondents in both groups, which seem to be more prone to adopt the Arabic loans *assəbḥith* and *aʕəchwith*, instead. These latter variants are virtually unknown to the majority of Chaoui speakers, especially teens and young adults.

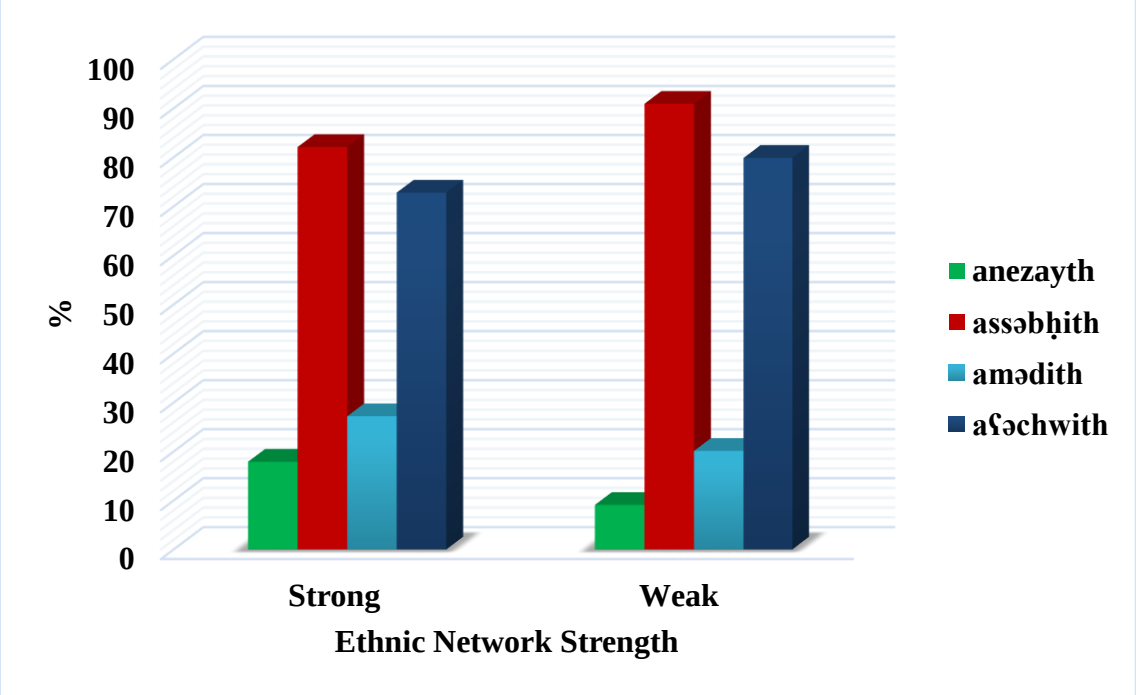

Figure 5.11 Overall distribution of *anezayth vs. asebəbhith* and *amədith vs. aʕchwith* by ethnic network strength

The best fit model, displayed in table 8 below, indicates that gender and ethnic strength have the strongest sociolinguistic impact on the use of *anezayth* [ʌnəzeiθ]. Notwithstanding its extreme low proportions in data, *anezayth* [ʌnəzeiθ] is still favored by speakers with tight

ethnic relations and male speakers. Likewise, the obsolete term *amədith* [ʌmədiːθ], albeit at the edge of lexical obsolescence, still gains a relatively strong foothold among males and, much extensively, rural respondents.

Table 8

Stepwise Logistic Regression Analysis of anezayth Social Distribution in Batna Speech Community (Fixed-effects Model)

Model Basics:	Input Probability: 0.116		Intercept: -2.033	
Model Fit:	Deviance: 871.24		R^2 = 0.0693	
Factors	Log-odds	Respondents	Proportion	Factor Weight
Gender (p= 5.90e-06)				
Male	0.425	608	0.2090	0.605
Female	-0.425	395	0.987	0.395
Ethnic Strength (p= 0.0106)				
Strong	0.353	849	0.1790	0.587
Weak	-0.353	154	0.0909	0.413

Table 9

Stepwise Logistic Regression Analysis of amədith Social Distribution in Batna Speech Community (Fixed-effects Model).

Model Basics:	Input Probability: 0.236		Intercept: -1.177	
Model Fit:	Deviance: 1117.438		R^2 = 0.0532	
Factors	Log-odds	Respondents	Proportion	Factor Weight
Gender (p=4.84e-08)				
Male	0.422	608	0.321	0.604
Female	-0.422	395	0.170	0.396
Regionality (p=0.023)				
Rural	0.166	504	0.292	0.541
Urban	-0.166	499	0.230	0.459

The regional distribution of *aʕəchwith* [ʌʕəʃwiːθ] and *amədith* [ʌmədiːθ] reveals relatively analogous patterns to those of the words *chəhər* [ʃhər] and *yur* [juːr]. Speakers in the central and southern regions-Batna ville and Merouana- adopted the Arabic loan *aʕəchwith* [ʌʕəʃwiːθ] much frequently, whilst many of those who inhabit in the eastern regions tend to use the Chaoui term *amədith*. Therefore, the impact of Arabic is, without dispute, crystal clear in the case of *morning* and *evening* variables. Presumably, one can simply infer that *amədith* [ʌmədiːθ] and *anezayth* [ʌnəzeiθ] will be progressively eroded and ousted from Chaoui speech in almost all social groups in the next decade. Urban areas aside, these variants might possibly be preserved in some isolated villages in the eastern parts of Batna. The sociolinguistic situation of the Chaoui word *yur* [juːr] is relatively stable. As evidenced in figure 5.10, the word is still a major choice for respondents and, thus, is more likely to sustain its currency in the future, most probably in the monoethnic Chaoui villages.

5.4.4 Metals

This section considers the regression analysis of the variables silver and gold, two of the most locally produced metals in the Great Maghreb. Silver and gold are strongly tied to the local economy and Berber folkways. Both metals are used to make traditional silver artifacts and gold-made jewelry. In predominantly Berber speaking regions, speakers use either the Berber *aẓrəf* [ʌẓrəf] or its Arabic equivalents *lfəd^{ʕ}a* [lfəd^{ʕ}ʌ] to describe silver. They, also, use either the Berber *urəɣ* [uːrəɣ] or the Arabic loanword *ḏhəb* [ḏhəb] for gold (Chafik, 1990, 1996; Haddadou, 2007; Tibermacine, 2009).

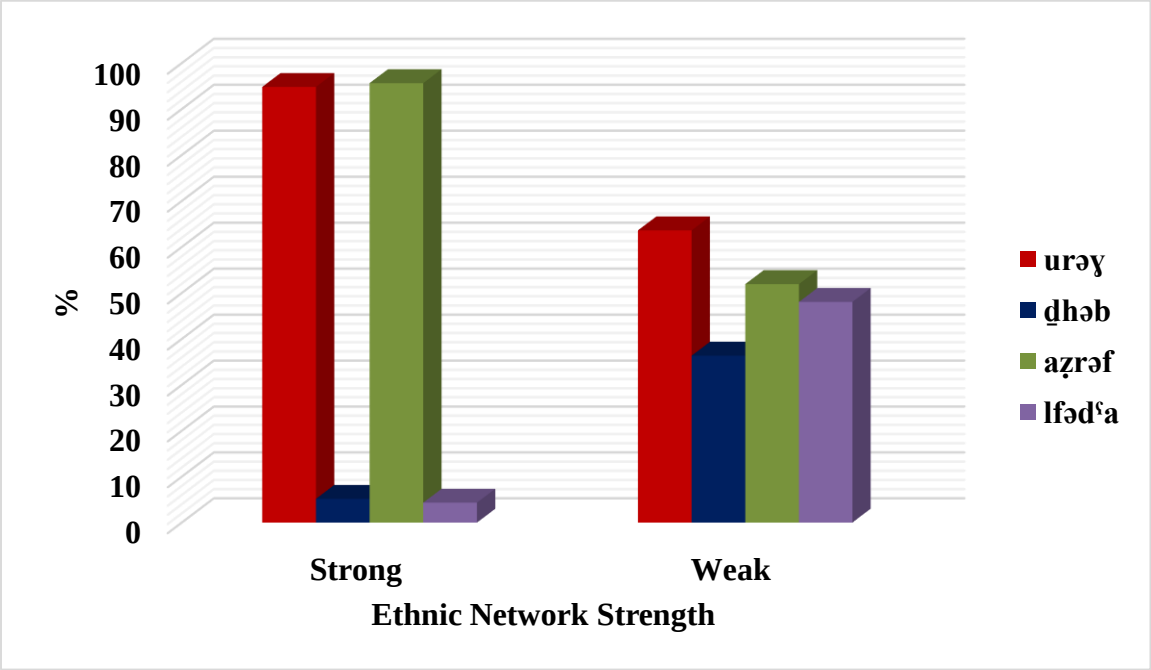

Figure 5.12 Overall distribution of *aẓrəf* vs. *lfədˁ* and *urəɣ* vs. *ḏhəb* by ethnic network strength.

The variants *aẓrəf [ʌẓrəf]* vs. *lfədˁa* and *urəɣ* [uːrəɣ] vs. *ḏhəb* [ḏhəb] are plotted, graphically, in figure 5.12. Comparatively, the Arabic loans, in stark contrast to their Berber competing variants, are used with low proportions (*lfədˁa* = 111/1003, *ḏhəb* = 100 /1003). Across respondents with high ENS indexes, *lfədˁa* [lfədˁʌ] is favored by roughly 4 % and *ḏhəb* is favored by 5 %. As for respondents with low ENS indexes, the former is adopted by 48 % whereas the latter is adopted by 36 %. Such great lexical variations across ethnic network categorization entail that Arabic has a more considerable amount of influence on speakers with weak Chaoui ties than speakers with strong Chaoui ties. While the Chaoui variants *aẓrəf* [ʌẓrəf] and *urəɣ* [uːrəɣ] are major choices in the whole research sample, they are more dominant in the speech of respondents with high ENS scores than those with low ENS scores. These results entail high linguistic conservatism among Chaoui speakers with

strong network ties. Thus, while weakly nested Chaoui ties are correlated with high lexical variation and great Arabic impact, strongly nested Chaoui ties are associated with linguistic stability and conservatism.

Table 10

Stepwise Logistic Regression Analysis of aẓrəf Social Distribution in Batna Speech Community (Fixed-effects Model)

Model Basics: Input Probability: 0.793 Intercept: 1.343				
Model Fit Deviance: 503.821 $R^2 = 0.29$				
Factors	Log-odds	Respondents	Proportion	Factor Weight
Ethnic Strength (p=6.27e-28)				
Strong	1.334	849	0.956	0.792
Weak	-1.334	154	0.519	0.208
Ethnic Homophily (p=1.09e-03)				
Homophilous	0.681	567	0.949	0.664
Mixed Ethnic	0.151	387	0.850	0.538
Heterophilous	-0.832	49	0.510	0.303

Of all the seven potential predictors, ethnic strength and ethnic homophily appear to be the most, statistically, significant predictors in the step-up model. As it was expected, *aẓrəf* [ʌẓrəf] is to a great extent favored by respondents with strong Chaoui ties (0.792). It is, however, disfavored by respondents with weak Chaoui ties as it is evidenced by its extremely low centered-factor weights (0.208). The Chaoui term *aẓrəf* [ʌẓrəf] is also favored by respondents with ethnically homophilous and mixed friendship contacts, and is favored by respondents whose friendship networks are dominated by Arab peers (heterophilous). This vindicates the inextricable link between speech conservatism and strongly nested Chaoui networks. It, also, entails that speakers who interact much frequently with peers of Berber descent are at the leading edge of preserving Chaoui features.

Table 11

Stepwise Logistic Regression Analysis of urəɣ Social Distribution in Batna Speech Community (Fixed-effects Model)

Model Basics:	Input Probability: 0.88	Intercept: 1.994		
Model Fit	Deviance: 506.947	$R^2 = 0.278$		
Factors	Log-odds	Respondents	Proportion	Factor Weight
Ethnic Orientation (p=1.09e-26)				
High	1.229	816	0.960	0.774
Low	-1.229	187	0.642	0.226
Regionality (p=2.48e-04)				
Rural	0.456	504	0.950	0.612
Urban	-0.456	499	0.85	0.388

The application value *urəɣ* [uːrəɣ] correlates with ethnic orientation and regionality, as shown in table 11. In essence, it is more favorably associated with respondents with high EO scores and with rural regions. The extremely low centered factor weights among rural respondents and respondents with low EO scores is indicative of the high lexical borrowing in the same sub-groups. A quick glance over the historical axe reveals that the Berber words *aẓrəf* [ʌẓrəf] and *urəɣ* [uːrəɣ] were commonly used in Berber varieties. The former is still preserved in almost all Berber speaking areas, except in Ouargla and Great Kabyle (Kossmann, 2013). The latter, which is a derivation of the color term *auraɣ* (yellow), also, had been the dominant word for gold in most Berber speaking communities (Chafik, 1990; Haddadou, 2006). Basset (1883), adds that the use of *urəɣ* has been widespread in several Berber areas, including Chaouia speaking regions ever since late 19th century. Therefore, it stands to reason that *aẓrəf* and *urəɣ* had been and still resistant to lexical erosion and Arabic lexical borrowing in Chaouia, notwithstanding the extensive Arabic-Berber contact in Batna.

5.4.5 Weather

The second category consists of three weather exclusive concepts; namely: winter, snow and rain. Figure 5.13 below shows that the Chaoui variant *tağrəst* [teʒrəst] is less immune to Arabic lexical borrowing. It is a minor choice in both ethnic categories (weak 9.74 %, strong 19.67 %). Its competing Arabic equivalent lməchta [ləməʃətʌ], conversely, gains a strong foothold as a major choice in the same categories (weak 90.25%, strong 80.32%).

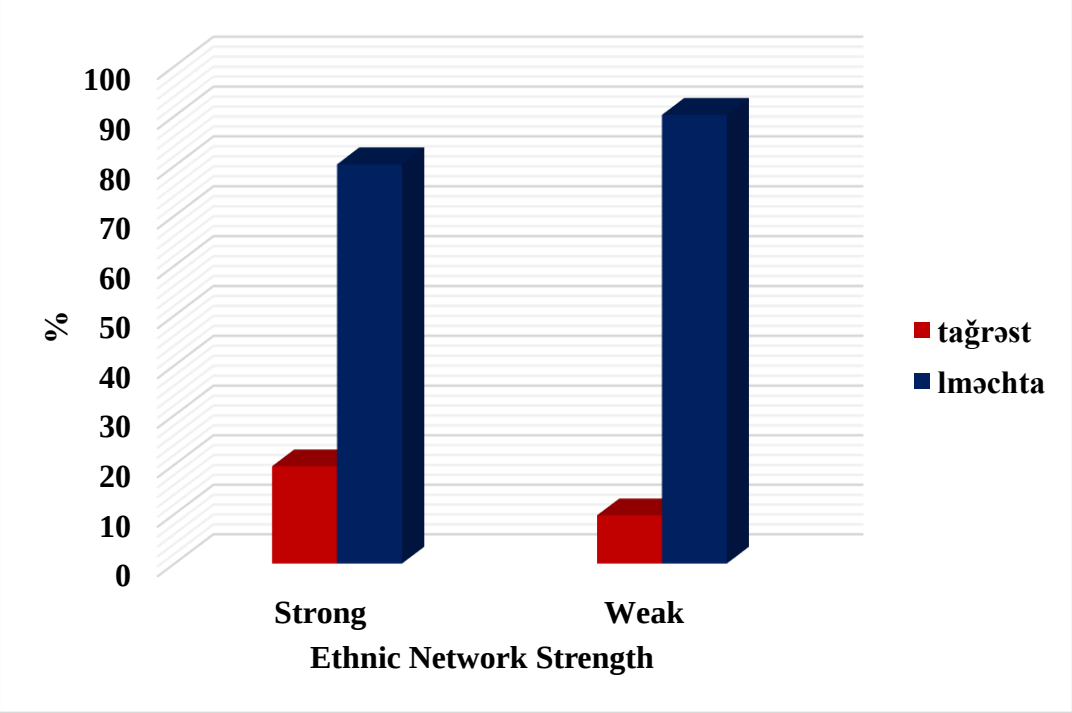

Figure 5.13 Overall distribution of *tağrəst* and *ləməchta* by ethnic network strength

The distribution of the variable snow across ethnic network categorization differs diametrically from the lexical variable winter. Arabic lexical borrowing is less attested to the variable snow, which appears to be resistant to the impact of foreignism. To put it otherwise, while *thəlğ* [θəlʒ] gains some currency among respondents with low ENS scores, it is almost absent from the speech of respondents with high ENS scores. The variant *aḏfəl* [eḏfəl],

conversely, appears to be a major choice among respondents with low ENS scores and a dominant choice among those with high ENS scores. Thus, while *tağrəst* [teʒrəst] is on the edge of lexical erosion, *aḏfəl* seems to be less amenable to the influence of Arabic.

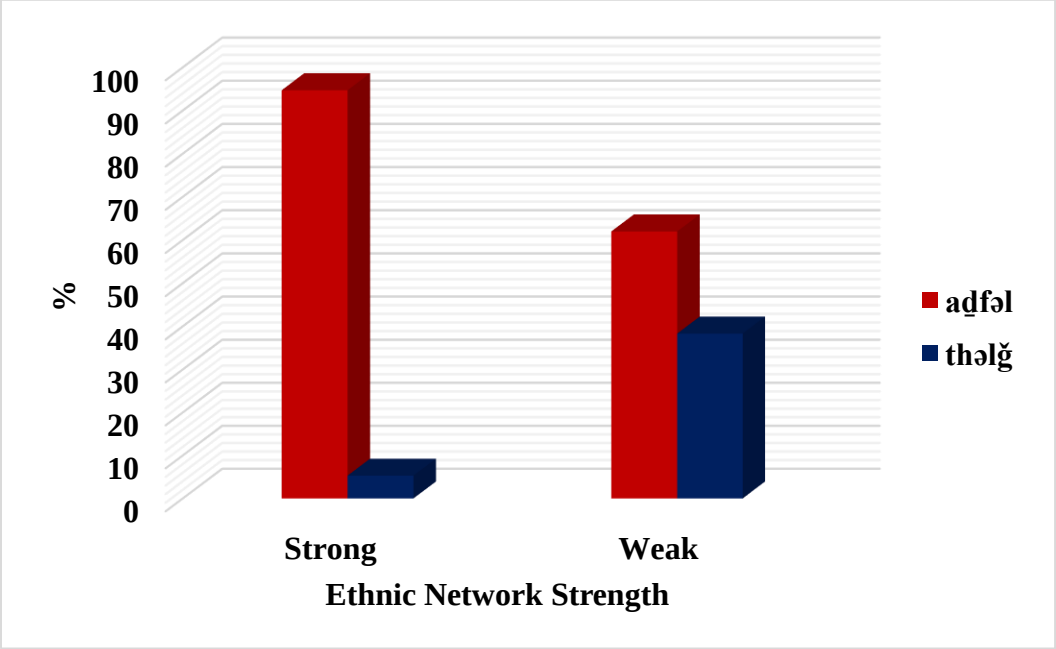

Figure 5.14 Overall distribution of *aḏfəl* and *thəlğ* by ethnic network strength.

While the variables winter and snow have two competing variants, the variable rain has three competing lexical variants. Based on a plethora of Berber linguistics introductions and dictionaries, *anẓar* [ʌnẓɑːr̩] was reported as the oldest form of the word rain (Amaniss, 2009; Basset, 1883; Chafik, 1996; Haddadou, 2009; Kossmann, 2013). In the course of time, *anẓar* made its way to many Berber varieties, most notably Chaouia in the Aures province (Tibermacine, 2009). *The variant hamәthna* [hʌmәθnʌ], albeit not broadly well-attested in most Berber varieties, occurs in the middle Atlas: *amәtna* [ʌmәtnʌ] or *tamәtna* [tʌmәtnʌ], which is translated as "longue période pluvieuse ou neigeuse", meaning 'long rainly or snowy season' (Oussikoum, 2013, p. 257); amәtna / imәtni "période de pluie (en hiver); pluies

continuelles .. chute de neige, tourmente de neige", meaning 'Rainy season (in winter); continual rains .. snowfall, snow storm', (Taïfi, 1991, p. 443). It is more commonly used in Chaouia speaking areas (Tibermacine, 2009). *nawəth* [nwəθ], arguably, is a general term for rain not solely in Berber varieties but also in many Arabic dialects, most notably in the Aures province in Algeria and Oujda in Morocco. The use of *nawəth*, it is assumed, roots back to the Arabic word *naw?* [nawʔ] which means rain (Al-Raed, 1992) or *downpour* (al-Mu'jam al-Wasit, 1960), a suddenly unpredicted heavy rain fall (the opposite of drizzling). Another textual evidence comes from some religious Hadiths and traditional documents, which affirmed that *nawəth* is traceable to the pre-Islamic era (Jahiliyyah era), wherein Arabs used the expression 'امطرنا بنوء كذا' [ɒmṭirnʌ binawʔi kʌḏʌ] to mean that rainfall is caused by the fall movements of planets and stars in the sky (Al-Raed, 1992). Thus, *naw?* is a reasonably attested Arabic loan, which made its way to many Berber varieties like Beni-Salah in Algeria and Beni-Menacer in Western parts of Algeria ever since the Islamic conquests in North Africa (Kossmann, 2013). The alternative term *elgarəth*, also realized as *agerriw*, is less documented and under-researched word in Berber Sociolinguistics. Its origin, however, roots back to the Arabic word القر [el qɒr] meaning *cold weather* (Lisān al-Arab, Ibn Manzūr, 1883). By way of example, Arabs in the pre-Islamic era used to say 'هذا يوم ذو قر' [hʌḏʌ jʌwmɒn qɒr] meaning *'today, the weather is so cold'*. Presumably, the Arabic word القر [el qɒr] made its way to Berber through lexical borrowing and shifted its meaning from that of cold to rain. In addition, *nawəth*, *lemṭər* [ləmṭʌr] and *elgarəth* do not occur in any of the modern Berber dictionaries. Therefore, it stands to reason that they are well attested Arabic loans, as opposed to *anẓar* [ʌnẓɑːṛ] and *hamәthna* [hʌməθnʌ] which are old Berber words.

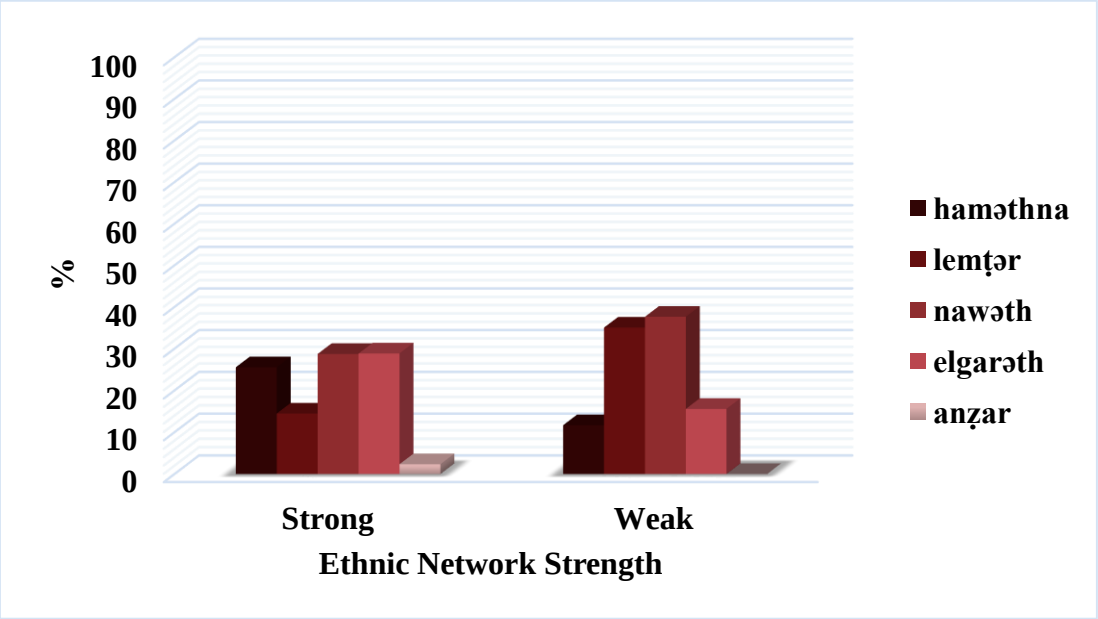

Figure 5.15 Overall distribution of *haməthna*, *anẓar*, *nawəth*, *lemṭər* and *elgarəth* by ethnic network strength

Of all the three weather-exclusive variables, the variable rain is part of the Swadesh List. The latter refers to words which are, arguably, highly resistant to lexical borrowing (Swadesh, 1971). The distribution of the five variants in figure 5.15 portrays an image of high lexical variation in both ethnic network subgroups. As for speakers with strong ethnic ties, *nawəth* and *elgarəth* are without dispute major preferences, followed by *lemṭər* [ləmṭʌr] and finally the archaic variant *anẓar* [ʌnẓɑːr̩] with extremely low proportions. As for respondents with weak ethnic ties, the Arabic loans *nawəth* [newəθ] and *lemṭər* [ləmṭʌr] gained strong foothold as dominant choices, whereas *haməthna* [hʌməθnʌ] and *elgarəth* are used with relatively low rates. The archaic variant *anẓar* eclipses completely from speech. Therefore, as for ethnically nested Chaoui groups, Arabic and Chaoui variants are used with comparable rates. As for ethnically loose, weak groups, Chaoui variants are less favored choices, whilst Arabic alternatives appear to be gradually increasing in use, especially *lemṭər* [ləmṭʌr] and

nawəth [newəθ]. The variant *anẓar*, it is noted, is virtually unknown to all respondents and is more likely to disappear from speech, socially and regionally, in the next few years. These findings are consistent with Kossmann's (2013) view that the word that refers to the rain, contrary to other words in Swadesh list (Swadesh, 1971), is less immune to lexical borrowing in Chaouia.

Table 12

Stepwise Logistic Regression Analysis of tağrəst Social Distribution in Batna Speech Community (Fixed-effects Model)

Model Basics: Input Probability: 0.179 Intercept: -1.522 Model Fit: Deviance: 913.206 R^2 = 0.0712				
Factors	Log-odds	Respondents	Proportion	Factor Weight
Gender (p=31e-03)				
Male	0.293	608	0.219	0.573
Female	-0.293	395	0.124	0.427
Ethnic Strength (p=9.79e-03)				
Strong	0.348	849	0.1970	0.586
Weak	-0.348	154	0.0974	0.414
Age (p= 0.0349)				
Seventies	1.173	2	0.500	0.764
Forties	0.396	65	0.323	0.598
Fifties	0.309	36	0.333	0.577
Thirties	-0.266	207	0.208	0.434
Twenties	-0.505	607	0.153	0.376
Teens	-0.548	80	0.138	0.366
Sixties	-0.559	6	0.167	0.364

Step up variation analysis in Table 12 shows that the word *tağrəst* [teʒrəst] is more associated with gender, ethnic strength and age factors. Though extremely low in proportion, *tağrəst* seems to be more favored by speakers in their 70s and 40s. It is also favored by male respondents and speakers who scored the highest indexes in ethnic orientation scale.

Table 13 displays the multiple logistic regression results of the application value *aḏfəl* [eḏfəl]. Statistically, ethnic orientation is the most significant predictor, followed by ethnic strength, age and regionality. On closer examination, oldest age cohorts (70s and 60s) favor the use of the Chaoui word *aḏfəl* more than the other groups, reflecting their strong speech conservatism, as opposed to young age cohorts, which favor the use of Arabic loans, instead. The great Log-Odds coefficients between the oldest and youngest generations echo ongoing lexical replacement in Chaouia dialect. As for ethnic orientation and ethnic strength, respondents with the highest scores favor the use of *aḏfəl* more than the other sub-groups. Regionality, though the least statistically significant variable, also, shows an effect on the distribution of *aḏfəl*. The application value is favored by rural respondents and disfavored by their urban counterparts, indicating once again the strong connection between Chaouia, speech conservatism and rurality.

Table 13

Stepwise Logistic Regression Analysis of aḏfəl Social Distribution in Batna Speech Community (Fixed-effects Model)

Model Basics:	Input Probability: 0.996		Intercept: 5.478	
Model Fit :	Deviance: 523.884		R^2 = 0.427	
Factors	Log-odds	Respondents	Proportion	Factor Weight
Ethnic Orientation (p=3.14e-04)				
High	0.675	0.952	0.952	0.663
Low	-0.675	187	0.652	0.337
Ethnic Strength (p=1.07e-03)				
Strong	0.575	849	0.947	0.640
Weak	-0.575	154	0.617	0.360
Age (p= 0.0169)				
Seventies	8.862	2	1.000	>.999
Sixties	8.862	6	1.000	>.999
Fifties	-2.865	36	0.972	0.0539

Forties	-2.871	65	0.954	0.0536
Thirties	-3.579	207	0.908	0.0271
Twenties	-3.644	607	0.901	0.0255
Teens	-4.765	80	0.738	0.00845
Regionality (p=0.0279)				
Rural	0.267	504	0.933	0.566
Urban	-0.267	499	0.860	0.434

The combination between ethnic orientation and ethnic network strength is the only interaction analysis reported by Rbrul model (p=1.09e-04); the other possible interactions were excluded due to their high p-values. Indeed, regression analysis shows that respondents with high EO scores and ENS indexes use the variant *aḏfəl* much extensively than other sub-categories (Log-odds= 0.678, Factor Weight= 0.663). These results vindicated the inextricable link between ethnic orientation, ethnic network strength and local dialectal norms, with native Chaoui words being more associated with positive attitudes towards Berber and strong Chaoui ties.

Step-up regression analysis displays three predictors which play a major role in the use of the variant *haməthna* [hʌməθnʌ]. It is worth noting that *anẓar* [ʌnẓɑːr̩] was not included as the application value in the regression analysis due to its extremely low proportion in the sample data. Stepwise regression analyses in table 14 indicate that, across all age groups, respondents in their sixties seem to be the most conservative in the use of *haməthna*. The other age groups, conversely, appear to be more amenable to use Arabic loans, instead. Unequivocally, the great Log-Odds coefficients between the oldest generation and youngest generation is indicative of a gradual lexical change across generations and which is spearheaded by youngsters in the whole research sample.

Table 14

Stepwise Logistic Regression Analysis of hamәthna Social Distribution in Batna Speech Community (Fixed-effects Model)

Model Basics:	Input Probability: 0.734	Intercept: 1.016	Difference: 11
Model Fit:	Deviance: 988.451	R^2 = 0.382	
Factors	Log-odds	Respondents	Proportion	Factor Weight
Age (p=2.05e-11)				
Sixties	13.143	6	1.000	>.999
Forties	-1.249	65	0.538	0.223
Fifties	-1.425	36	0.500	0.194
Seventies	-1.673	2	0.500	0.158
Twenties	-2.577	607	0.216	0.0706
Thirties	-2.931	207	0.169	0.0506
Teens	-3.288	80	0.112	0.036
Ethnic Orientation (p=1.94e-04)				
High	0.465	816	0.265	0.614
Low	-0.465	187	0.102	0.386
Ethnic Homophily (p=8.25e-03)				
Homophilous	0.192	567	0.282	0.548
Mixed Ethnic	0.143	49	0.184	0.536
Heterophilous	-0.335	387	0.171	0.417

Like the variants *aḏfəl* [eḏfəl] and *tağrəst* [teʒrəst], the Berber variant *hamәthna* [hʌməθnʌ] is strongly associated with high EO scores than low EO scores. As evidenced in table 14, *hamәthna* is more favored by respondents with ethnically homophilous contacts than respondents with ethnically mixed and heterophilous contacts. Again, these findings are consistent with Wassink's (2016) research results that ethnically nested friendship networks serve as norm enforcements in language use. Ethnically diverse friendship networks are, comparatively, focal points of lexical innovation and change, socially and regionally.

5.4.6 Other Semantic Fields

This section considers five lexical variables that belong to different semantic fields: house corner (*aɣmərth* vs. *chukth*), cinder or charchoal (*tirğith* vs. *lefḥem*), El Kouhel El Ithmed (*haẓult* vs. *ləkḥəl*), salt (*hisenth* vs. *lməlḥ* vs. *rəbḥ*) and mirror (*hisith* vs. *lemri* vs. *aləmeʕ*). The term *aɣmərth* [ʌɣmərθ] is a well-attested Berber word for the concept of *corner* in Chaouia and Kabyle. It is alse used to describe angle, corner and elbow in Ghadames and Nefoussa in Lybia (Amaniss, 2009; Haddadou, 2009). The terms *tirğith* [tɪrʒi:θ] and *haẓult* are widely attested Berber words for 'cinder' and 'Khôl al-ithmid', respectively (Amaniss, 2009, Chafik, 1996; Haddadou, 2007). The variant *hisith* [hɪsi:θ] is a well-attested Berber word for mirror in Ghadames and Nefoussa, Lybia and in some Chaouia speaking areas in the Aures province (Amaniss, 2009; Haddadou, 2007; Saâd, 2013). The alternative Arabic loan *lemri* [lemri] is the dominant lexical choice in some Berber varieties in Bejaia, Zouaoua, Kabyle; Beni Snassen, North Morocco (Basset, 1883), whereas *aləmeʕ* [eləmeʕ] was introduced as a new competing form in the last few decades.

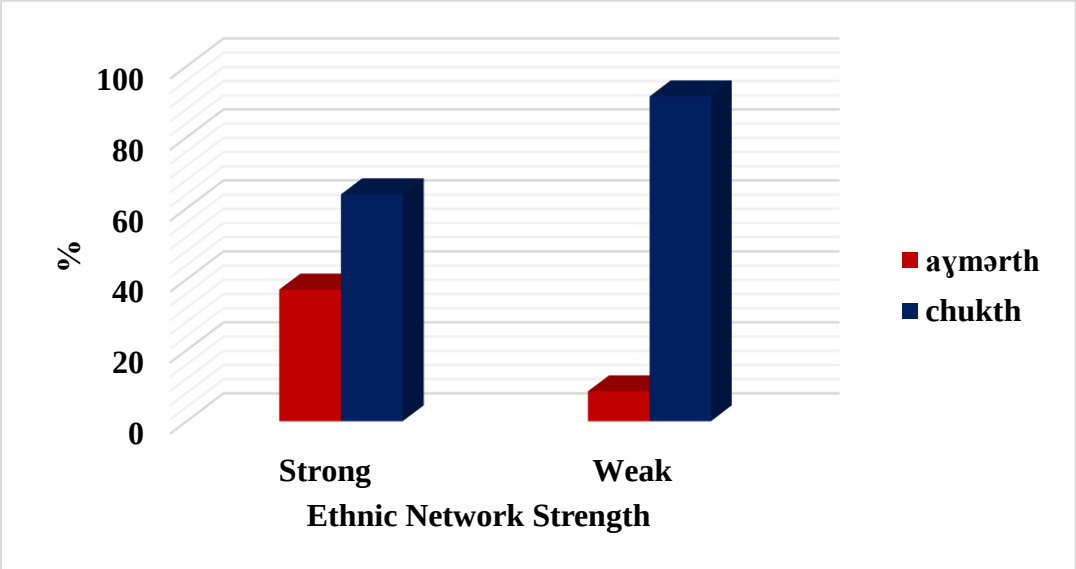

Figure 5.16 Overall distribution of *aɣmərth* and *chukth* by ethnic network strength.

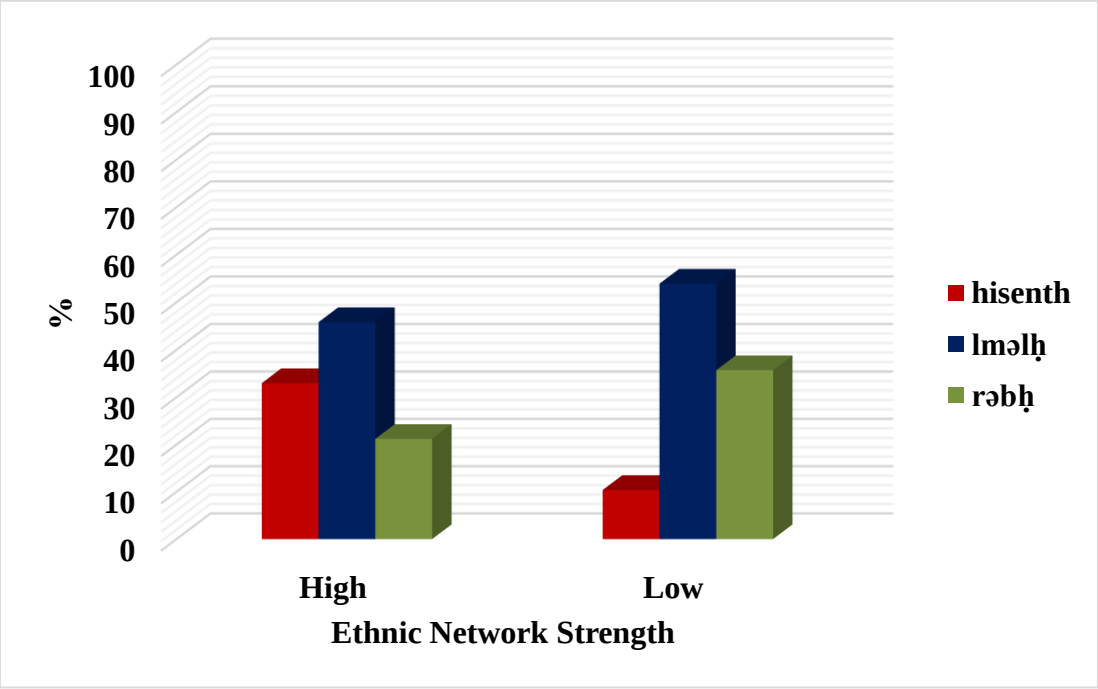

Figure 5.17 Overall distribution of *hisenth*, *lməlḥ* and *rəbḥ* by ethnic network strength

The lexical variables corner and salt are the epitomes of dialect obsolescence, whereby Chaoui variants *aɣmərth* [ʌɣmərθ] and *hisenth* [hɪsənθ] are gradually substituted by the Arabic alternatives *chukth* [ʃʊk̲θ] and *lməlḥ* [lməlḥ], respectively. Arabic loans, as displayed graphically in figures 5.16 and 5.17, are major preferences for most respondents in both ethnic categories, a pattern indicating that the influence of Arabic on Chaouia is at an advanced stage. It is worth noting that *rəbḥ* [rəbḥ], though not the dominant lexical choice in the data, still gains some currency in both ethnic categories. In many Chaoui regions, the use of the response *lməlḥ* [lməlḥ] is believed to be a *jinx* or bad omen, which foreshadows unfortunate and unpleasant events, and hence is usually avoided in speech and replaced by the alternative variant *rəbḥ*, which literally means *earnings or gaining money*. By the same token, a deep seated supersition is the belief that the use of *rəbḥ* is a good omen of success and prosperity in many Chaouia speaking areas in Batna and Oum El Bouaghi.

Table 15

Stepwise Logistic Regression Analysis of aɣmərth Social Distribution in Batna Speech Community (Fixed-effects Model)

Model Basics: Input Probability: 0.739 Intercept: 1.039				
Model Fit: Deviance: 1087.776 R^2 = 0.323				
Factors	Log-odds	Respondents	Proportion	Factor Weight
Regionality (p=7.59e-19)				
Rural	0.667	504	0.464	0.661
Urban	-0.667	499	0.188	0.339
Ethnic Strength (p=2.37e-06)				
Strong	0.667	849	0.3710	0.661
Weak	-0.667	154	0.0844	0.339
Age (p=1.44e-05)				
Seventies	11.556	2	1.000	>.999
Sixties	-0.138	6	0.833	0.466
Fifties	-1.182	36	0.639	0.235
Forties	-2.040	65	0.400	0.115
Thirties	-2.493	207	0.314	0.0764
Twenties	-2.696	607	0.311	0.0632
Teens	-3.007	80	0.225	0.0471
Ethnic Homophily (p=1.52e-03)				
Homophilous	0.395	567	0.407	0.597
Mixed Ethnic	-0.165	387	0.235	0.459
Heterophilous	-0.230	49	0.122	0.443

Table 15 indicates that *aɣmərth* [ʌɣmərθ] is favored by rural speakers, elders and respondents whose friendship contacts are ethnically homophilous. It is, however, disfavored by urban speakers, respondents whose ages range from 69 to 18, and those who contract mixed or heterphilous friendship ties. The variant *aɣmərth*, though low in proportion (328/1003), is still more favored by respondents with high ENS scores than those with low ENS scores. Interaction analyses revealed that the use of *aɣmərth* is more favored by rural

respondents whose friendship contacts are of Chaoui roots (homophilous) than other sub-categories.

Table 16

Stepwise Logistic Regression Analysis of hisenth Social Distribution in Batna Speech Community (Fixed-effects Model)

Model Basics:	Input Probability: 0.764		Intercept: 1.177	
Model Fit:	Deviance: 1109.09		R^2 = 0.239	
Factors	Log-odds	Respondents	Proportion	Factor Weight
Age (p=5.30e-09)				
Seventies	11.477	2	1.000	>.999
Sixties	-0.323	6	0.833	0.420
Fifties	-1.195	36	0.667	0.232
Forties	-1.599	65	0.554	0.168
Thirties	-2.615	207	0.295	0.0682
Twenties	-2.845	607	0.249	0.0549
Teens	-2.900	80	0.212	0.0522
Ethnic Orientation (p=3.56e-08)				
High	0.647	816	0.339	0.656
Low	-0.647	187	0.102	0.344
Ethnic Homophily (p=0.0201)				
Homophilous	0.266	567	0.349	0.566
Mixed Ethnic	-0.103	49	0.163	0.474
Heterophilous	-0.163	387	0.233	0.459

Logistic regression analyses shown in table 16 above indicate that *hisenth* [hɪsənθ] is correlated with age, ethnic orientation and ethnic homophily. Like *aɣmərth, hisent* is favored by the oldest age group, aged 70 onward, and is disfavored by the other age groups, a strong indication of the less Arabic impact on the speech of elderly speakers. The increase of centered factor weights goes on a par with age differentiation, a strong indication that *hisenth* progressively eclipses from speech, not only socioethnically but also synchronically and

diachronically. Logistic regression analysis in table 16, also, reveals that *hisenth* is favored by respondents who have positive ethnic orientation towards Chaoui and Berber culture. It is, also, more used by speakers whose peers are of Chaoui descent than other subgroups (ethnic mixed and heterophilous).

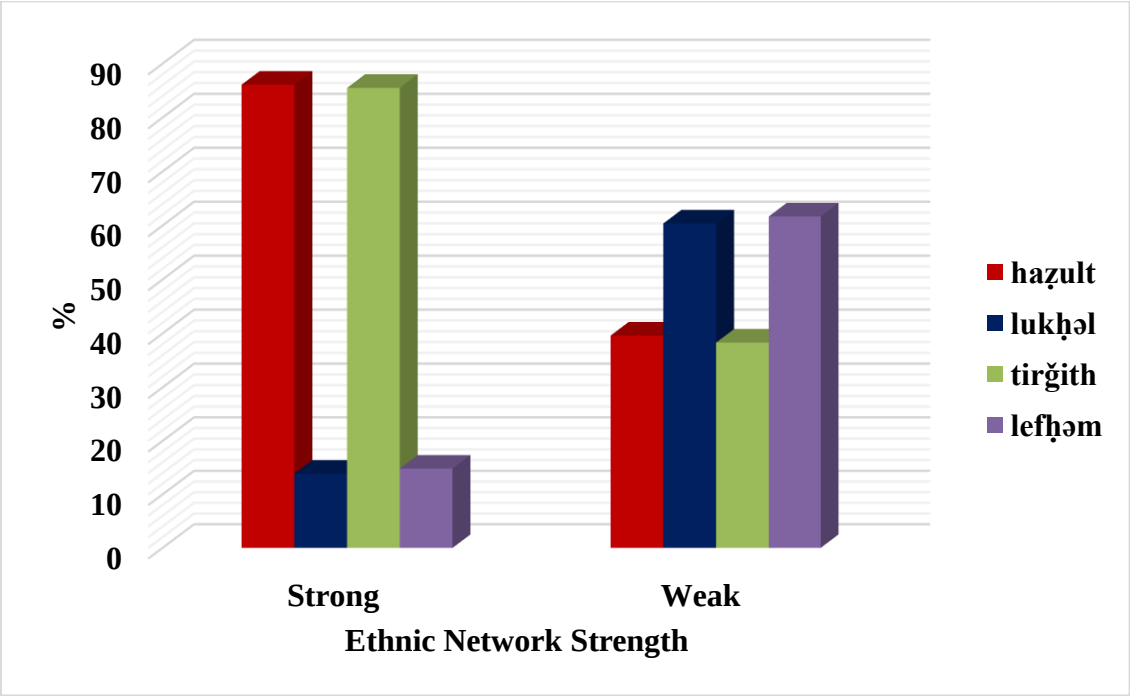

Figure 5.18 Overall distribution of *haẓult* vs. *lukḥəl*, *tirğith* vs. *lefḥəm* by ethnic network strength.

The distributions of the variables powder and cinder as evidenced in figure 5.18 pattern, statistically, with ethnic strength categorization. The Chaoui variants *haẓult* and *tirğith* [tɪrʒi:θ] are, quantitatively, extensive in the speech of respondents who scored high ENS indexes, whilst the Arabic loans *lukḥəl* and *lefḥəm* are more frequent in the speech of those who scored low ENS indexes.

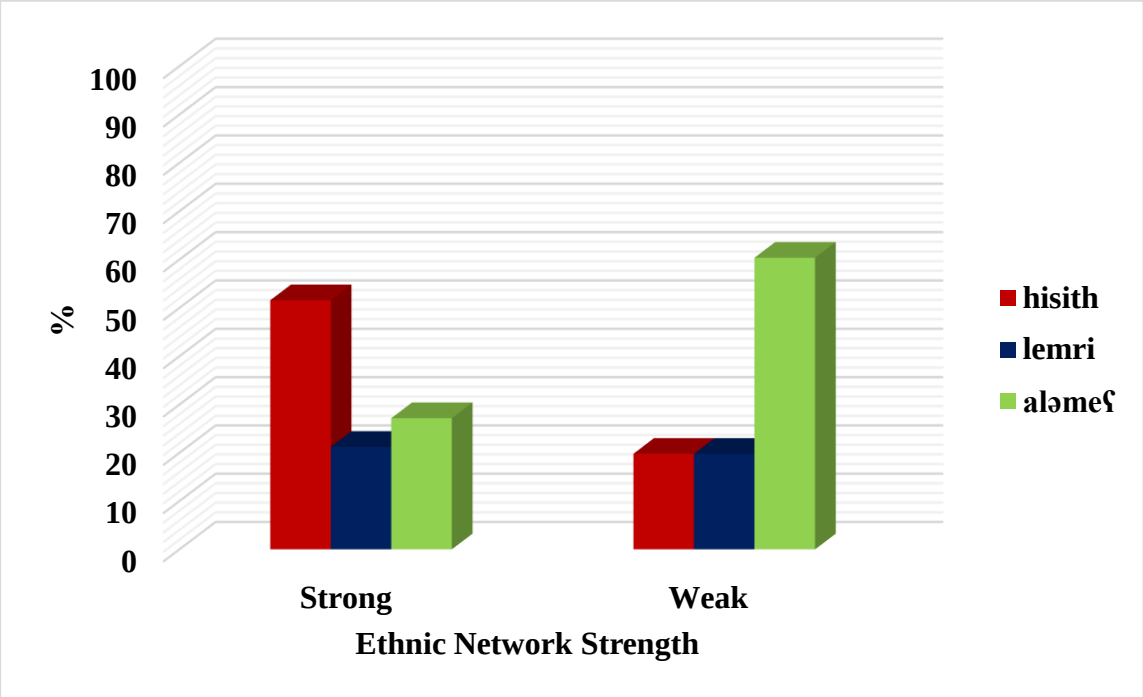

Figure 5.19. Overall distribution of *hisith*, *lemri* and *aləmeʕ* by ethnic network strength

As evidenced in figure 5.19, the distribution of the lexical variable *mirror*, also, displays the expected ethnic strength categorization pattern. Indeed, while the Chaoui term hisith [hɪsi:θ] is a major choice among respondents with high ENS scores, the loanword *aləmeʕ* [eləmeʕ] gained a strong foothold as a dominant choice among respondents with low ENS scores. The variant *lemri* [lemri], however, is a minor choice in both categories. That said, chances are that *lemri* is unlikely to increase or diffuse in Chaouia speaking areas, socially and spatially.

Table 17

Stepwise Logistic Regression Analysis of haẓult Social Distribution in Batna Speech Community (Fixed-effects Model)

Model Basics:	Input Probability: 0.993		Intercept: 1.016	
Model Fit	Deviance: 825.578		R^2 = 0.459	
Factors	Log-odds	Respondents	Proportion	Factor Weight

Ethnic Orientation (p= 3.47e-08)				
High	0.793	816	0.876	0.688
Low	-0.793	187	0.412	0.312
Regionality (p= 1.69e-04)				
Rural	0.342	504	0.857	0.585
Urban	-0.342	499	0.721	0.415
Ethnic Strength (p= 0.012)				
High	0.380	849	0.861	0.594
Low	-380	154	0.396	0.406
Age (p= 0.0236)				
Sixties	9.498	6	1.000	>.999
Seventies	9.405	2	1.000	>.999
Fifties	-2.203	36	0.972	0.0995
Forties	-3.672	65	0.862	0.0248
Thirties	-4.120	607	0.786	0.0160
Twenties	-4.141	207	0.792	0.0157
Teens	-4.767	80	0.650	0.00843

The distribution of the Chaoui variant *haẓult* shows a clear generational pattern. It is favored by respondents in their seventies and sixties and disfavored by other age cohorts. Such generational differentiation mirrors ongoing lexical change led by youngsters. Equally, this gradual lexical replacement is borne out by the fact that *haẓult* is adopted by all older age groups (Proportion: 1000) and is absent from the speech of teens, respondents in their thirties and twenties. The distribution of *haẓult* also co-varies, systematically, with regionality, ethnic strength and ethnic orientation. Respondents of rural origins, who scored high in ENS indexes and EO indexes, tend to favor the use of the Chaoui term *haẓult*.

Table 18

Stepwise Logistic Regression Analysis of tirğith Social Distribution in Batna Speech Community (Fixed-effects Model)

Model Basics:	Input Probability: 0.734		Intercept: 4.964	
Model Fit	Deviance: 808.73		R^2 = 0.489	
Factors	Log-odds	Respondents	Proportion	Factor Weight
Ethnic Orientation (p=9.57e-08)				
High	0.765	816	0.870	0.682
Low	-0.765	187	0.401	0.318
Age (p=7.12e-07)				
Sixties	9.482	6	1.000	>.999
Seventies	9.439	2	1.000	>.999
Forties	-2.520	65	0.938	0.0745
Fifties	-3.028	36	0.944	0.0462
Thirties	-3.822	207	0.836	0.0214
Twenties	-4.190	607	0.768	0.0149
Teens	-5.361	80	0.538	0.00467
Regionality (p=1.18e-04)				
Rural	0.353	504	0.845	0.587
Urban	-0.353	499	0.719	0.413
Ethnic Strength (p=6.97e-03)				
Strong	0.409	849	0.855	0.601
Weak	-0.409	154	0.383	0.399
Gender (p=0.015)				
Male	0.221	608	0.826	0.555
Female	-0.221	395	0.716	0.445

Logistic regression results of *tirğith* [tɪrʒiːθ] distribution are almost similar to that of *haẓult* distribution. It is substantially frequent in the speech of: 1) Respondents with high EO scores, 2) older age groups (seventies and sixties), 3) respondents with high ENS scores, and 4) male respondents. On closer inspection, step-up regression analysis indicates a tight interaction between ethnic orientation and the degree of ethnic strength (p=3.51e-03). In essence, *tirğith* is more favored by respondents with high scores in EO and ENS (High:

Strong, Log-odds= 0.493) scales and is less favored by those with low scores in the same social predictors (Low: Weak, Log-odds= -0.493).

Contrary to the terms *haẓult* and *tirğith* [tɪrʒiːθ], *hisith* [hɪsiːθ] use co-varies significantly with only three determinants: ethnic homophily, ethnic orientation and age. The other four social determinants, however, were excluded from the step-up analysis due to their high p-values, and thus are not statistically significant. Ethnic homophily, unequivocally, appears to be the highest statistically significant determinant. The variant *hisith* [hɪsiːθ] is favored by respondents with ethnically homophilous ties and disfavored by those with ethnically mixed or heterphilous ties. This, once again, is indicative of the role of ethnic friendship networks in monitoring and maintaining Chaoui native words. While high EO scores favor the application value *hisith* [hɪsiːθ], low EO scores disfavor it and correlate more with the alternative Arabic loans *lemri* [lemri] and *aləmeʕ* [eləmeʕ], instead.

Finally, *hisith* distribution displays a significant age differentiation pattern. The centered factor weights increment in an orderly fashion as one moves from teens' cohort to the oldest age cohorts. Based on the 'Apparent Time' hypothesis (Bailey, Wikle, Tillery & Sand, 1991), other things being equal, such age based-lexical variation echos a gradual erosion of the Chaoui term 'hisith' from speech in favor of its Arabic equivalents.

Table 19

Stepwise Logistic Regression Analysis of hisith Social Distribution in Batna Speech Community (Fixed-effects Model)

Model Basics:	Input Probability: 0.851		Intercept: 1.745	
Model Fi :	Deviance: 743.121		R^2 = 0.312	
Factors	Log-odds	Respondents	Proportion	Factor Weight
Ethnic Homophily (p=4.17e-09)				
Homophilous	0.741	242	0.657	0.677

Heterophilous	-0.360	20	0.300	0.411
Mixed Ethnic	-0.381	348	0.333	0.406
Ethnic Orientation (p=2.02e-05)				
High	0.555	508	0.514	0.635
Low	-0.555	102	0.196	0.365
Age (p=0.0171)				
Seventies	11.524	2	1.000	>.999
Sixties	-0.963	6	0.833	0.276
Fifties	-1.362	27	0.741	0.204
Forties	-1.656	45	0.667	0.160
Twenties	-2.476	362	0.439	0.0776
Teens	-2.532	44	0.364	0.0736
Thirties	-2.535	124	0.395	0.0734

5.4.7 Adjectives

Variation analyses of adjectives revealed interesting patterns across ethnic categorization. Across all the eight adjectives under investigation, three essential sociolinguistic patterns emerge:

a. Adjectives which pattern significantly with ethnic strength categorization.
b. Lexical forms which are highly influenced by Arabic lexical borrowing.
c. Lexical forms which are more resistant to the impact of Arabic.

The first pattern is well-attested for the adjectives smart and tall, as shown in figures 5.20 and 5.21 below. To begin, the Berber variant *miḡis* is marginalized and is used with low frequencies in the research data. It is remarkably disfavored by most research participants to the point that, it is assumed, it is on the threshold of lexical obsolescence.

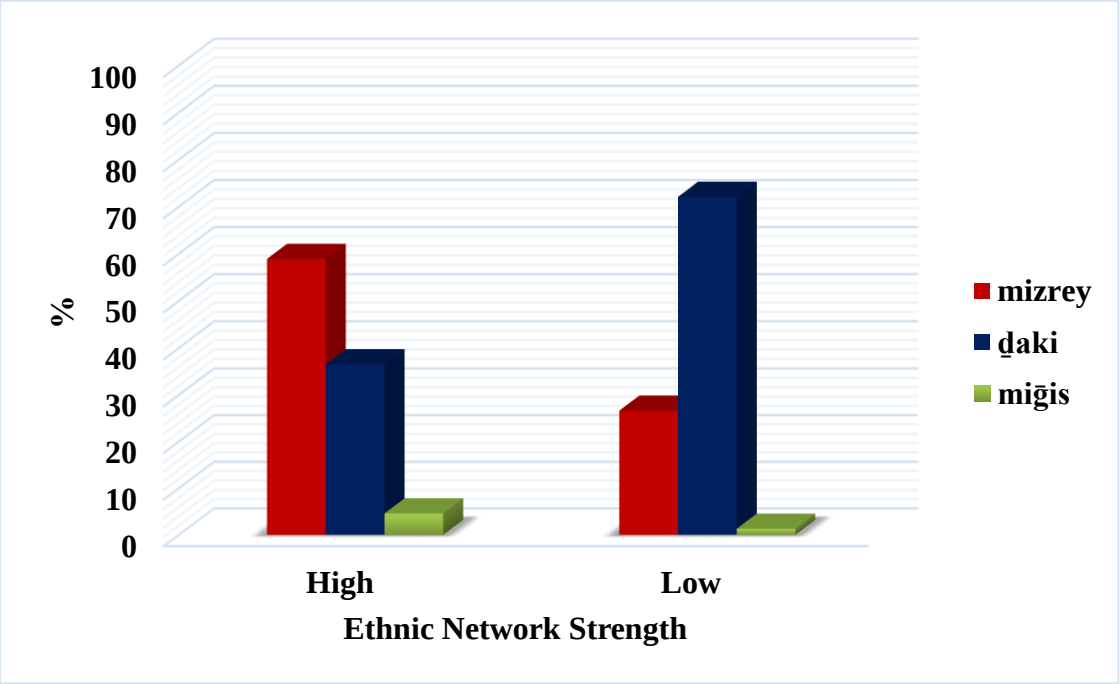

Figure 5.20 Overall distribution of *mizrey*, *miḡis* and *ḏaki* by ethnic network strength.

The distribution of the Berber term *mizrey* [mɪzrei] is diametrically opposed to the loanword *ḏaki* [ḏeki], with the former being strongly associated with high ethnic strength scores, and the latter being strongly associated with low ethnic strength scores. The fact is that *ḏaki* is highly used by respondents whose Chaoui ties are weak indicates that Arabic impact is at an advanced stage. The archaic Berber alternative *miḡis* [mɪɣi:s] is a marginal lexical choice in the whole research sample. The distribution of *yezirəth* [jəzi:rərθ] is not nearly as differentiated as that of *mizrey*. It is a major preference for respondents whose Chaoui ties are strong, whereas *yetwəl* is, comparatively, a major choice for those whose Chaoui ties are weak. That said, these findings further echo the high interplay of Chaoui ties strength and lexical variation, which is indicative of dialect change in Chaouia.

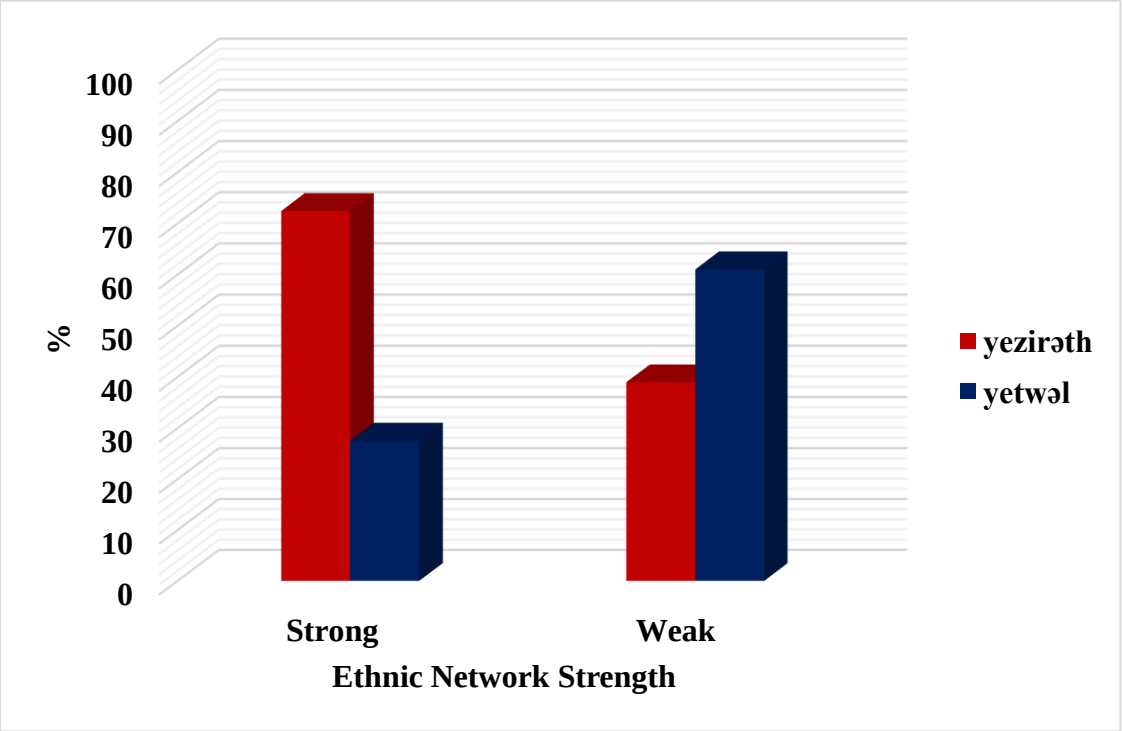

Figure 5.21 Overall distribution of *yezirəth* and *yetwəl* by ethnic network strength

The expected and well-attested pattern is for the words *mizrey* [mɪzrei] and *yezirəth* [jəziːrərθ] to co-vary significantly with ethnic network density. Step-up regression model sets the task to examine all possible one-way analyses for both Berber application values.

Table 20

Stepwise Logistic Regression Analysis of mizrey Social Distribution in Batna Speech Community (Fixed-effects Model)

Model Basics:	Input Probability: 0.859		Intercept: 1.809	
Model Fit:	Deviance: 1295.006		R^2 = 0.189	
Factors	Log-odds	Respondents	Proportion	Factor Weight
Age (p=4.42e-04)				
Seventies	11.038	2	1.000	>.999
Fifties	-1.052	36	0.806	0.259
Forties	-1.214	65	0.754	0.229
Sixties	-1.835	6	0.667	0.138
Twenties	-2.194	607	0.522	0.10

Thirties	-2.276	207	0.512	0.0931
Teens	-2.467	80	0.425	0.0782
Ethnic Orientation (p=6.31e-03)				
High	0.365	816	0.597	0.59
Low	-0.365	187	0.289	0.410
Ethnic Strength (p=0.0174)				
Strong	0.354	849	0.589	0.588
Weak	-0.354	154	0.266	0.412

As evidenced in Table 20, of all the seven potential predictors, age, ethnic orientation and ethnic strength display a strong association with *mizrey* [mɪzrei] distribution. The step-up analysis yielded no significant interaction effects on *mizrey*, however. As it was expected, while *mizrey* is favored by the oldest age cohort, it is, however, disfavored by other age cohorts. The extremely low centered factor weights among young generations is suggestive of high and progressive impact of Arabic on Chaoui dialect norms. Similarly, step-up results corroborated the results charted in figure 5.20 in that *mizrey* is favorably used by respondents with high ethnic strength scores and is disfavored by those with low ethnic scores. It is, equally, preferred by respondents who have positive evaluative norms towards Berber culture than those who have negatively evaluative norms.

Table 21

Stepwise Logistic Regression Analysis of yezirəth Social Distribution in Batna Speech Community (Fixed-effects Model)

Model Basics:	Input Probability: 0.988	Intercept: 4.417	Difference: 12
Model Fit:	Deviance: 1102.810	R^2 = 0.437	
Factors	Log-odds	Respondents	Proportion	Factor Weight
Ethnic Orientation (p=2.55e-11)				
High	0.609	816	0.741	0.648
Low	-0.609	187	0.374	0.352
Gender (p=2.80e-07)				

Male	0.386	608	0.748	0.595
Female	-0.386	395	0.557	0.405
Regionality (p=9.65e-06)				
Rural	0.333	504	0.752	0.582
Urban	-0.333	499	0.593	0.418
Ethnic Homophily (p=6.88e-03)				
Homophilous	0.355	567	0.743	0.588
Mixed Ethnic	-0.097	387	0.605	0.476
Heterophilous	-0.258	49	0.408	0.436
Age (p=9.25e-03)				
Sixties	10.253	6	1.000	>.999
Seventies	10.185	2	1.000	>.999
Forties	-3.641	65	0.785	0.0256
Fifties	-3.677	36	0.833	0.0247
Thirties	-4.012	207	0.729	0.0178
Twenties	-4.303	607	0.651	0.0133
Teens	-4.805	80	0.500	0.00812

Table 21, also, displays an orderly age-correlated pattern for the distribution of *yezirəth* [jəziːrərθ]. It is more favored by older age groups, aged from 60 to 79, and is disfavored by speakers aged from 17 to 59 years old. Respondents with high EO scores favor the use of *yezirəth*, whereas those with low EO scores disfavored it. The application value is, also, highly favored by males and rural speakers, and is less adopted by female and urban counterparts. That said, the great log-odds differences across gender are in line with several oft-cited research studies on gender-based speech change (Labov, 1966; Johnson, 1994, 1996), whereby linguistic innovation and the use of positively evaluated forms is associated with women, and linguistic conservatism is associated with men and stances of *toughness* and *masculinity*. In stark contrast to respondents with mixed and ethnically heterophilous ties, respondents whose ties are mostly of Chaoui roots, homophilous, tend to use *yezirəth*

[jəziːrərθ] at higher rates. This result is quite intriguing because it stresses the major role of homophilous sub-groups in preserving native Chaoui norms.

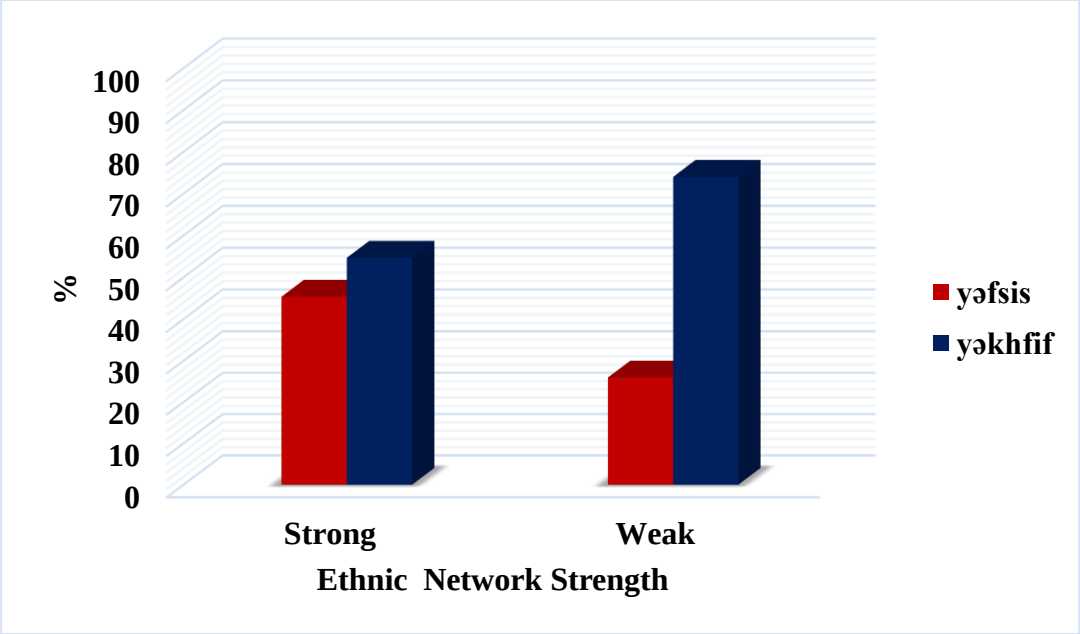

Figure 5.22 Overall distribution of *yəfsis* and *yəkhfif* by ethnic network strength

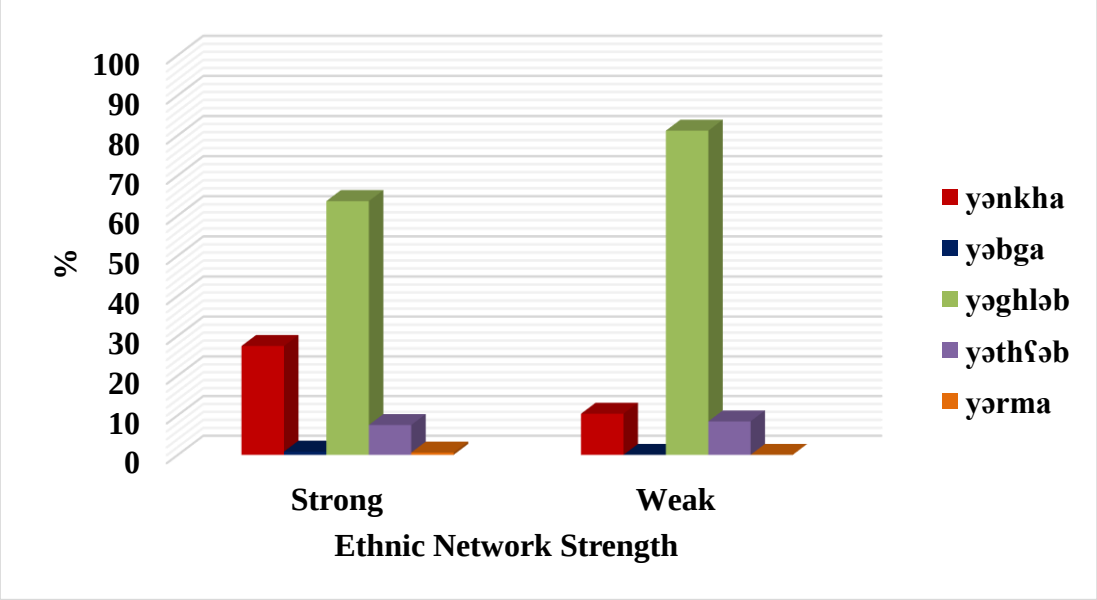

Figure 5.23 Overall distribution of *yəbga, yərma, yənkha, yethʕəb* and *yəthʕəb* by ethnic network strength.

The second category is well attested for the adjectives light and tired, whereby Chaoui variants are gradually disappearing from daily speech. As evidenced in figure 5.22, the percentage of respondents who prefer *yəkhfif* [jəxfɪf] exceeds the percentage of respondents who prefer the Berber *yəfsi* [jəfsi:s], a pattern suggestive of lexical erosion in Chaoui speaking areas in Batna. The impact of Arabic lexical borrowing is even more, quantitatively, higher in the case of the adjective tired. Across both ethnic strength categories, the Berber archaic variants *yəbga* and *yərma*, along with the Arabic loan *yəthʕəb* [jəθʕəb], are completely disfavored in the research sample. They are virtually unknown to most respondents, but elders. Furthermore, no sub-group used *yəbga*, *yərma* and *yəthʕəb* more than 10 percent. Thus, chances are that these lexical forms will completely go out of use and disappear in the next few years. While the Berber term *yənkha* [jənxʌ] makes a fair showing in speech, it is still a minor choice compared to the Arabic loan *yəghləb*. The latter, conversely, made its way to Chaoui dialect and gained a strong foothold as the only dominant lexical choice, not only among respondents with high ENS scores but also among respondents with low ENS scores

Table 22

Stepwise Logistic Regression Analysis of yəfsis Social Distribution in Batna Speech Community (Fixed-effects Model)

Model Basics:	Input Probability: 0.861	Intercept: 1.825		Difference: 8
Model Fit	Deviance: -656.72	R^2 = 0.157		
Factors	Log-odds	Respondents	Proportion	Factor Weight
Ethnic Orientation (p=.33e-06)				
High	0.410	816	0.462	0.601
Low	-0.41	187	0.257	0.399
Age (p=0.000215)				
Seventies	11.331	2	1.000	> 0.999
Sixties	-0.625	6	0.833	0.349
Fifties	1.253	36	0.722	0.222

Forties	-1.802	65	0.585	0.142
Thirties	-2.449	207	0.415	0.080
Twenties	-2.503	607	0.397	0.076
Teens	-2.698	80	0.338	0.063

Of all the possible predictors, only ethnic engagement and age appear to be the, statistically, significant correlates of the variant *yəfsis* [jəfsi:s] distribution. The centered factor weights of the oldest generations seem to be higher than those of young generations, reflecting, as it is true with *yezirəth* [jəziːrərθ], an ongoing lexical change. By the same token, the centered factor weights of respondents with high EO indexes and respondents with low EO indexes are diametrically dissimilar, a pattern that mirrors a strong interplay between extensive use of Chaoui forms and attachment to Berber identity.

Table 23 includes all the possible one-way analyses in the model fit. Ethnic strength appears to be the strongest social correlate of the adjective *yənkha* [jənxʌ]. Albeit low in frequency, *yənkha* is still relatively more adopted by those who scored high in the ethnic strength scale than those who scored low in the same scale. Interesting findings, however, emerge in the case of age and gender social predictors.

Table 23

Stepwise Logistic Regression Analysis of yənkha Social Distribution in Batna Speech Community (Fixed-effects Model)

Model Basics:	Input Probability: 0.273	Intercept: -0.98	Difference: 10
Model Fit	Deviance: 1058.485	R^2 = 0.101	
Factors	Log-odds	Respondents	Proportion	Factor Weight
Ethnic Strength (p=2.95e-05)				
Strong	0.530	837	0.278	0.629
Weak	-0.53	154	0.104	0.371
Age (p=1.46e-04)				

Fifties	0.7820	35	0.543	0.686
Sixties	0.5120	6	0.500	0.625
Seventies	0.4500	2	0.500	0.611
Forties	0.0803	64	0.359	0.52
Thirties	-0.2760	202	0.277	0.431
Twenties	-0.7253	603	0.219	0.326
Teens	-0.8230	79	0.190	0.305
Regionality (p=4.70e-03)				
Rural	0.218	499	0.291	0.554
Urban	-0.218	492	0.211	0.446
Gender (p=0.0191)				
Male	0.185	394	0.272	0.546
Female	-0.185	597	0.238	0.454

The predicted and, quite remarkably, *not* well-attested pattern is for the adjective *yənkha* [jənxʌ] to increase in the speech of oldest age groups and male respondents. Interestingly enough, notwithstanding its association with adults and elders, *yənkha* is more favored by respondents in their fifties than those in their sixties and seventies. The distribution of *yənkha*, however, does not hold for gender variable. Indeed, contrary to what was expected, *yənkha* is relatively more favorably adopted by females than by their male counterparts. As for regionality, the adjective *yənkha* is more associated with rural areas than with urban areas. Contrary to rural settings, which are mostly inhabited by the majority of Chaoui speakers, urban areas are biethnic, and thus serve as focal points of lexical change and diffusion. Figures 5.24, 5.25 and 5.26 chart the ethnic strength categorization of the lexical variables heavy and bitter, cold and thin, respectively:

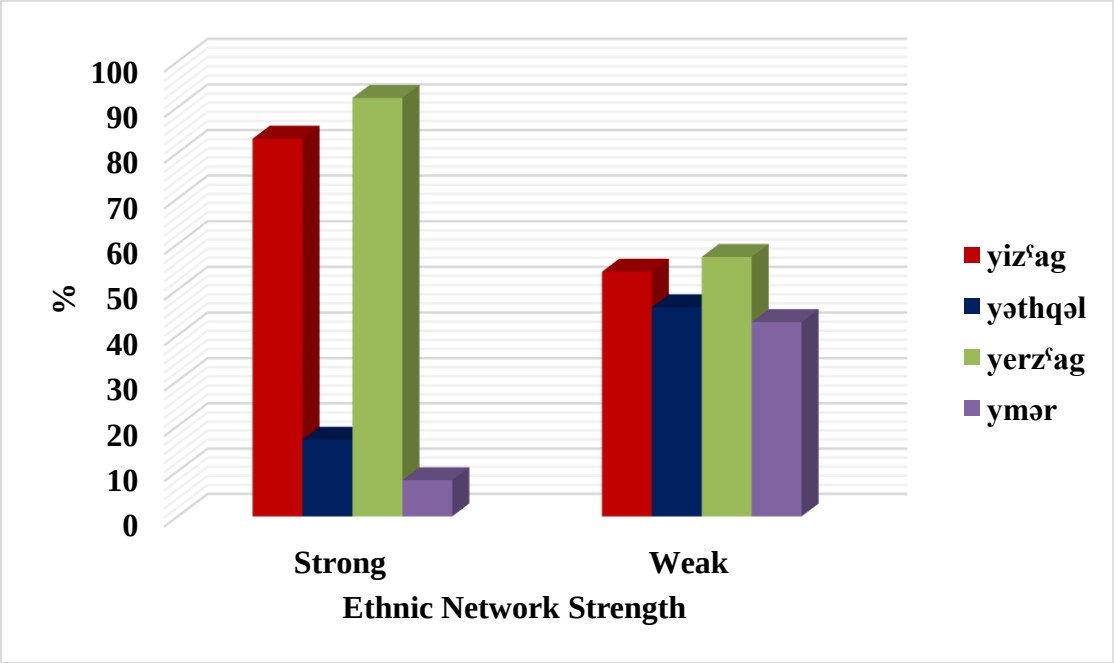

Figure 5.24 Overall distribution of *yizʿag* vs. *yəthqəl, yərzʿag* vs. *ymər* by ethnic network strength.

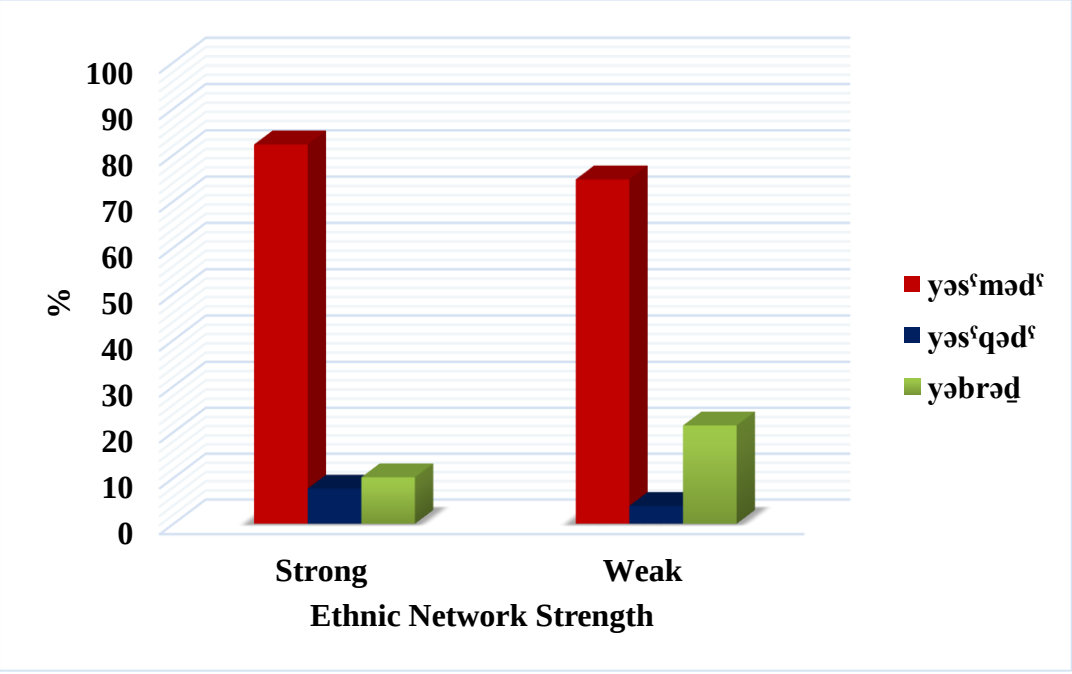

Figure 5.25 Overall distribution of *yəsʿmədʿ, yəsʿqədʿ* and *yəbrəḏ* by ethnic network strength

As for respondents with low ENS scores, the Berber variants *yizˤag* [yɪzˤɑːg], *yərzag*, *yəsˤmədˤ* [jəsˤmədˤ] and *yzəd* [jzəd] are, to some extent, more frequent in speech than their competing equivalents: *yethqəl, ymər*, *yəbrəḏ* [jəbrəḏ] and *arqiq*. Berber variants are without dispute more dominant choices among respondents with high ENS scores than respondents with low ENS scores. Thus, the relatively low rates of Arabic loans in both categories mirror the low Arabic influence on Chaoui adjectives. It is, also, a strong evidence that theses four Chaoui variants are, to a great extent, less amenable to the impact of lexical borrowing and, by extension, lexical obsolescence. In stark contrast with the second category, chances are that *yizˤag* [yɪzˤɑːg], *yerzag* [jər ẓaːg], *yəsˤmədˤ* [jəsˤmədˤ] and *yzəd* might possibly sustain their currency in most Chaoui speaking regions.

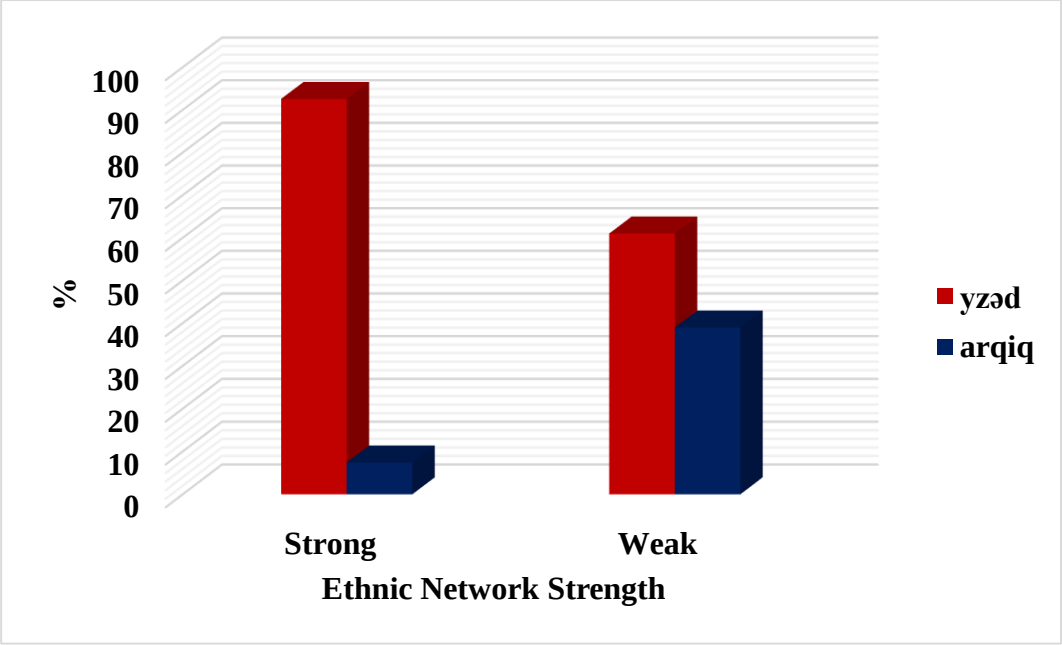

Figure 5.26. Overall distribution of *yzəd* and *arqiq* by ethnic network strength.

Tables 24 and 25 foreground the logistic regression analyses of the adjectives *yərzˤag* and *yəsˤmədˤ*, respectively. In essence, it appears that *yerzag* [jərẓaːg] is more favored by

respondents who: 1) Scored high EO indexes, 2) Inhabit in rural regions and isolated settings and 3) Scored high ENS indexes.

Table 24

Stepwise Logistic Regression Analysis of yərzʿag Social Distribution in Batna Speech Community (Fixed-effects Model)

Model Basics:	Input Probability: 0.815		Intercept:1.484	Difference: 4
Model Fit:	Deviance: 646.173		R^2 = 0.23	
Factors	Log-odds	Respondents	Proportion	Factor Weight
Ethnic Orientation (p=4.02e-06)				
High	0.771	816	0.930	0.684
Low	-0.771	187	0.588	0.316
Regionality (p=1.57e-04)				
Rural	0.403	504	0.925	0.599
Urban	-0.403	499	0.808	0.401
Ethnic Strength (p=0.0165)				
Strong	0.392	849	0.920	0.597
Weak	-0.392	154	0.571	0.403

As for interaction effects, Rbrul model presents one combination: The use of *yerzag* [jər ẓa:g] is favored by rural respondents who scored high indexes in ethnic orientation scale (Log-odds= 0.271). These results, again, vindicate the fact that rurality, along with strong affinity towards Tamazight culture and identity, are strong correlates of linguistic stability in Chaoui dialectal forms.

Table 25

Stepwise Logistic Regression Analysis of yəsˁmədˁ Social Distribution in Batna Speech Community (Fixed-effects Model)

Model Basics:	Input Probability: 0.778	Intercept: 1.484	Difference: 5
Model Fit:	Deviance: 935.321	R^2 = 0.0686	
Factors	Log-odds	Respondents	Proportion	Factor Weight
Gender (p=1.47e-06)				
Male	0.395	608	0.860	0.597
Female	-0.395	395	0.734	0.403
Regionality (p=9.17e-03)				
Rural	0.217	504	0.843	0.554
Urban	-0.217	499	0.778	0.446
Ethnic Homophily (p=0.0349)				
Mixed Ethnic	0.373	387	0.837	0.592
Homophilous	0.120	567	0.806	0.530
Heterophilous	-0.493	49	0.653	0.379

Three external factors; namely: gender, regionality and ethnic homophily, co-vary significantly with *yəsˁmədˁ* [jəsˁmədˁ] distribution, as displayed in table 25. The regression analyses yielded no significant interaction effects in the model fit. It appears that the highest centered factor weights are associated with a) males, b) rural respondents and c) respondents whose friendship networks are either ethnically mixed or mostly dominated by Chaoui peers.

Table 26

Multiple Logistic Regression Analysis of yizˁag Social Distribution in Batna Speech Community (Fixed-effects Model)

Model Basics:	Input Probability: 0.723	Intercept: 0.960	Difference: 3
Model Fit:	Deviance: 945.667	R^2 = 0.134	
Factors	Log-odds	Respondents	Proportion	Factor Weight
Ethnic Orientation (p=9.84e-17)				
High	0.750	816	0.846	0.679
Low	-0.75	187	0.524	0.321

Regionality (p=8.87e-05)				
Rural	0.325	504	0.853	0.581
Urban	-0.325	499	0.717	0.419

Step-up model fit of the adjective *yizʿag* [yɪzˤɑːg] displays a nearly mirror image of *yerzag* [jər ẓa:g] distribution. Rural respondents and respondents with high EO scores tend to use the application value much extensively. Urban respondents and respondents with low EO means displayed relatively low centered factor weights, and thus disfavoring the use of the application value.

Table 27

Stepwise Logistic Regression Analysis of yzəd Social Distribution in Batna Speech Community (Fixed-effects Model)

Model Basics:	Input Probability: 0.996		Intercept: 5.493	
Model Fit:	Deviance: 613.940		R^2 = 0.421	
Factors	Log-odds	Respondents	Proportion	Factor Weight
Ethnic Orientation (p=4.31e-06)				
High	0.773	816	0.936	0.684
Low	-0.773	187	0.620	0.316
Regionality (p=0.0284)				
Rural	0.241	504	0.915	0.560
Urban	-0.241	499	0.840	0.440
Age (p=0.0323)				
Seventies	8.990	2	1.000	>.999
Sixties	8.990	6	1.000	>.999
Fifties	-2.799	36	0.972	0.0574
Forties	-2.891	65	0.954	0.0526
Thirties	-3.634	207	0.903	0.0257
Twenties	-3.990	607	0.870	0.0182
Teens	-4.666	80	0.750	0.00932
Ethnic Strength (p=0.0453)				
Strong	0.330	849	0.926	0.582

Weak	-0.33	154	0.610	0.418

As elucidated in table 27, the centered factor weights of *yzəd* [jzəd] are, to some extent, higher among rural informants and those with high EO scores than other sub-categories. Similar patterns, also, hold for ethnic network strength, whereby *yzəd* [jzəd], albeit low in proportions, seems to be favorably adopted by respondents with dense Chaoui contacts. Finally, the distribution of the application value *yzəd* across age draws a perfect Apparent Time picture, with the oldest age cohorts in their 70s and 60s, being highly correlated with *yzəd* use than adults and younger age cohorts. Such prototypical age-based differentiation, it is assumed, mirrors a progressive lexical replacement pattern, wherein *yzəd* is gradually ousted from speech in favor of the Arabic loan *arqiq*.

5.3.8 Animals and Insects

This section foregrounds five animals (and insects) related terms; namely: *partridge, pigeon, ant, ram* and *fish*. Some animal types are commonly found in all geographical areas. For instance, the ram makes part of livestock animals and, by extension, rural and peasantry lifestyle in almost all communities all over the world. Other animal categories, in contrast, are only found in few geographical areas-e.g., deer, fish...etc. Thus, because shared concepts, objects and natural phenomena are more resistant to lexical borrowing (Swadesh, 1971), one might assume that the Chaoui terms of fish and partridge are more amenable to borrowing than the Chaoui terms of pigeon, ant and ram.

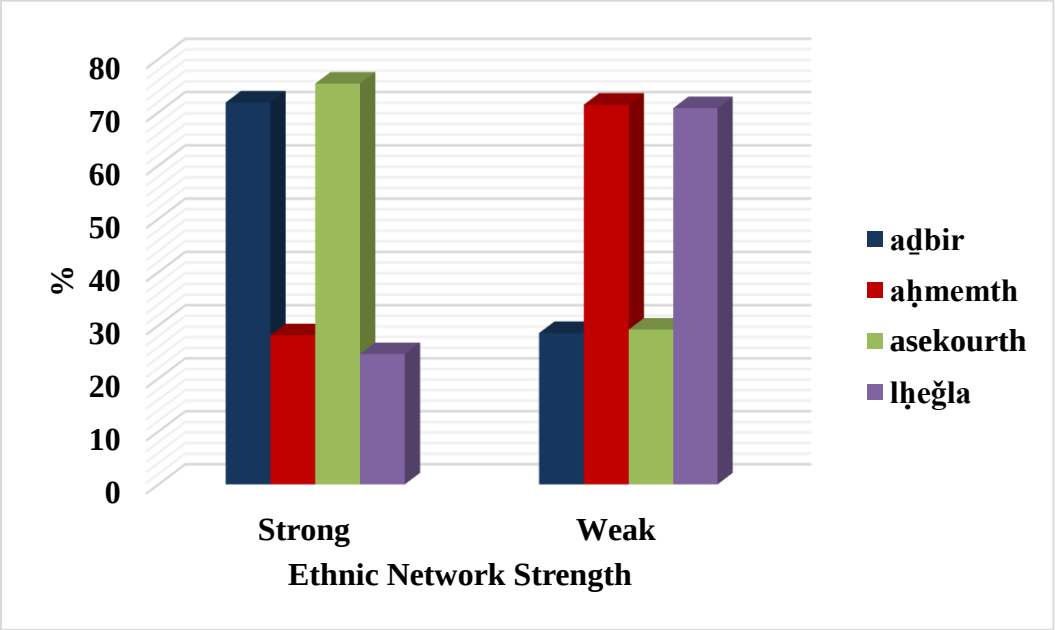

Figure 5.27 Overall distribution of *aḏbir*, *aḥmemth*, *asekourth* and *lḥeğla* by ethnic network strength.

Contrary to what was expected, all five examined terms are more amenable to Arabic influence. Figure 5.27 elucidates graphically the strong ethnic conditioning of the lexical variables under study. As for the strongly Chaoui categories, the percentage of respondents who use the Chaoui variants *aḏbir* [eḏbi:r] and *asekourth* [esəku:rθ] exceeds, quite remarkably, those who use the Arabic loanword *aḥmemth* [ʌḥʌmʌmθ] and *lḥeğla* [lḥəʒlʌ], respectively. Also, the percentage of Arabic loans appear to be substantially higher in the speech of respondents with low ENS, a pattern indicative of the high impact of Arabic on Chaouia.

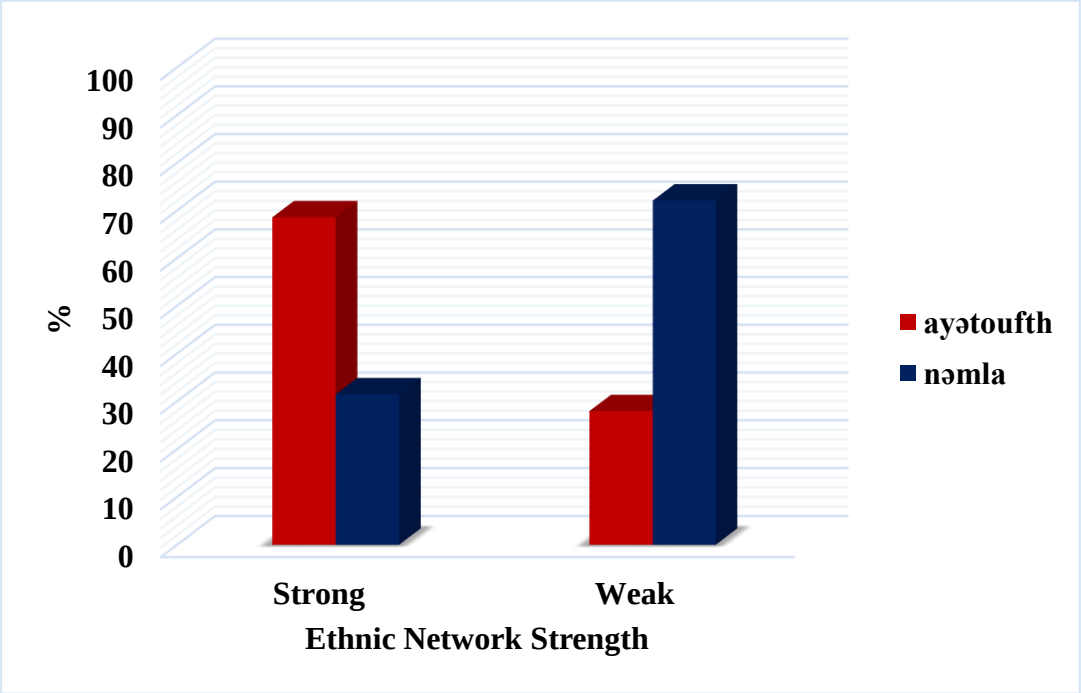

Figure 5.28 Overall distribution of *ayətoufth* and *nəmla* by ethnic network strength.

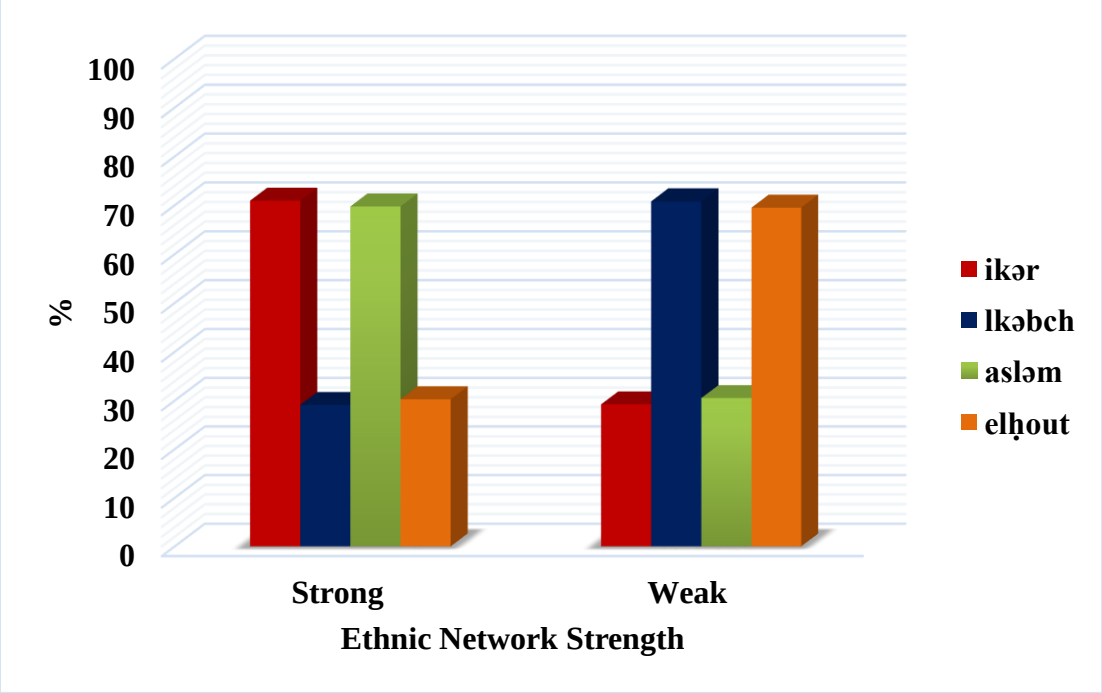

Figure 5.29 Overall distribution of *ikər, lkəbch, asləm* and *elḥout* by ethnic network strength.

The distributions of the variables *ant*, ram and fish showed strong association with ethnic strength categorization. The Chaoui terms *ayətoufth*, *ikər* and *asləm* [esləm] are strongly favored by respondents with dense Chaoui contacts, whilst their Arabic counterparts, *nəmla* [nəmlʌ], *lkəbch* [kəbʃ] and *elḥout* [əlḥu:t], are extensive in the speech of respondents with weak, loose Chaoui ties.

The regression analysis shown in table 28 indicates the strong correlation between the use of *aḏbir* [eḏbi:r] and four socioregional predictors: ethnic orientation, ethnic strength, gender and regionality. While ethnic orientation is the most, statistically, significant variable in the model fit, regionality is the least significant variable. Ethnic orientation and ethnic strength display relatively similar patterns: the use of the application value *aḏbir* is substantially favored by respondents who have positive attitudes towards Berber identity and those whose Chaoui ties are dense. Factor weights (and Log-Odds) of respondents with low scores in both variables (EO and ENS) are relatively low, indicating a pattern of lexical change in Chaouia.

Table 28

Stepwise Logistic Regression Analysis of aḏbir Social Distribution in Batna Speech Community (Fixed-effects Model)

Model Basics:	Input Probability: 0.515		Intercept: 0.0617	
Model Fit:	Deviance: 1154.261		R^2 = 0.169	
Factors	Log-odds	Respondents	Proportion	Factor Weight
Ethnic Orientation (p=1.84e-04)				
High	0.503	816	0.729	0.623
Low	-0.503	187	0.316	0.377
Ethnic strength (p=2.32e-03)				
Strong	0.449	849	0.718	0.610
Weak	-0.449	154	0.286	0.390
Gender (p=2.58e-03)				

Male	0.219	608	0.701	0.555
Female	-0.219	395	0.577	0.445
Regionality (p=4.53e-03)				
Rural	0.207	504	0.714	0.552
Urban	-0.207	499	0.589	0.488

The aforementioned findings are borne out by analyses of interaction effects in the step-up regression model. Factor weights of *aḏbir* [eḏbi:r] use are comparatively higher among respondents who scored high in EO and ENS indexes than other sub-categories (Log-odds= 0.355). Because 0.50 is a threshold at which variants are favored/disfavored, *aḏbir* is disfavored by High: weak (Log-odds= -0.355) and low: strong categories (Log-odds= -0.355). Male respondents exceed their female counterparts in the use of the application value *aḏbir*. This, once again, is consistent with Chambers and Trudgill's (2004) view that men are more, linguistically, conservative than women who are more prone to adopt symbolically, innovative and prestigious forms. By the same token, rural respondents exceed their urban counterparts in the use of *aḏbir*. Cross-regionally, the word *aḏbir* propagates in several rural areas in the east: Arris T'Kout and Tighanimine. The sociolinguistic situation in Batna and other outlying areas is variable, with both forms *aḏbir* and *aḥmemth* [ʌḥʌmʌmθ] making fair showing in speech. This corroborates the view that urban areas are characteristically focal points of lexical innovation and transmission, as opposed to the monoethnically, rural areas which are sociolinguistically conservative.

Table 29

Stepwise Logistic Regression Analysis of ayətoufth Social Distribution in Batna Speech Community (Fixed-effects Model)

Model Basics:	Input Probability: 0.857	Intercept: 1.793	Difference: 13
Model Fit:	Deviance: -532.427	R^2 = 0.374	

Factors	Log-odds	Respondents	Proportion	Factor Weight
Regionality (p=1.19e-17)				
Rural	0.65	504	0.758	0.657
Urban	-0.65	499	0.487	0.343
Ethnic Homophily (p=1.57e-15)				
Mixed	0.963	387	0.724	0.724
Homophilous	-0.368	567	0.587	0.409
Heterophilous	-0.594	49	0.245	0.356
Ethnic Orientation (p=0.000551)				
High	0.502	816	0.700	0.623
Low	-0.502	187	0.289	0.377
Ethnic Strength (p=0.00108)				
Strong	0.550	849	0.686	0.630
Weak	-0.55	154	0.279	0.366
Age (p=0.00112)				
Seventies	11.132	2	1.000	> 0.999
Fifties	-1.076	36	0.833	0.254
Sixties	-1.082	6	0.833	0.253
Forties	-1.890	65	0.615	0.131
Thirties	-1.989	207	0.643	0.120
Twenties	-2.038	607	0.628	0.115
Teens	-3.057	80	0.425	0.045
Gender (p= 0.0128)				
Male	0.194	608	0.668	0.548
Female	-0.194	395	0.554	0.452

Ayetoufth [ʌk̲tɔːfθ] distribution displays a relatively cross-generational pattern. Oldest age cohorts (aged 70s onward) categorically favor the use of the Chaoui word, whereas youngsters' speech shows a considerable amount of Arabic influence, a pattern indicative of ongoing dialect change in Chaouia. *Ayetoufth*, as it was predicted, is also favored by males, rural speakers, respondents with high EO scores and those who contract dense Chaoui ties.

Table 30

Stepwise Logistic Regression Analysis of asləm Social Distribution in Batna Speech Community (Fixed-effects Model)

Model Basics:	Input Probability: 0.734	Intercept: 4.964	Difference: 12
Model Fit	Deviance: 808.73	R^2 = 0.489	
Factors	Log-odds	Respondents	Proportion	Factor Weight
Regionality (p=2.26e-27)				
Rural	0.812	504	0.800	0.693
Urban	-0.812	499	0.473	0.307
Ethnic Strength (p=3.31e-12)				
High	0.693	849	0.697	0.667
Low	-0.693	154	0.305	0.333
Gender (p=1.05e-05)				
Male	0.338	608	0.702	0.584
Female	-0.338	395	0.537	0.416
Age (p=1.06e-05)				
Sixties	10.336	6	1.000	>.999
Seventies	10.327	2	1.000	>.999
Forties	-2.990	36	0.889	0.0479
Fifties	-3.803	65	0.723	0.0218
Thirties	-4.130	207	0.696	0.0158
Twenties	-4.645	607	0.608	0.00952
Teens	-5.095	80	0.488	0.00609

Table 31

Stepwise Logistic Regression Analysis of asekourth Social Distribution in Batna Speech Community (Fixed-effects Model)

Model Basics:	Input Probability: 0.986	Intercept: 4.223	Difference: 12
Model Fit:	Deviance: 1068.546	R^2 = 0.448	
Factors	Log-odds	Respondents	Proportion	Factor Weight
Ethnic strength (p=3.25e-20)				
Strong	0.956	849	0.754	0.722
Weak	-0.956	154	0.292	0.278
Regionality (p=4.43e-10)				
Rural	0.477	504	0.788	0.617

Urban	-0.477	499	0.577	0.383
Gender (p=9.80e-03)				
Male	0.20	608	0.725	0.550
Female	-0.2	395	0.618	0.450
Ethnic Homophily (p=0.0178)				
Mixed	0.3355	387	0.583	0.583
Homophilous	-0.0975	567	0.707	0.476
Heterophilous	-0.2380	49	0.367	0.441
Age (p=0.0332)				
Sixties	10.503	2	1.000	>.999
Seventies	10.357	6	1.000	>.999
Forties	-3.736	36	0.806	0.0233
Fifties	-3.962	207	0.720	0.0187
Thirties	-4.119	607	0.685	0.016
Twenties	-4.236	65	0.646	0.0143
Teens	-4.807	80	0.512	0.00811

The logical regression analyses of the application values *asləm* [esləm] and *asekourth* [esəku:rθ] are displayed in tables 30 and 31, respectively. As for *asləm*, age distribution suggests an apparent-time pattern. To put it otherwise, the centered factor weights of *asləm* use increments as one moves up in age spectrum, indicating that the Chaoui term *asləm* is progressively disappearing from speech. Furthermore, both application values are favorably used by rural respondents, females and strong Chaouia ethnic ties. The variant *asekourth* [esəku:rθ], also, tends to be more associated with mixed ethnic friendship groups and strong Ethnic ties: rural subcategories (Log-odds= 0.257, Factor Weights= 0.564).

As for the variable *ram*, it appears that *iḵər* [i:ḵər] correlates with regionality, gender and ethnic network strength. Centered factor weights of *iḵər* use are higher among rural

respondents than those who inhabit in urban areas. Males use *iḵər* more than their female counterparts who seem to be at the leading edge of lexical change. Across age, *iḵər* is categorically favored by older age groups and almost disfavored by other age groups. The decreasing proportions (from 1.000 to 0.488) mirror a progressive lexical replacement spearheaded by youngsters. Equally, the centered factor weights of the variant *iḵər* [iːk̲ər] are comparatively higher among respondents with strong Chaoui ties than those with weak ethnic ties.

Table 32

Stepwise Logistic Regression Analysis of iḵər Social Distribution in Batna Speech Community (Fixed-effects Model)

Model Basics:	Input Probability: 0.892	Intercept: 2.112		
Model Fit	Deviance: 1076.472	R^2 = 0.33		
Factors	Log-odds	Respondents	Proportion	Factor Weight
Regionality (p=6.98e-19)				
Rural	0.671	504	0.784	0.662
Urban	-0.671	499	0.505	0.338
Gender (p=8.33e-04)				
Male	0.257	608	0.701	0.564
Female	-0.257	395	0.559	0.436
Ethnic Homophily (p=9.16e-04)				
Mixed	0.400	387	0.669	0.599
Homophilous	-0.194	567	0.654	0.452
Heterophilous	-0.206	49	0.347	0.449
Ethnic Orientation (p=1.26e-03)				
High	0.456	816	0.722	0.612
Low	-0.456	187	0.310	0.388

Age (p=1.64e-03)				
Seventies	10.754	2	1.000	>.999
Fifties	-1.054	36	0.861	0.258
Sixties	-1.313	6	0.833	0.212
Forties	-1.450	65	0.738	0.190
Thirties	-1.914	207	0.686	0.129
Twenties	-2.221	607	0.626	0.0979
Teens	-2.802	80	0.488	0.0572
Ethnic Strength (p=3.27e-03)				
Strong	0.474	849	0.709	0.616
Weak	-0.474	154	0.292	0.384

The aforementioned results indicate that Arabic lexical borrowing exerted a high influence on the five terms under investigation. In hindsight, the Chaoui terms *asləm*, *asekourt*, *ayetoufth*, *aḏbir* and *iḵər* seem to be tightly preserved by males, older speakes, rural speakers, speakers with high ethnic engagement and dense Chaoui ties. Conversely, the Arabic loans *elḥout*, *lḥejla*, *nemla*, *aḥmemth* and *lkebch* seem to be variably adopted by females, youngsters, urban inhabitants, speakers with low ethnic engagement and weak, loose Chaoui ties. Because basic vocabulary is more stable and resistant to change (Swadesh, 1971), it stands to reason that Arabic influence is at an advanced stage. Age based lexical differentiations, as indicated by the apparent time pattern in the case of the variables ram, fish and ant and partidge, reflect an ongoing lexical change across time axe.

5.3.9 Human Body

Seven human body exclusive variants display varying pictures of ethnic density patterning. In stark contrast with the ethnic conditioning of *fats* and *arm*, which are relatively resistant to change, *beard*, *forehead*, *brain*, *kidney* and *saliva* are more permeable and amenable to Arabic lexical borrowing. It is worth noting that of all the 1003 respondents, 392

left the items associated with the variables *ḏreʕ* [ḏreʕ], meaning arm, and *elğebhəth* [əlʒəbhəθ], meaning forehead, unanswered in Linguistic Tasks section. Figures 5.30, 5.31 and tables 5.33, 5.36 below account for 611 responses only.

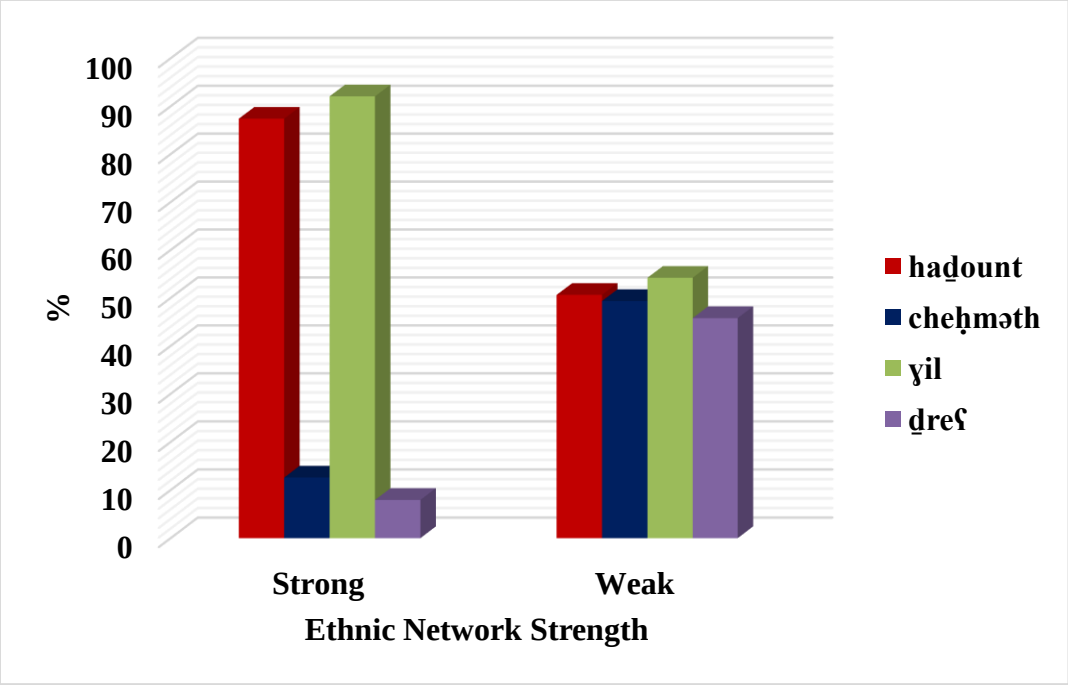

Figure 5.30 Overall distribution of *haḏount vs. cheḥməth*, *ɣil vs. ḏreʕ* by ethnic network strength.

The variants *ɣil* and *haḏount* [hʌḏunt] are respectively adopted by 92.06 % and 87.40 % of respondents who scored high in the ENS scale. Across speakers with low ENS scores, the Chaoui terms *ɣil* and *haḏount* are used with relatively comparable rates (and proportions) alongside with their Arabic alternatives *ḏreʕ* [ḏreʕ] and *cheḥməth* [ʃəḥməθ].Of all the seven Chaoui variants, *ɣil* and *haḏount* gained a strong foothold with the largest number of proportions in the whole research sample. 522 respondents out of 611 opted for *ɣil* and 822 out of 1003 opted for *haḏount*, a clear indication that these two Chaoui words are, to some extent, still preserved in Chaoui speech.

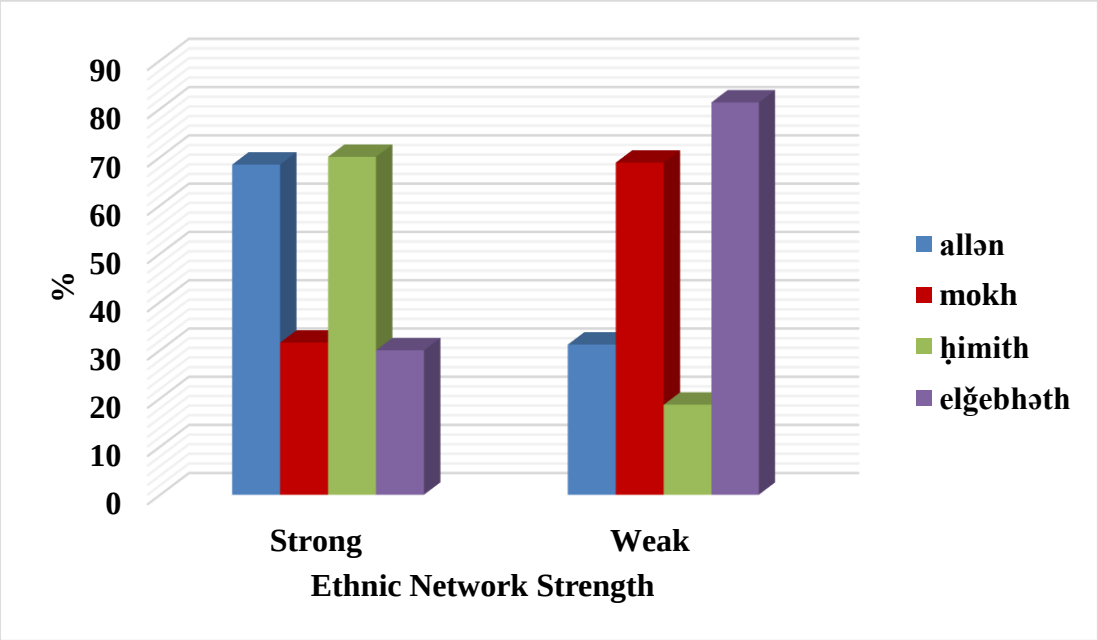

Figure 5.31 Overall distribution of *ḥimith*, *elğebhəth*, *allən* and *mokh* by ethnic network strength.

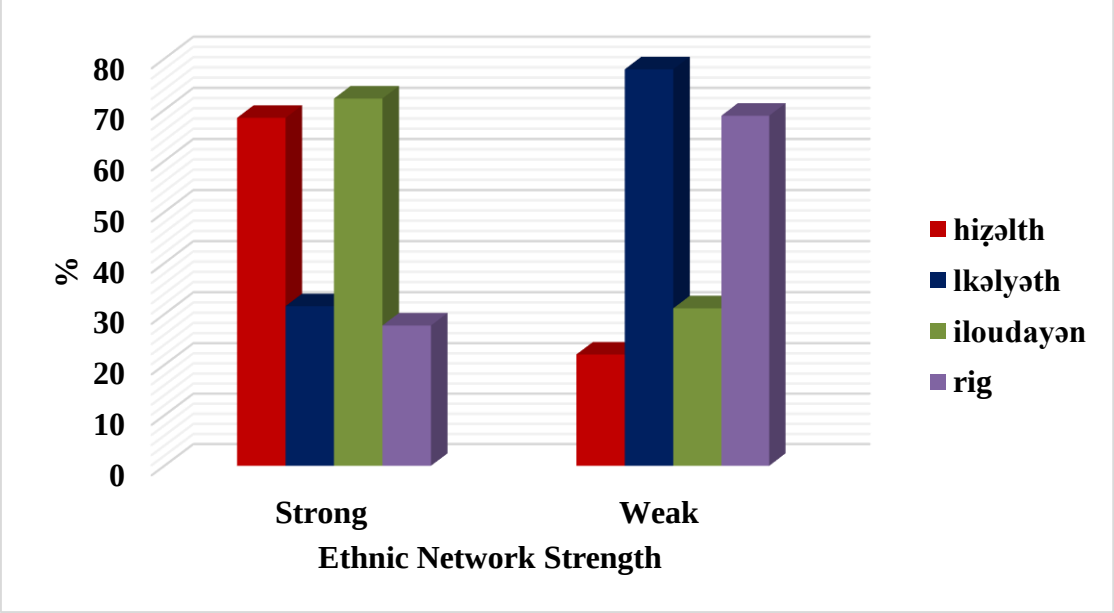

Figure 5.32 Overall distribution of *hiẓəlth*, *lkəlyəth*, *iloudayən* and *rig* by ethnic network strength.

Figures 5.31 and 5.32 above indicate relatively the same socioethnic patterning for the lexical variables *forehead, brain, kidney* and *saliva*. Arabic impact, it is noted, seems to be substantially higher among respondents with weak Chaoui ties. The Berber variants *ḥimith* [ḥımıθ], *allən, hiẓəlth* [hıẓəlθ] and *iloudayən* [ılʊdeyən] are strongly associated with strong, dense Chaoui ties and less associated with weak, loose ties, an indicative pattern of the role of ethnic density and cohesiveness in maintaining native Chaoui words and, by extension, sociolinguistic stability in Chaouia.

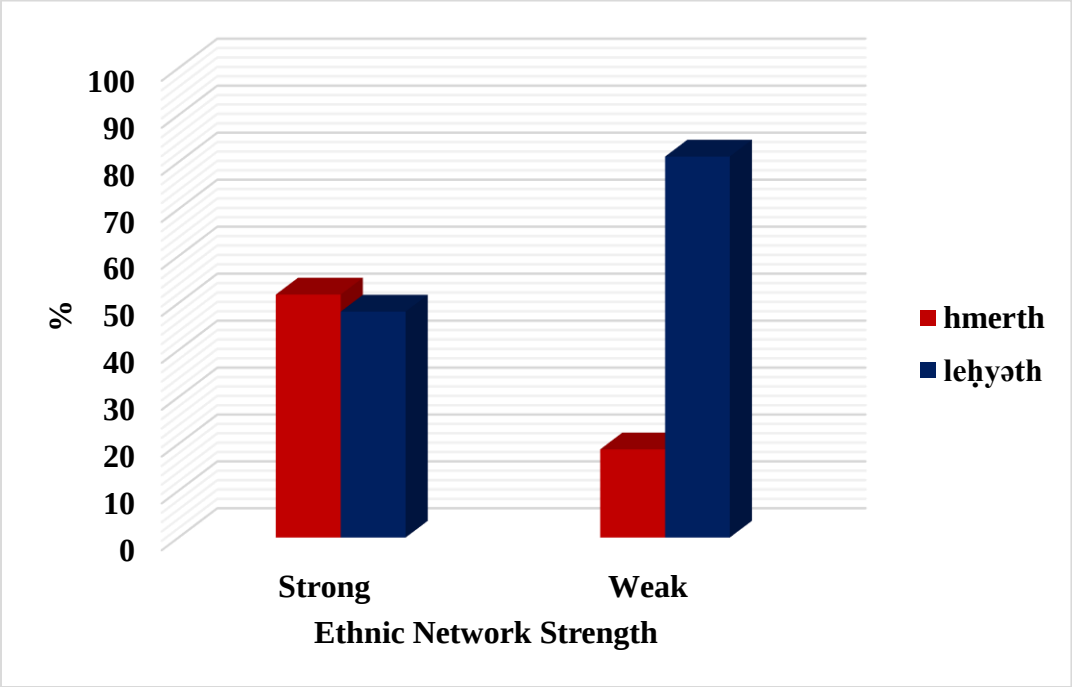

Figure 5.33 Overall distribution of *hmerth* and *leḥyəth* by ethnic network strength

Figure 5.39 elucidates that socioethnic patterning is, however, less prominent for the distribution of the lexical variable *beard*. The Arabic loan *leḥyəth* [leḥjəθ] makes a fair showing alongside with the Chaoui term *hmerth* [hmerθ] among participants with strong Chaoui ties. However, respondents with weak Chaoui ties appear to be more prone to use the loan *leḥyəth*, and thus are more influenced by Arabic lexical borrowing. Contrary to *ɣil* [ɣıl]

and *haḏount* [hʌḏunt] distributions, the great amount of Arabic lexical borrowing entails lexical change in Chaouia, wherein the loan *leḥyəth* tends to progressively replace the Chaoui term *hmerth* and makes its way to many social and regional groups in Batna.

Table 33

Stepwise Logistic Regression Analysis of ɣil Social Distribution in Batna Speech Community (Fixed-effects Model)

Model Basics:	Input Probability: 0.796		Intercept: 1.360	
Model Fit:	Deviance: 423.212		R^2 = 0.202	
Factors	Log-odds	Respondents	Proportion	Factor Weight
Ethnic Strength (p=5.68e-18)				
Strong	1.11	504	0.921	0.752
Weak	-1.11	107	0.542	0.248
Regionality (p=0.0513)				
Rural	0.252	297	0.899	0.563
Urban	-0.252	314	0.819	0.437

Table 33 above indicates that the application value *ɣil* [ɣɪl] co-varies with two social triggers; namely: ethnic density and regionality. As it was expected, strong Chaoui ties favor the Chaoui term *ɣil*, whilst weak ties disfavor it. Also, the application value is, comparatively, more adopted by respondents who live in villages and close-knit regions than respondents who live in urban settings. However, it is worth noting that the centered factor weights of rural and urban respondents are close to the statistical threshold value, that is 0.50, a strong evidence that Arabic lexical borrowing influenced many villages and urban areas, though with varying degrees. It, also, indicates that the use of the loanword *ḏreʕ* [ḏreʕ] diffused, spatially, from multiethnic, urban areas (la ville) into the outlaying rural, monoethnic areas.

Table 34

Stepwise Logistic Regression Analysis of haḍount Social Distribution in Batna Speech Community (Fixed-effects Model)

Model Basics: Input Probability: 0.742 Intercept: 1.055				
Model Fit Deviance: 818.233 R^2 = 0.197				
Factors	Log-odds	Respondents	Proportion	Factor Weight
Regionality (p=3.22e-06)				
Rural	0.426	504	0.891	0.605
Urban	-0.426	499	0.743	0.395
Ethnic Orientation (p=1.21e-03)				
High	0.496	816	0.881	0.622
Low	-0.496	187	0.540	0.378
Ethnic Strength (p=2.08e-03)				
Strong	0.476	849	0.874	0.617
Weak	-0.476	154	0.506	0.383
Gender (p=0.0454)				
Male	0.180	608	0.845	0.545
Female	-0.180	395	0.775	0.455

In stark contrast with *ɣil* [ɣıl] distribution, *haḍount* use patterns with four social determinants. It is favored by rural speakers, high EO scores, strong Chaoui ties and male respondents. Moreover, two-way analysis indicates that the use of *ɣil* is highly associated with speakers with high means in ethnic orientation and ethnic density (p=1.87e-03; High: Strong, Log-odds= 0.504)

Table 35

Stepwise Logistic Regression Analysis of hmerth Social Distribution in Batna Speech Community (Fixed-effects Model)

Model Basics:	Input Probability: 0.36	Intercept: -0.574		
Model Fit	Deviance: 1260.216	R^2 = 0.167		
Factors	Log-odds	Respondents	Proportion	Factor Weight
Age (p=1.73e-10)				
Fifties	1.145	36	0.806	0.759
Forties	0.918	65	0.738	0.715
Thirties	0.165	207	0.570	0.541
Sixties	-0.340	6	0.500	0.416
Seventies	-0.429	2	0.500	0.394
Twenties	-0.503	607	0.409	0.377
Teens	-0.956	80	0.275	0.278
Ethnic Strength (p=3.07e-09)				
Strong	0.643	849	0.518	0.655
Weak	-0.643	154	0.188	0.345
Ethnic Homophily (p=0.0355)				
Homophilous	0.360	567	0.529	0.589
Mixed	0.091	387	0.411	0.523
Heterophilous	-0.451	49	0.204	0.389

The Chaoui term *hmerth* [hmerθ] co-varies significantly with age, ethnic density and ethnic homophily. As for age, the application value [hmerθ], as evidenced in table 35, does not increment in an orderly fashion across successive generations. Respondents in their 50s, 40s and 30s favor the use of *hmerth* at higher centered factor weights than other age cohorts. That said, adults and middle-aged speakers are at the leading edge of preserving the word *hmerth*, as opposed to elders and youngsters who seem to be less immune to Arabic influence. Like *ɣil* [ɣɪl], *hmerth* [hmerθ] is more favorably adopted by respondents with the highest scores in ENS scale. It is, also, disfavored by respondents whose friendship networks

comprise of only Arab peers. Conversely, respondents, whose friendship networks are mostly Chaoui or ethnically mixed, tend to use *hmerth* at higher centered factor weights.

Table 36

Stepwise Logistic Regression Analysis of ḥimith Social Distribution in Batna Speech Community (Fixed-effects Model)

Model Basics: Input Probability: 0.878		Intercept: 1.974		
Model Fit: Deviance: 691.075		R^2 = 0.355		
Factors	Log-odds	Respondents	Proportion	Factor Weight
Ethnic Strength (p=1.42e-21)				
Strong	1.155	504	0.700	0.760
Weak	-1.155	107	0.187	0.240
Age (p=1.21e-04)				
Seventies	11.437	2	1.000	>.999
Forties	-0.705	45	0.867	0.331
Fifties	-0.882	27	0.889	0.293
Thirties	-2.224	124	0.629	0.0976
Sixties	-2.436	6	0.667	0.0805
Twenties	-2.472	362	0.569	0.0778
Teens	-2.718	45	0.444	0.0619

As for *ḥimith* [ḥɪmɪθ] distribution, the stepwise regression analysis in Table 36 shows that respondents with high ENS means displayed higher centered factor weights than those with low ENS means. As far as age is concerned, while the use of *ḥimith* is maintained by the oldest age groups, it is disfavored by other age cohorts in age spectrum. The centered factor weight of *ḥimith* [ḥɪmɪθ] decreases as one moves down in age line.

Table 37

Stepwise Logistic Regression Analysis of iloudayən Social Distribution in Batna Speech Community (Fixed-effects Model)

Model Basics: Input Probability: 0.989		Intercept: 4.537		
Model Fit: Deviance: 977.765		R^2 = 0.531		
Factors	Log-odds	Respondents	Proportion	Factor Weight
Regionality (p= 8.40e-28)				
Rural	0.875	504	0.821	0.706
Urban	-0.875	499	0.495	0.294
Ethnic Orientation (p=8.58e-26)				
High	1.056	816	0.748	0.742
Low	-1.056	187	0.273	0.258
Ethnic Homophily (p=3.42e-08)				
Mixed	0.5273	387	0.716	0.629
Heterophilous	-0.0473	49	0.388	0.488
Homophilous	-0.4800	567	0.644	0.382
Age (p= 1.19e-04)				
Seventies	10.561	2	1.000	>.999
Sixties	10.327	6	1.000	>.999
Fifties	-3.271	36	0.861	0.0366
Forties	-3.856	65	0.708	0.0207
Thirties	-4.055	207	0.700	0.0170
Twenties	-4.434	607	0.646	0.0117
Teens	-5.272	80	0.488	0.00511
Gender (p=0.0164)				
Male	0.196	608	0.706	0.549
Female	-0.196	395	0.587	0.451

As evidenced in table 37 above, regionality, EO, age, ethnic homophily and gender are the most statistically significant triggers that correlate with the term *iloudayən* [ɪlʊdeyən]. Due to their high P-values, ethnic strength and mobility were excluded from the model fit. Geographically, the application value sustained its currency in rural and isolated regions (factor weight = 0.688). Like *ɣil* and *haḏount* [hʌḏunt], *allən* [elən] is less favored by urban

speakers who seem to be more prone to use the Arabic loan mokh [mɒx] much frequently. Crisscrossed with ethnic homophily, villagers who contract with only Chaoui peers are the most conservative sub-category in the use of the word *iloudayən* (Log-odds= 0.429), followed by urban participants with heterophilous ties (Log-odds= 0.242) and urban participants with ethically mixed friendship networks (Log-odds= 0.187).

Table 38

Stepwise Logistic Regression Analysis of allən Social Distribution in Batna Speech Community (Fixed-effects Model)

Model Basics: Input Probability: 0.991		Intercept: 4.663		
Model Fit: Deviance: 1060.153		R^2 = 0.508		
Factors	Log-odds	Respondents	Proportion	Factor Weight
Regionality (p=1.26e-25)				
Rural	0.792	504	0.786	0.688
Urban	-0.792	499	0.467	0.312
Ethnic Orientation (p=5.25e-16)				
High	0.786	816	0.705	0.687
Low	-0.786	187	0.289	0.313
Age (p=6.16e-08)				
Seventies	10.363	2	1.000	>.999
Sixties	10.212	6	1.000	>.999
Fifties	-2.329	36	0.944	0.0887
Forties	-3.622	65	0.769	0.026
Thirties	-4.488	207	0.647	0.0111
Twenties	-4.779	607	0.601	0.00833
Teens	-5.357	80	0.475	0.00469
Ethnic Homophily (p=1.18e-03)				
Mixed	0.392	387	0.654	0.597
Homophilous	-0.179	567	0.633	0.455
Heterophilous	-0.213	49	0.347	0.447
Gender (p=5.74e-03)				
Male	0.215	608	0.678	0.554
Female	-0.215	395	0.549	0.446

The Chaoui word *allən* [elən] is maintained by older age cohorts, aged 60 years old onward, in the research sample. Yet, centered factor weights drop quite remarkably in other age groups (from 17 years old to 59 years old), reflecting the high frequency of the Arabic loan *mokh* [mɒx] across these cohorts. By the same token, the extremely low centered factor weights across youngsters and middle aged speakers indicate that Arabic impact reached an advanced stage on the one hand, and lexical erosion in Chaouia on the other. Furthermore, it seems that regional backgrounds of respondents crisscross significantly with ethnic homophily (p=1.22e-07).

The expected and well-attested pattern is for villagers, whose friendship networks are characteristically homophilous, to maintain the Chaoui verb *allən* more than other sub-categories (Log-odds=0.563). Indeed, Chaoui speakers, most notably in monoethnic, close-knit regions, contract with peers and friends with whom they have similar ethnic roots. Thus, such monoethnically, cohesive Chaoui networks exert normative pressures on groups' behaviors, both socially and linguistically, such as preserving native lexical features, and *allən* is a case in point. The interaction analysis indicates that the application value is favored, though with less degrees, by two other sub-categories; namely: Urbans with ethnically mixed friendship networks (Log-odds= 0.323) and urbanites whose friends are of Arabic backgrounds (Log-odds= 240)

Table 39

Stepwise Logistic Regression Analysis of hiẓelth Social Distribution in Batna Speech Community (Fixed-effects Model)

Model Basics: Input Probability: 0.983 Intercept: 4.034 Difference: 13				
Model Fit: Deviance: 1024.477 $R^2 = 0.534$				
Factors	Log-odds	Respondents	Proportion	Factor Weight
Regionality (p=3.47e-24)				
Rural	0.786	504	0.772	0.687
Urban	-0.786	499	0.453	0.313
Ethnic Orientation (p=1.95e-09)				
High	0.913	816	0.708	0.714
Low	-0.913	187	0.198	0.286
Ethnic Homophily (p=1.89e-07)				
Mixed	0.591	387	0.664	0.644
Heterophilous	-0.256	49	0.286	0.436
Homophilous	-0.335	567	0.607	0.417
Age (p=2.35e-03)				
Seventies	10.692	2	1.000	>.999
Sixties	10.466	6	1.000	>.999
Fifties	-3.784	36	0.778	0.0222
Forties	-3.851	65	0.677	0.0208
Thirties	-4.068	207	0.667	0.0168
Twenties	-4.508	607	0.590	0.0109
Teens	-4.947	80	0.488	0.00705
Gender (p=3.29e-03)				
Male	0.234	608	0.668	0.558
Female	-0.234	395	0.529	0.442

Furthermore, regression analyses in tables 38 and 39 showed that *iloudayən* [ɪlʊdeyən] and *hiẓelth* [hɪẓəlθ] pattern with the same socioregional factors. Ordered in terms of their statistical significance, regionality, ethnic orientation, age and gender correlate with the two application values (*iloudayən* and *hiẓelth*) in the step-up analysis. Both Chaoui variants are favorably adopted by rural speakers, speakers who are attached to Berber cultural heritage,

older age cohorts and males. It is, equally, worth noting that *allən* [elən]*, iloudayən* and *hiẓelth* do not progressively (or steadily) increment in use across age. Rather, R-brul analysis indicates that centered factor weights of the three application values reached 1.000 among respondents in their sixties and seventies, and from then dropped *abruptly* to less than 0.010 among middle-aged and youngestes. Such abrupt lexical change entails a high Arabic impact on *allən*, *iloudayən* and *hiẓelth*. Equally, it entails an advanced phase of lexical obsolescence, whereby the aforementioned Chaoui terms were already ousted from speech in favor of their Arabic competing equivalents; namely, *mokh, rig and lkeylyeth (*or *lkelweth),* respectively.

5.4.10 Verbs

That verbs are among the most frequently used content words in day-to-day social encounters is crystal clear (Abdulrahim, 2019). To put it otherwise, native speakers of different socioregional roots tend to employ verbs (adverbs and adjectives) more than other semantic fields, such as scientific terminologies and natural phenomena. We assume that verbs, unlike other semantic fields, are less amenable to change and more resistant to the impact of Arabic in Batna speech community. Equally, we predict that the 14 verbs under study are strongly maintained in speech due to their high frequency of occurrence in speech on the one hand, and to their one-to-one strong links with ethnic density on the other. The expected and, unsurprisingly, well-attested pattern is for Chaoui verbs to be influenced by Arabic lexical borrowing, though with varying degrees. A close-grained examination of the 14 verbs reveals four preponderant trajectories of lexical variation and change:

a. Cross-ethnic categorization: Chaoui verbs which are highly associated with one ethnic category, but are used with fairly comparable proportions along with loan words in the other category.

b. Cross-ethnic categorization: Chaoui verbs are associated with high ENS indexes, whereas Arabic verbs are associated with low ENS indexes.

c. Patterns of Language obsolescence: Chaoui verbs which are highly amenable to lexical borrowing, and thus are more prone to lexical obsolescence.

d. Patterns of language maintenance (or stability): Chaoui verbs which are, to a great extent, more resistant to borrowing, and thus are more likely to sustain their currency in speech.

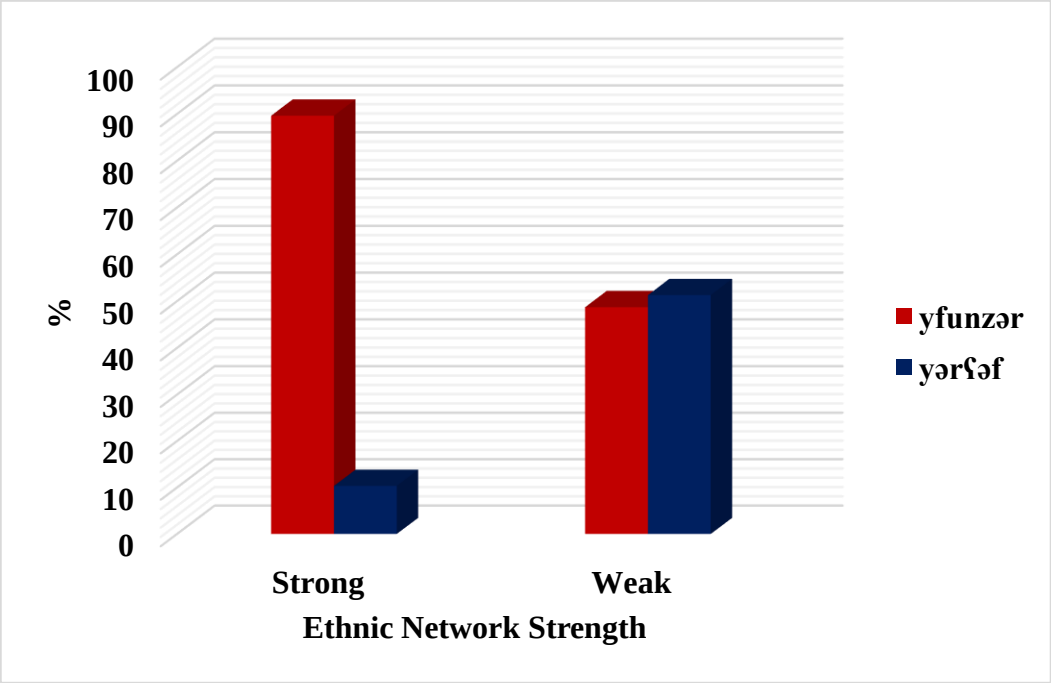

Figure 5.34 Overall distribution of *yfunzər* and *yərʕəf* by ethnic network strength.

Charted graphically in figures 5.34, 5.35 and 5.36, the distribution of the verbs *to nosebleed, to be able* and *to look for* revealed an interesting sociolinguistic pattern: Chaoui verbs are highly adopted by speakers with strong ethnic ties, and used with relatively comparable rates along with their Arabic equivalents among speakers with weak ethnic ties.

Said differently, as for ethnically nested categories, speakers tend to categorically favor the Chaoui verb *yfunzər*. The sociolinguistic profile of weakly nested categories is varietal as both loan and Chaoui words, *yərʕəf* and *yfunzər*, respectively, make nearly fair showings in the data.

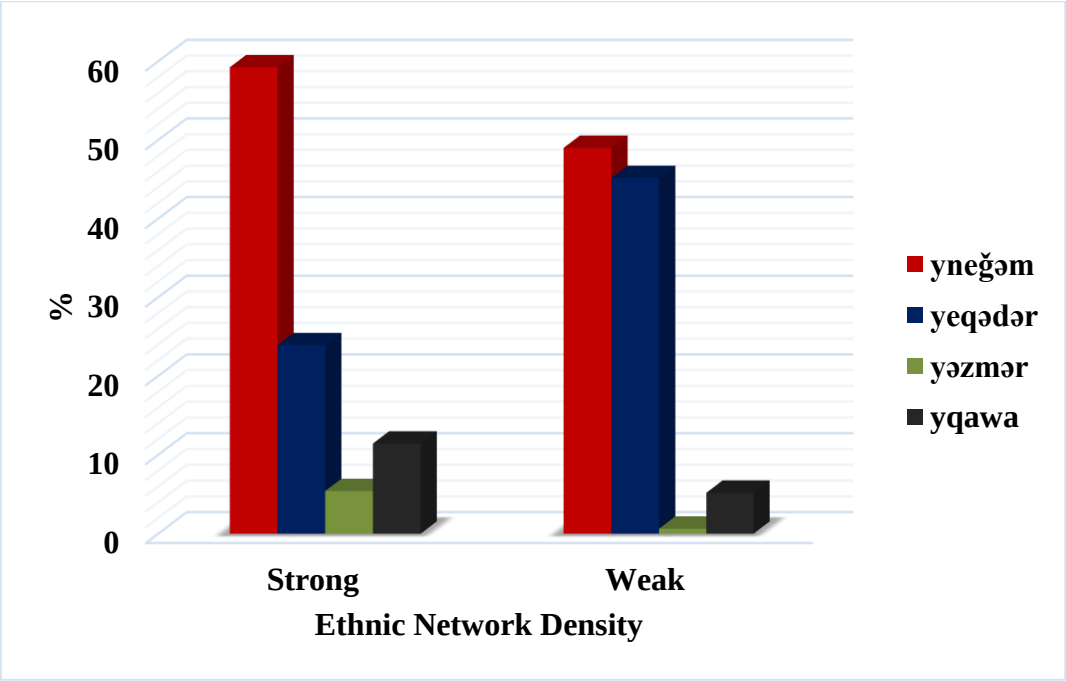

Figure 5.35 Overall distribution of *yneğəm*, *yəzmər*, *yeqədər* and *yqawa* by ethnic network strength.

Of all the four competing variants, *yneğəm* [ynedʒəm] and *yeqədər* [yəqədər] appear to be extensively represented in data. Nevertheless, while the former is a dominant lexical choice among speakers with high ENS, it is a major choice alongside its Arabic competing variant *yeqədər* among speakers whose ethnic network ties are characteristically weak. The verbs *yəzmər* [yəʒmər] and *yqawa* [yqʌwʌ] are the least represented choices in speech, with the former being completely disfvavored by most respondents and the latter being favored by only a few number of respondents in the sample. No ethnic category, weakly or strongly

nested, use the archaic verb *yəzmər* more than 5 %, and thus chances are that it is more likely to disappear from daily speech. Geographically, the use of *yəzmər* is widespread in many areas in Algeria, along with the Berber verb *yneğəm* (Berdoudi, 2017; Haddadou, 2007).

Recently, *yəzmər* has increasingly and pretty continuously been evanesced from speech and substituted by the Berber verb *yneğəm* and loan verb *yeqədər*[yəqədər], which progressively made their ways into dialectal Berber speech norms. Thus, there is a high likelihood that *yəzmər* will eclipse from speech in the next few years, socially and regionally. Albeit marginalized in data, *yqawa* [yqʌwʌ] is, to some extent, more associated with high ENS means than with low ENS means. In stark contrast with the obsolescent verb *yəzmər*, which is on the edge of lexical erosion, *yaqawa* has gradually made its way to some Berber speaking areas in the Aures province. All things being equal, *yqawa* will increment in use, most notably in the eastern parts of Batna, such as Bouzina and Menaa.

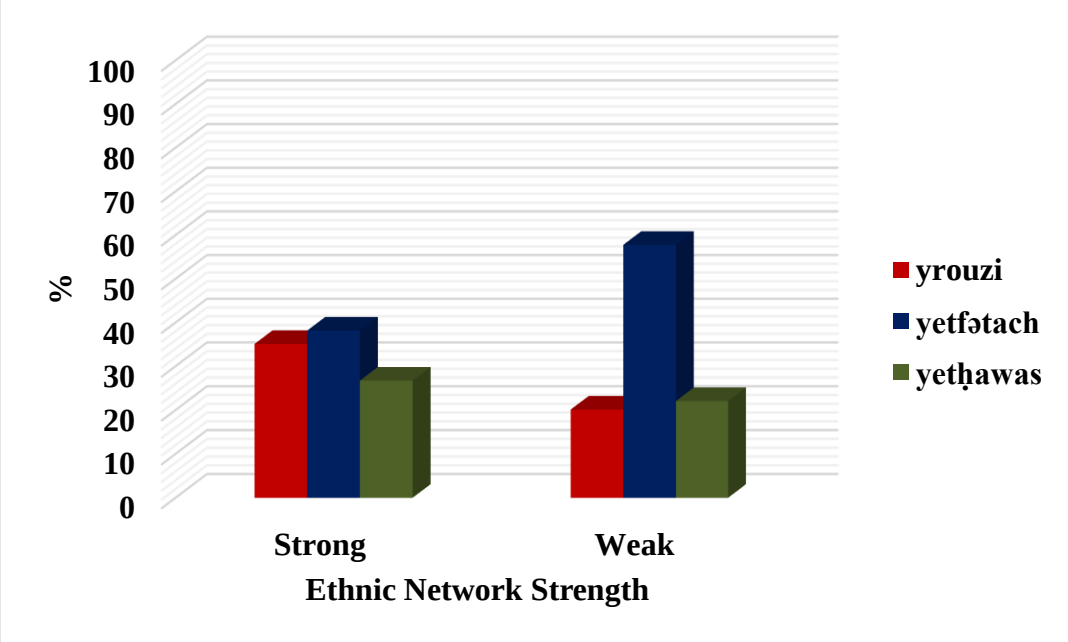

Figure 5.36 Overall distribution of *yrouzi*, *yetfətach* and *ytḥawas* by ethnic network strength.

By the same token, ethnically, loose groups display high amount of Arabic impact as the loanword *yetfətach* gains a strong foothold in Chaoui speech. Across ethnically dense groups, the percentage of respondents who favor *yetfətach* is parallel to those who favor *yrouzi*. The variant *yetḥawas*, conversely, is a minor choice in both ethnic categories.

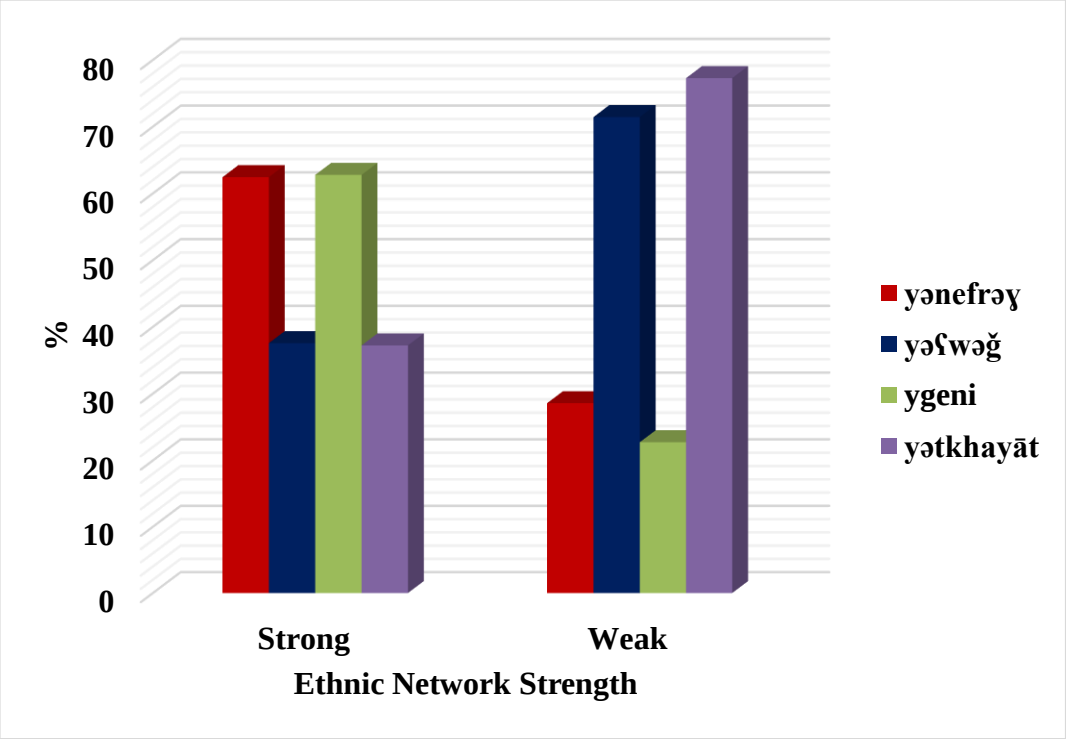

Figure 5.37 Overall distribution of *ygeni vs. yətkhayāt* and *yənefrəɣ vs. yəʕwəğ* by ethnic network strength.

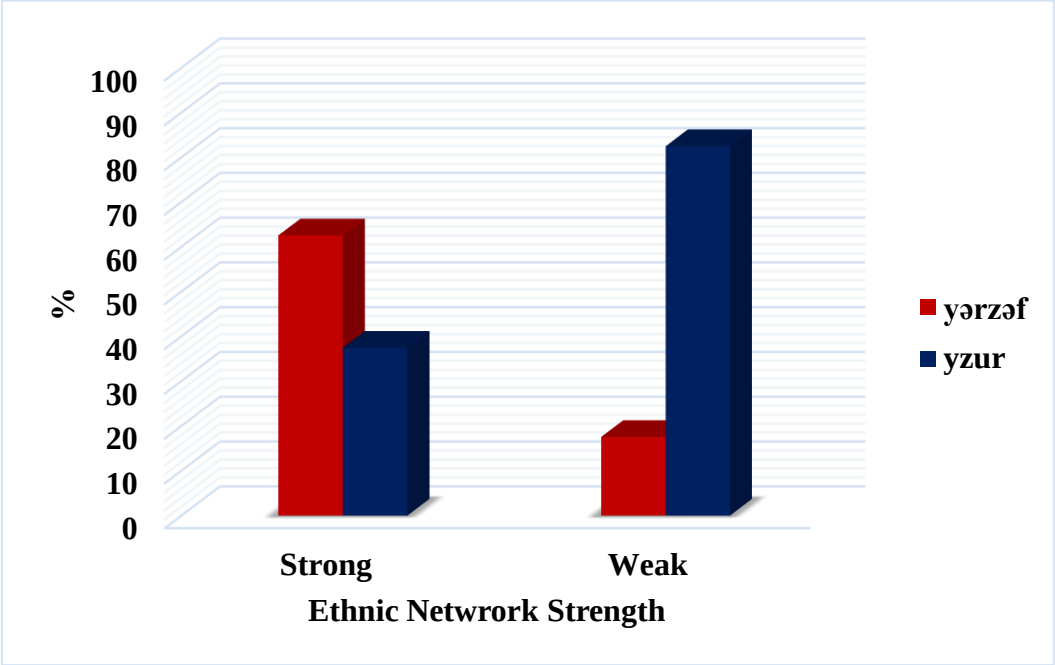

Figure 5.38 Overall distribution of yərzəf and yzur by ethnic network strength.

The second category preponderantly consists of seven lexical variables which co-vary with ethnic network categorization. Mapped against ethnic network density, *yənefrəɣ*, *ygeni*, *yerzəf, yəsser, yərɣa, ykenəf* and *yetcharay* exceedingly increment in the speech of respondents whose Chaoui ties are characteristically strong and multiplex. The use of loanwords *yəʕwəj, yətkhayāt* [jətxəja:t], *yzur* [jzur], *ykhalət, yechʕəl*, *yechwi* and *yetʕammar* increments in the speech of respondents whose Chaoui ties are weak and loose. To put it otherwise, the amount of Arabic lexical borrowing is comparatively substantial among respondents with high ENS scores than those with low ENS scores.

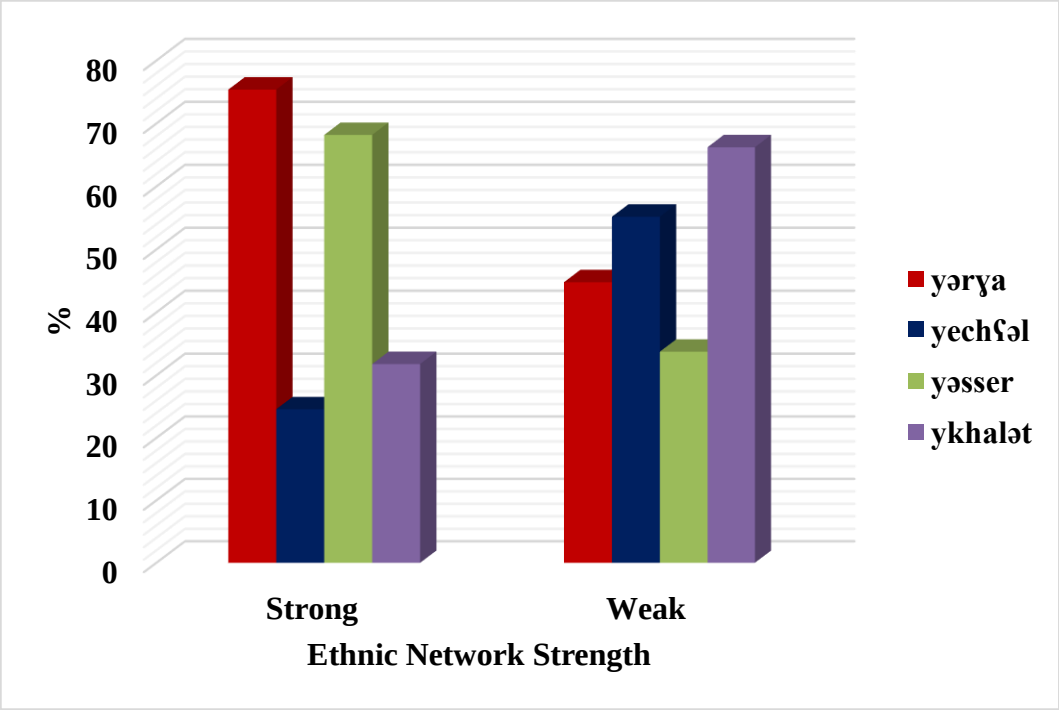

Figure 5.39 Overall distribution of *yəsser*, *ykhalət*, *yərɣa* and *yechʕəl* by ethnic network strength.

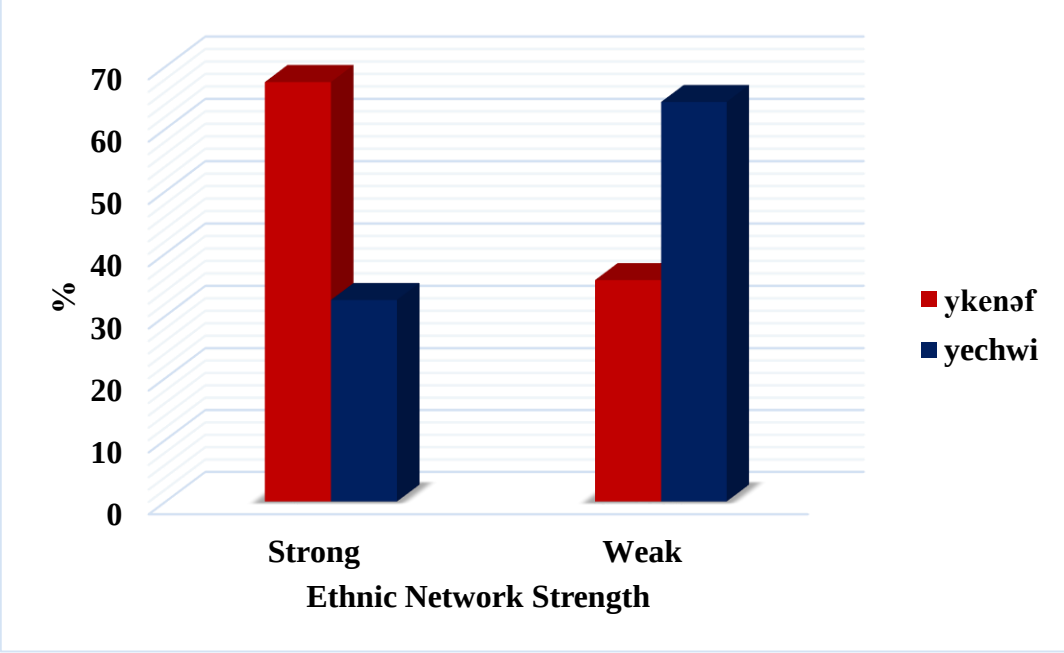

Figure 5.40 Overall distribution of *ykenəf* and *yechwi* by ethnic network strength.

The results corroborate Milroy's (1980) view on the role of social network density in linguistic stability and/or change. Ethnically nested networks serve as a hindrance to the process of linguistic change, whilst ethnically weak and loose networks serve as *gateways* of linguistic change and diffusion of loanwords in Chaouia.

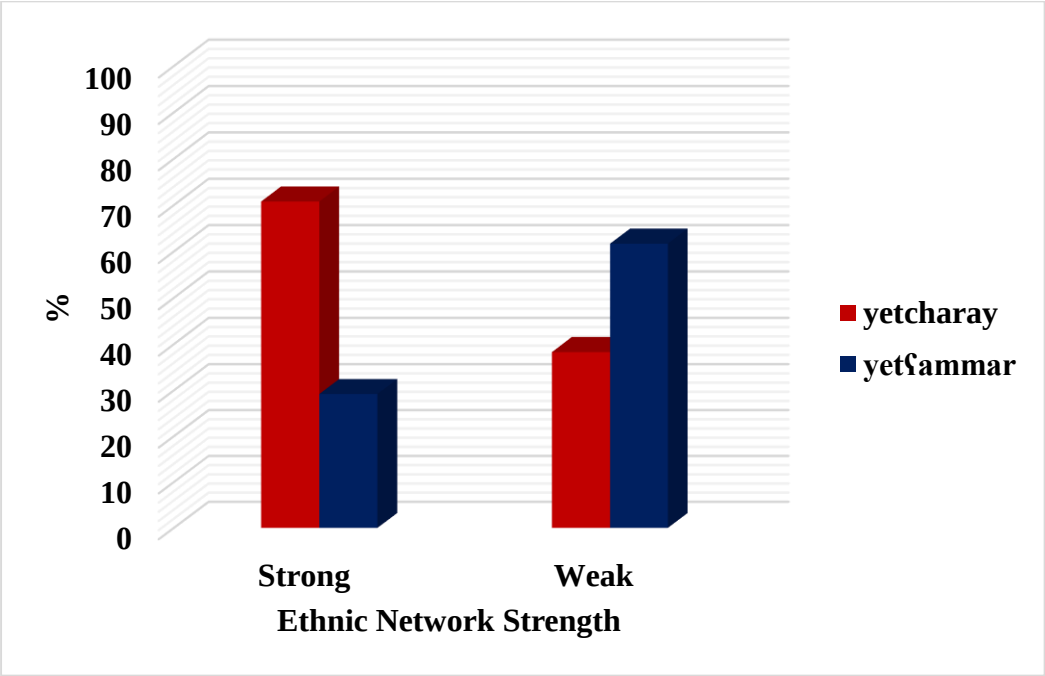

Figure 5.41 Overall distribution of *yetcharay* and *yetʕammar* by ethnic network strength

The sociolinguistic profile of the verbs *to look like* and *to get used to* is that of obsolescence. The Arabic loanword appears to be, without dispute, the dominant lexical choice in both ethnic network categories. It is used by 69.14 % of respondents with high ENS scores and by 83.11 % of respondents with low ENS scores, a strong indication of the high Arabic sociolinguistic impact on Chaouia in Batna. The loanword *yətmethel* is adopted by approximately 5 % of respondents in each ethnic category. Contrary to the loanword

yətchabeh [jətʃebeh], the Chaoui verb *yerwəs* [jərwəs] seems to be a minor choice in the two ethnic categories, strongly and weakly nested.

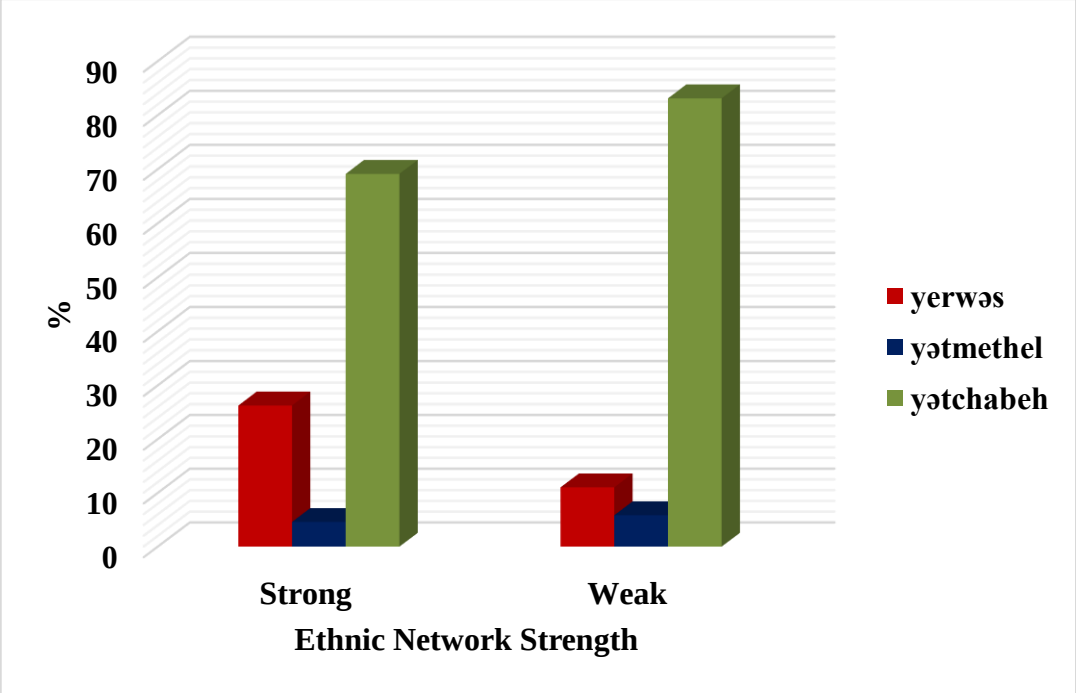

Figure 5.42 Overall distribution of *yərwəs, yəctmethel* and *yətchabeh* by ethnic network strength.

The distribution of the lexical variable *to get used to* provides a second mirror image to that of *to look like*, with the loanword ousting its Berber competing equivalent from dialectal Chaoui norms. Figure 5.43 below shows that across respondents with strong Chaoui ties, the Chaoui variant *yənoum* is a minor choice and the loan *yətʕawəd* [jətʕewed] is almost absent from speech data. As for respondents with weak Chaoui ties, both loan and non-loan words are completely disfavored by almost all respondents. The second loanword *ywaləf* [jweləf] is a dominant lexical choice in both ethnic network categories.

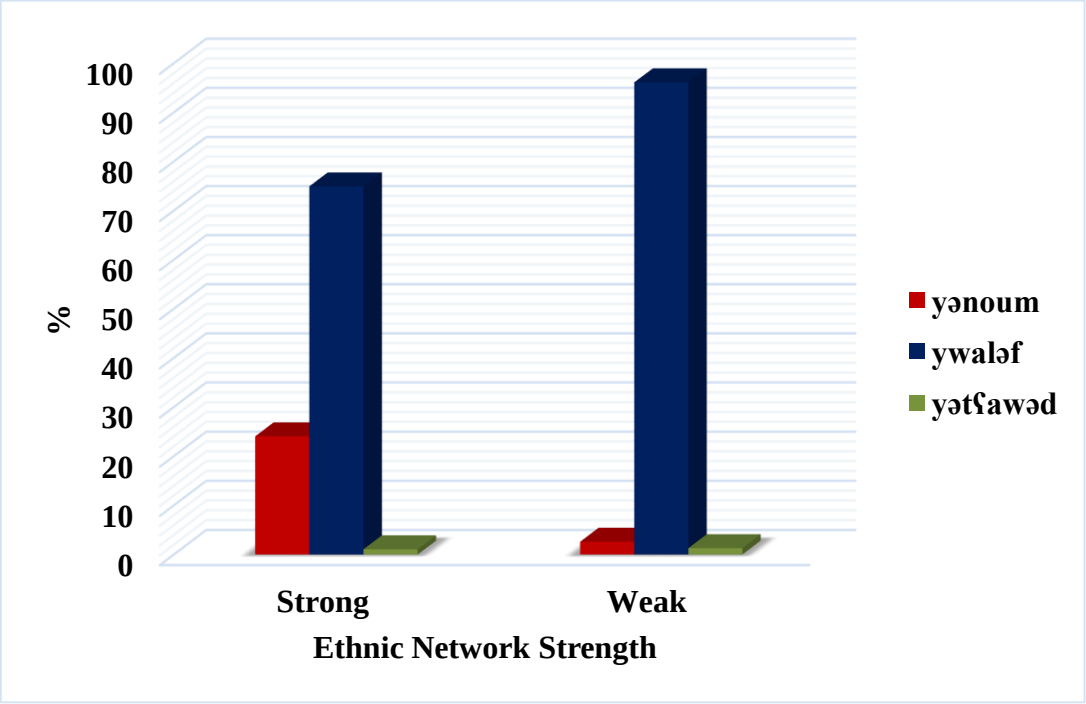

Figure 5.43 Overall distribution of *yənoum, ywaləf* and *yətʕawəd* by ethnic network strength

The verbs *yətchabeh* [jətʃebeh] and *ywaləf* [jweləf] have continuously made their way as the only preferences for Chaoui speakers. The native Berber variants *yerwəs* and *yənoum* [jənuːm], due to their extremely low proportions in data, are more likely to dissipate from local Chaoui speech norms and became almost unknown to the next generations. Furthermore, one can easily foresee, with confidence, that these two Chaoui verbs will eclipse from speech in favor of their Arabic competing forms, socially and spatially, in the next few decades.

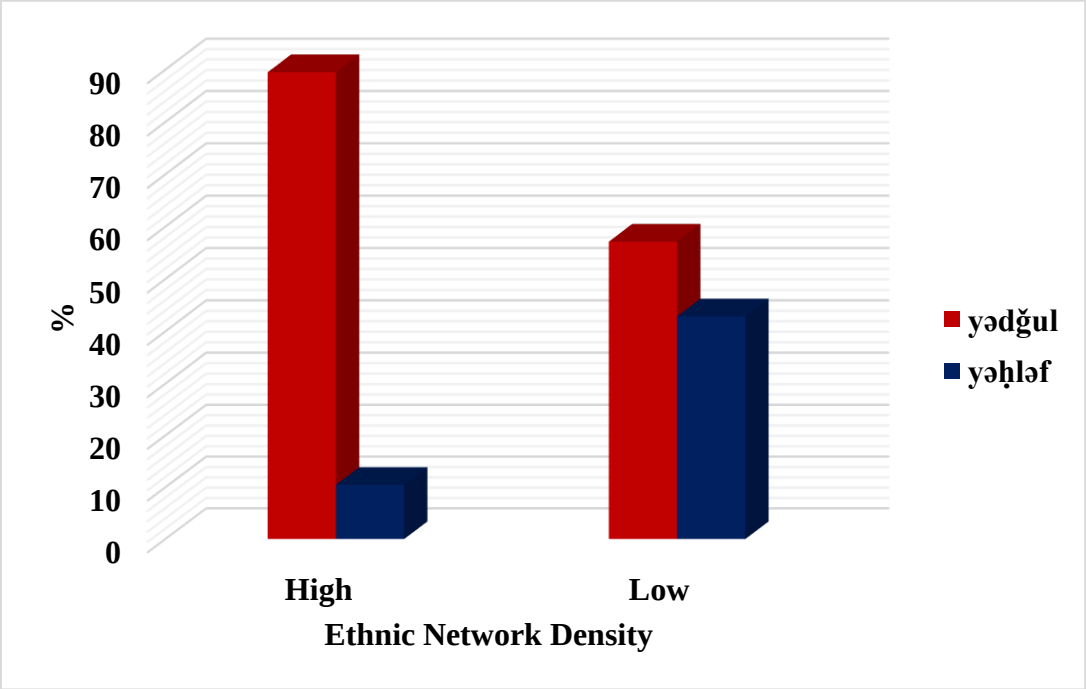

Figure 5.44 Overall distribution of *yədğul* and *yəḥləf by* ethnic network strength.

Of all the 14 verbs under examination, the verbs to swear and to dream display a dialect maintenance pattern, whereby Berber verbs are still resistant to Arabic influence. Across both ethnic network categories, Chaoui verbs *yədğul* [jədʒu:l] and *yəterğay* [jəterʒei] are major preferences, whereas Arabic loanwords *yəḥləf* [jəḥləf] and *yeḥlem* [jəḥləm] are adopted with low proportions.

In stark contrast to the obsolete verbs *yerwəs* [jərwəs] and *yənoum, yədğul* [jədʒu:l] and *yəterğay* [jəterʒei] are still maintained by most respondents in the sample. They are highly resistant to Arabic lexical borrowing and, by extension, dynamics of dialect death.

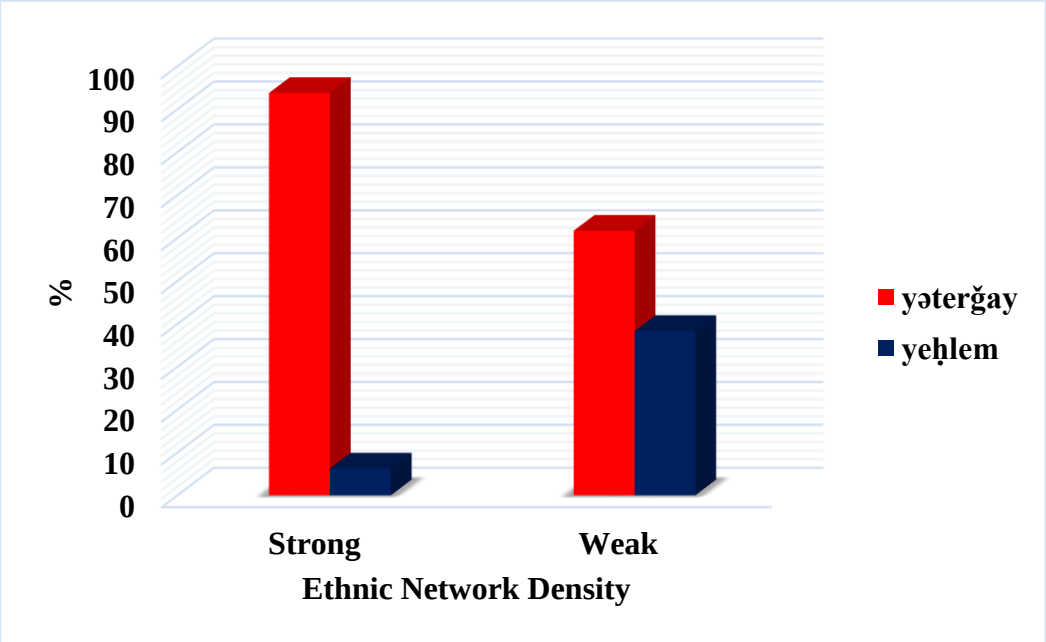

Figure 5.45 Overall distribution of *yəterğay* and *yeḥlem* by ethnic network strength.

Table 40

Stepwise Logistic Regression Analysis of yfunzər Social Distribution in Batna Speech Community (Fixed-effects Model)

Model Basics: Input Probability: 0.773 Intercept: 1.224				
Model Fit: Deviance: -362.194 R^2 = 0.263				
Factors	Log-odds	Respondents	Proportion	Factor Weight
Regionality (p=1.9e-05)				
Rural	0.421	504	0.899	0.604
Urban	-0.421	499	0.768	0.396
Gender (p=1.99e-05)				
Male	0.407	608	0.882	0.6
Female	-0.407	395	0.759	0.4
Ethnic Strength (p=0.000285)				
Strong	0.57	849	0.896	0.639
weak	-0.57	154	0.487	0.361
Ethnic Orientation (p=0.000469)				
High	0.554	816	0.903	0.635
Low	-0.554	187	0.529	0.365

Table 41

Stepwise Logistic Regression Analysis of ynejəm Social Distribution in Batna Speech Community (Fixed-effects Model)

Model Basics: Input Probability: 0.52 Intercept: 0.0806				
Model Fit: Deviance: 1336.256 R^2 = 0.0358				
Factors	Log-odds	Respondents	Proportion	Factor Weight
Ethnic Orientation (p=2.12e-04)				
High	0.306	816	0.609	0.576
Low	-0.306	187	0.444	0.424
Gender (p=3.67e-04)				
Male	0.236	608	0.628	0.559
Female	-0.236	395	0.501	0.441

Tables 40 and 41 consider regression analyses of the Chaoui verbs *yfunzər* and *ynejəm*. The former appears to be favorably adopted by rural respondents, women and respondents with strong Chaoui ties. It is, also, favored by respondents with high EO scores and geographically mobile speakers. The second application value, *ynejəm*, co-varies with ethnic orientation and gender patterns. The archaic verb *yəzmər* was not set as the application value in the R-brul model because it is almost disfavored by all research participants in the research sample. R-brul analyses revealed that *ynejəm* is strongly preserved by respondents with high EO scores and is disfavored by respondents with low EO scores. Step-up analyses, equally, display cross-gender patterning, with men being more conservative in the use of *ynejəm* than women. The latter, it must be noted, appears to be more prone to adopt and use the Arabic loan *yeqədər* [yəqədər], much extensively. As for *yruzi* socioethnic distribution, age is the most, statistically, significant variable in the model fit, whereas ethnic strength is the least significant.

Table 42

Stepwise Logistic Regression Analysis of yruzi Social Distribution in Batna Speech Community (Fixed-effects Model)

Model Basics: Input Probability: 0.813 Intercept: 1.471				
Model Fit: Deviance: 1172.712 R^2 = 0.223				
Factors	Log-odds	Respondents	Proportion	Factor Weight
age (p=8.07e-07)				
Seventies	11.658	2	1.000	>.999
Sixties	-0.372	6	0.833	0.408
Fifties	-1.209	36	0.694	0.230
Forties	-1.867	65	0.508	0.134
Thirties	-2.479	207	0.362	0.0773
Twenties	-2.738	607	0.282	0.0608
Teens	-2.993	80	0.225	0.0477
Ethnic Orientation (p=9.73e-07)				
High	0.873	816	0.370	0.705
Low	-0.873	187	0.144	0.295
Gender (p=1.71e-03)				
Male	0.236	608	0.380	0.559
Female	-0.236	395	0.248	0.441
Ethnic Strength (p=0.0284)				
Strong	0.424	154	0.201	0.604
Weak	-0.424	849	0.351	0.396

On closer examination, the oldest generations tend to use *yruzi* much extensively than their youngest counterparts. Interestingly enough, the low centered factor weights (and proportions) among speakers in their thirties, twenties and teens mirror the great influence of lexical borrowing on these age categories. Such age-correlated lexical differentiations, it is assumed, entail an ongoing lexical change spearheaded by youngsters. Like *yfunzər* distribution, the verb *yruzi* displays a strong correlation with EO, gender, ethnic strength. In

essence, it is highly favored by respondents with positive, strong affinity with/for Berber cultural heritage, males, and those whose ethnic ties are characteristically dense.

Table 43

Stepwise Logistic Regression Analysis of yənefrəɣ Social Distribution in Batna Speech Community (Fixed-effects Model)

Model Basics: Input Probability: 0.421 Intercept: -0.318				
Model Fit: Deviance: 1179.092 R^2 = 0.228				
Factors	Log-odds	Respondents	Proportion	Factor Weight
Regionality (p=4.33e-21)				
Rural	0.657	504	0.730	0.659
Urban	-0.657	499	0.413	0.341
Ethnic Orientation (p=1.33e-13)				
High	0.699	816	0.641	0.668
Low	-0.699	187	0.273	0.332
Ethnic Homophily (p=1.19e-03)				
Mixed	0.46526	387	0.607	0.614
Homophilous	-0.00326	567	0.575	0.499
Heterophilous	-0.46200	49	0.265	0.387
Gender (p=6.13e-03)				
Male	0.198	608	0.549	0.549
Female	-0.198	395	0.506	0.451

The aforementioned findings revealed that seven verbs displayed one repeating pattern: the use of Chaoui verbs co-varies with lows ENS indexes, thus portraying a prototypically ethnic network categorization pattern. The next step is to probe down all the possible one-way effects on the use of each Chaoui verb in the model fit. As a rule of thumb, it must be reiterated, 0.05 is the threshold of statistical significance in the model fit. It must, also, be stated that centered factor weights which range from 0.50 to 1.00 (represented as >.999 in the regression analyses tables) favor the application value, whereas those which range from 00 to

0.49 disfavor it (Bayley, 2013). Therefore, for each application value, only statistically significant factors are displayed; predictors with p-values more than 0.05 are excluded from the step-up regression analyses. To begin, table 43 above considers the four social predictors- Regionality, EO, ethnic homophily, gender- for the use of *yənefrəɣ* [yənərəɣ]. The latter is favored by respondents who inhabit in rural regions, those with positive orientation towards Berber culture and those whose friendship networks are ethnically mixed. The same application is more associated with men than women, who appear to be more amenable to use the Arabic loan, *yəʕwəj*, instead.

Table 44

Stepwise Logistic Regression Analysis of ygeni Social Distribution in Batna Speech Community (Fixed-effects Model)

Model Basics: Input Probability: 0.987 Intercept: 4.358 Model Fit: Deviance: 1128.841 R^2 = 0.492				
Factors	Log-odds	Respondents	Proportion	Factor Weight
Regionality (p=8.01e-24)				
Rural	0.725	504	0.728	0.674
Urban	-0.725	499	0.403	0.326
Ethnic Orientation (p=2.61e-18)				
High	0.823	816	0.646	0.695
Low	-0.823	187	0.219	0.305
Age (p=1.85e-07)				
Seventies	10.476	2	1.000	>.999
Sixties	10.476	6	1.000	>.999
Fifties	-2.766	36	0.889	0.0592
Forties	-3.827	65	0.692	0.0213
Thirties	-4.362	207	0.589	0.0126
Twenties	-4.773	607	0.539	0.00838
Teens	-5.224	80	0.425	0.00536

Like *yənefrəɣ* [yənərəɣ], the verb *ygeni* [jgeni] is maintained by rural respondents and disfavored by their urban counterparts. It is, also, more favorably used by respondents who scored high in EO scale. As for age variable, there seems to be a great difference in factor weights between the oldest age groups, sixties and seventies, and other age groups. Elders tend to be more immune to Arabic influence, whereas the latter, youngsters, use the verb *ygeni* [jgeni] at extremely low rates. Hence, Arabic influence is considerably higher among youngsters than elderly speakers. In addition, these great aged-based lexical variations entail that the Chaoui verb *ygeni* is gradually and pretty continuously dissipating from speech in favor of the incoming alternative loanword *yətkhayāt* [jətxəja:t].

Table 45

Stepwise Logistic Regression Analysis of yetcharay Social Distribution in Batna Speech Community (Fixed-effects Model)

Model Basics: Input Probability: 0.569 Intercept: 0.278				
Model Fit: Deviance: 1110.173 R^2 = 0.221				
Factors	Log-odds	Respondents	Proportion	Factor Weight
Regionality (p=1.06e-18)				
Rural	0.644	504	0.802	0.656
Urban	-0.644	499	0.513	0.344
Ethnic Orientation (p=5.63e-14)				
High	0.664	816	0.725	0.660
Low	-0.664	187	0.364	0.340
Gender (p=8.91e-06)				
Male	0.33	608	0.717	0.582
Female	-0.33	395	0.567	0.418

Of all the potential seven predictors, regionality, Ethnic orientation and gender correlate with the distribution of the verb *yetcharay*, as evidenced in table 45 above. In predominantly Berber speaking areas in the Aures, Chaoui speakers, most notably in rural communities, avail

themselves of the verbs *yetcharay* (Berber) and *yetʕammar* (Arabic loan) to describe someone who fills in a container, be it a barrel, bottle or a glass-water, with liquids and water. Yet, for many native speakers, *yetcharay* and *yetʕammar* have certain nuances of meaning, used in slightly different contexts and for different communicative ends. They would use the former to describe the act of filling a container with a liquid, and reserve the latter to describe the act of bringing water from another place. Nevertheless, while *yetcharay* and *yetʕammar* are commonly known and used in many Berber regions, the verb *yetayməd*, a derivation of the noun 'ayam', is also used for the second meaning (the act of bringing water from another place.), and is still preserved geographically in some close-knit landscapes in the Eastern parts of Batna. As evidenced in table 45, the use of *yetcharay* propagates across rural settings (factor weight= 0.656) and abates in urban settings (factor weight=0.344). Respondents, who have positive affinity for Berber culture, tend to be highly conservative in the use of *yetcharay*. Likewise, in stark contrast with females, who appear to be associated with *yetʕammar*, males retain and preserve the Chaoui verb *yetcharay* in their speech.

Regression analysis, displayed in table 46, foregrounds the socioregional conditioning of the verb (to pay someone a visit). In so doing, the Chaoui verb *yərzef* is set as the application value in the step-up analysis and examined in relation with seven potential social triggers. R-brul model fit revealed that the application value patterns with four external variables. It is preponderantly favored by: a) rural respondents and villagers, b) high EO indexes c) strong ethnic ties and d) respondents in their seventies. It is disfavored by a) urban respondents, b) low EO scores, c) weak, loose ethnic ties and d) respondents aged between 17 and 69 years old. The latter finding is eye-catching in that it indicates that the verb yərzef [jərzəf] is decreasing in use across generations. All things being equal, there is a high

likelihood that the application value *yərzef* will progressively be substituted by its competing Arabic equivalent *yzur* [jzur], especially among younger age cohorts.

Table 46

Stepwise Logistic Regression Analysis of yərzef Social Distribution in Batna Speech Community (Fixed-effects Model)

Model Basics: Input Probability: 0.806			Intercept: 1.423	
Model Fit: Deviance: 1167.425			R^2 = 0.312	
Factors	Log-odds	Respondents	Proportion	Factor Weight
Regionality (p=2.52e-14)				
Rural	0.541	504	0.692	0.632
Urban	-0.541	499	0.419	0.368
Ethnic Orientation (p=8.27e-07)				
High	0.711	816	0.642	0.671
Low	-0.711	187	0.182	0.329
Ethnic Strength (p=0.0289)				
Strong	0.365	849	0.625	0.59
Weak	-0.365	154	0.175	0.41
Age (p=0.0332)				
Seventies	11.114	2	1.000	>.999
Fifties	-0.866	36	0.806	0.296
Forties	-1.595	65	0.615	0.169
Thirties	-1.835	207	0.560	0.138
Twenties	-1.979	607	0.549	0.121
Teens	-2.340	80	0.438	0.0879
Sixties	-2.499	6	0.500	0.0759

It is, also, enlightening to note that both competing variants, *yərzef* [jərzəf] and *yzur*, are used interchangeably by most Chaoui speakers for the same communicative end, that is, to describe the act of moving into another place to see close friends, siblings or a relatives. However, in predominantly monoethnic Chaoui countrysides the eastern parts of Batna-eg., Arris, T'Kout- speakers avail themselves of both verbs to talk about slightly two distinct, yet

functionally related, social situations. They would use the loan verb *yzur* [jzur] in its general sense when they visit a specific place (or a person), and use the Chaoui verb *yərzef* [jərzəf] in its narrow sense to describe a situation in which the bride (or a wife) pays her family members a visit after the honeymoon period.

Table 47

Stepwise Logistic Regression Analysis of yəsser Social Distribution in Batna Speech Community (Fixed-effects Model)

Model Basics:	Input Probability: 0.54	Intercept: 0.16		
Model Fit:	Deviance: 1216.089	R^2 = 0.133		
Factors	Log-odds	Respondents	Proportion	Factor Weight
Ethnic Strength (p=4.68e-15)				
Strong	0.795	849	0.682	0.689
Weak	-0.795	154	0.338	0.311
Regionality (p=1.43e-06)				
Urban	0.341	499	0.677	0.584
Rural	-0.341	504	0.581	0.416
Ethnic Homophily (p=2.24e-05)				
Heterophilous	0.4620	49	0.612	0.613
Homophilous	0.0661	567	0.702	0.517
Mixed	-0.5281	387	0.525	0.371

Table 47 shows interesting results about the the socioethnic conditioning of the variant *yəsser*. As expected, its use increments across speakers with strong ethnic ties and abates across speakers with weak, loose ties. Interestingly enough, however, the expected and not well attested is for the verb *yəsser*, the application value, to be preserved regionally in rural areas. Yet, regression analysis, as displayed in table 47 above, showed that it is a minor choice in rural settings and a major choice in inner, urban settings. *yəsser*, also, seems to be highly

preferred by respondents whose friendship networks are characteristically heterophilous and homophilous, who contract ethnically cohesive Chaoui ties.

Table 48

Stepwise Logistic Regression Analysis of yərɣa Social Distribution in Batna Speech Community (Fixed-effects Model)

Model Basics: Input Probability: 0.913 Intercept: 2.35				
Model Fit: Deviance: 1079.121 R^2 = 0.233				
Factors	Log-odds	Respondents	Proportion	Factor Weight
Ethnic Orientation (p=3.28e-13)				
High	0.643	816	0.771	0.6550
Low	-0.643	187	0.428	.345
Gender (p=2.35e-06)				
Male	0.361	608	0.771	0.589
Female	-0.361	395	0.608	0.411
Regionality (p=6.01e-06)				
Rural	0.345	504	0.784	0.585
Urban	-0.345	499	0.629	0.415
Age (p=0.0301)				
Seventies	10.573	2	1.000	>.999
Forties	-1.219	65	0.815	0.228
Sixties	-1.427	6	0.833	0.194
Fifties	-1.650	36	0.806	0.161
Thirties	-1.809	607	0.708	0.141
Twenties	-1.904	207	0.715	0.130
Teens	-2.564	80	0.525	0.0715

Table 49

Stepwise Logistic Regression Analysis of ykenəf Social Distribution in Batna Speech Community (Fixed-effects Model)

Model Basics:	Probability: 0.872	Intercept: 1.918		
Model Fit:	Deviance: -618.707	R^2 = 0.173		
Factors	Log-odds	Respondents	Proportion	Factor Weight
Ethnic Strength (p=2.16e-11)				
Strong	0.614	849	0.675	0.649
Weak	-0.614	154	0.357	0.351
Gender (p=0.000968)				
Male	0.233	608	0.678	0.558
Female	-0.233	395	0.547	0.442
Mobility (p=0.00717)				
Mobile	0.198	345	0.699	0.549
Non-mobile	-0.198	658	0.588	0.451
Age (p=0.044)				
Seventies	11.063	2	1.000	> 0.999
Forties	-0.966	65	0.800	0.276
Thirties	-1.692	207	0.676	0.156
Twenties	-1.843	607	0.603	0.137
Fifties	-1.887	36	0.667	0.132
Teens	-2.131	80	0.512	0.106
Sixties	-2.544	6	0.500	0.073

Tables 48 and 49 consider the regression analyses of the application values *yərɣa* and *ykenəf*, respectively, examining, in details, the distribution of each verb across all the seven socio-regional triggers. The verb *yərɣa* is substantially adopted by: a) respondents with high EO indexes, b) males, c) villagers and d) speakers in their seventies. The verb *ykenəf*, meaning to grill (meat), is extensive in the speech of: a) speakers with strong ethnic ties, b) males, c) geographically mobile respondents, and d) oldest age group (70+).

Table 50

Stepwise Logistic Regression Analysis of yənoum Social Distribution in Batna Speech Community (Fixed-effects Model)

Model Basics: Input Probability: 0.0154 Intercept: -4.157				
Model Fit: Deviance: 928.887 R^2 = 0.411				
Factors	Log-odds	Respondents	Proportion	Factor Weight
Ethnic Orientation (p=2.12e-03)				
High	0.711	816	0.2480	0.671
Low	-0.711	187	0.0321	0.329
Ethnic Strength (p=0.0385)				
Strong	0.629	849	0.240	0.652
Weak	-0.629	154	0.026	0.348

Figures 5.42 and 5.43 indicate that *yerwəs* and *yənoum* [jənu:m] eclipsed from the speech of most Chaoui respondents. The next step is to foreground step-up analyses of each verb in the R-brul model fit. These two Chaoui variants, albeit low in data, still pattern with two or three social determinants in Batna speech community. As for *yənoum* [jənu:m] distribution, as it is evidenced in table 50 above, R-brul results indicate that ethnic orientation and ethic strength are the only statistically significant correlates. It is comparatively more common among respondents with high ENS scores than those with low ENS scores. That said, the archaic verb *yənoum*, though underrepresented speech data, was found to be more associated with positive ethnic orientation towards Berber culture. Low centered factor weights of *yənoum* among respondents with low EO values is indicative of the high impact of Arabic on these speakers. By the same token, the verb *yənoum*, albeit extremely low in data, is still favored by respondents whose ethnic ties are characteristically dense. Such findings vindicate the aforementioned results displayed, graphically, in figure 5.43 above.

Table 51

Stepwise Logistic Regression Analysis of yerwəs Social Distribution in Batna Speech Community (Fixed-effects Model)

Model Basics: Input Probability: 0.184		Intercept: -1.488		
Model Fit: Deviance: 1061.252		R^2 = 0.08		
Factors	Log-odds	Respondents	Proportion	Factor Weight
Ethnic Orientation (p=3.41e-04)				
High	0.427	816	0.267	0.605
Low	-0.427	187	0.118	0.395
Gender (p=0.0172)				
Male	0.188	608	0.268	0.547
Female	-0.188	395	0.195	0.453
Regionality (p=0.043)				
Rural	0.155	504	0.278	0.539
Urban	-0.155	499	0.200	0.461

Ordered in terms of their statistical significance, EO, gender and regionality co-vary with the distribution of the verb *yerwəs* [jərwəs]. Step-up statistical analyses shown in table 51 indicate that centered factor weights of the application value are high among respondents with high EO scores and low among respondents with low EO scores, a pattern suggestive of the great role of ethnic orientation, be it positive or negative, in preserving Chaoui speech norms. Across gender, unlike women, who prefer the Arabic loan *yətchabeh* [jətʃebeh], men tend to be more conservative in the use of the Chaoui verb yerwəs [jərwəs]. Similarly, the verb *yerwəs*, as it is often the case with other native Chaoui terms, is more geographically diffused across rural and close-knit areas than urban settings.

Table 52

Stepwise Logistic Regression Analysis of yədğul Social Distribution in Batna Speech Community (Fixed-effects Model)

Model Basics: Input Probability: 0.892		Intercept: 2.112		
Model Fit: Deviance: 1076.472		R^2 = 0.33		
Factors	Log-odds	Respondents	Proportion	Factor Weight
Ethnic Orientation (p= 4.76e-19)				
High	0.882	816	0.906	0.707
Low	-0.882	187	0.583	0.293
Gender (p= 8.45e-04)				
Male	0.316	608	0.885	0.578
Female	-0.316	395	0.785	0.422
Regionality (p= 9.21e-03)				
Rural	0.253	504	0.889	0.563
Urban	-0.253	499	0.802	0.437
Mobility (p= 0.011)				
Mobile	0.266	345	0.890	0.566
Non-mobile	-0.266	658	0.822	0.434

It is, also, enlightening to examine how the verbs *yədğul* [jədʒu:l] and yəterğay [jəterʒei] vary across different regional and social factors. R-brul analyses displayed in table 52 show four sociospatial predictors which pattern with the verb *yədğul* distribution; namely: EO, gender, regionality and mobility. Ethnic strength does not appear in the model fit results due to the fact it does not pattern, systematically, with the use of the application value under investigation. Said differently, because the use of the verb *yədğul* is extensive in both ethnic categories, strong and weak, ethnic network strength, along with age and ethnic homophiliy, was excluded from the stepwise regression analysis. Ethnic orientation, it is noted, appears to be the most statistically significant social determinant. As ethnic orientation scores abates, centered factor weights associated with *yədğul* [jədʒu:l] decrease, a suggestive pattern of the tight interplay between affinity for Berber culture and dialect maintenance. Likewise, the high

centered factor weights among men is suggestive of their conservative use of *yədğul*. The opposite, also, holds true for women, who are at the leading edge of *yəḥləf* [jəḥləf] use, and thus are less immune to Arabic lexical borrowing. Step-up results, likewise, indicate that the application value is highly favored by rural respondents and geographically mobile speakers, as well.

Table 53

Stepwise Logistic Regression Analysis of yəterğay Social Distribution in Batna Speech Community (Fixed-effects Model)

Model Basics: Input Probability: 0.997 Intercept: 5.745 Model Fit: Deviance: 544.279 R^2 = 0.465				
Factors	Log-odds	Respondents	Proportion	Factor Weight
Ethnic Orientation (p=2.05e-07)				
High	0.897	816	0.95	0.71
Low	-0.897	187	0.62	0.29
Regionality (p=2.22e-04)				
Rural	0.436	504	0.938	0.607
Urban	-0.436	499	0.838	0.393
Age (p=0.022)				
Seventies	8.681	2	1.000	>.999
Sixties	8.681	6	1.000	>.999
Forties	-1.808	65	0.985	0.141
Fifties	-3.024	36	0.972	0.0464
Thirties	-3.858	207	0.899	0.0207
Twenties	-4.062	607	0.881	0.0169
Teens	-4.610	80	0.788	0.00985

Table 53 indicates the strong interplay between the verb *yəterğay* [jəterʒei], meaning to dream, and three external factors; namely: EO, regionality and age. The application value, as it was often the case with *yədğul* [jədʒu:l] use, is tightly correlated with positive orientation towards Berber culture. As for geographical distribution, the verb *yəterğay* is more extensive

in rural, close-knit areas than urban regions. Table 53, also, elucidates a perfect cross-generational pattern. Centered factor weights and proportions of the application value decrease as one moves down in age spectrum. To put it otherwise, the oldest generation, aged 60 years old onward, use the verb *yəterğay* much extensively. However, Arabic influence increases continuously from speakes aged 59 to speakers aged 17 years old. Hence, this prototypical *Apparent-Time* image reflects a progressive lexical change across age spearheaded by youngsters. The aforementioned charts and R-brul tables yielded four major patterns and trajectories of lexical variation and change. In essence, interethnic contact coupled with many external factors, sociocultural and spatial, admit of varying degrees of the impact on the use of the 14 lexical variables under study, ranging from complete maintenance, to prototypically ethnic network categorization, to complete lexical obsolescence. Yet, across all these sociolinguistic profiles, interesting recurring patterns emerge. In most cases, the use of Chaoui verbs increases among oldest age groups and substantially decreases among younger age groups, a pattern reflecting progressive lexical replacements across generations. Most Chaoui verbs are maintained by males, speakers with high EO and ENS means and by those whose friends are of Chaoui or mixed ethnic roots. Arabic influence appears to be so remarkable in urban settings, speakers with low EO and ENS values and women.

5.5 Friendship Network Analysis

In this section, we shall examine the social cohesion of two friendship networks and gauge each participant's personal network density. Contrary to Milroy's (1980) Model, then, the Syncretic Social Network Model used in this study considers not only how Chaoui forms vary and propagate across ethnic groups but across individual speakers, as well.

5.5.1 Multiple Cohesion Measures: Whole Network Level

Social Cohesion, Wouter De Nooy et al. (2011) assert, is determined by the close knittedness and number of ties, be they personal or social, and is contracted by individuals and social groups. In other words, the more connections a social network contains, the tighter and the more cohesive it becomes. We carried out a set of UCINET analyses to gauge each network's social cohesiveness in terms of a set of dimensions (or properties). Table 1 indicates that Issam's friendship network is unequivocally more dense and multiplex (0.61; R=1.71) than Chahinaz's network (0.13; R=1.24). Both networks, also, contrast one another in terms of the number of Chaoui contacts. All contacts (or actors) in Issam's network are characteristically of Chaoui descent, whereas Chahinaz's network is characteristically 'mixed' ethnic, composed of 42 % Chaoui contacts and 58 % Arab contacts. As for connectedness, or as Borgatti et al (2013) call it *Knittedness*, both networks are highly connected and each node is adjacent to at least one node in the network. The high 'connectedness' degree is, also, attributed to the fact that both networks are free from the so called *Isolated Vertices*, or *egos* which are not joined by other nodes in the network (Wouter De Nooy et al, 2011). Nevertheless, while each node in Issam's friendship network is connected to at least four peers, some nodes in Chahinaz's network are connected to only one node (Abir and Chahinaz; Chahinaz and Soulef). The network average degree in Issam's network (14.76) is comparatively higher than Chahinaz's network (2.66), and this explains the difference in connectedness degree between both networks. Thus, Issam's network seems to be relatively more tightly nested than Chahinaz's network.

Table 54

Multiple Cohesion Measures of Chahinaz's Network and Issam's Network

	Friendship Networks	
Network Dimensions	**Chahinaz's Network**	**Issam's Network**
Density Degree	0.133	**0.615**
Percentage of Chaoui Peers	42 %	**100 %**
Connectedness	1.00	1.00
Network Average Degree	2.667	14.760
Centralization Degree	0.405	0.328
Number of Nodes	21	25

Notwithstanding their high connectedness degree, the latter network seems to be more centralized (0.40) than the former network (0.32). In keeping with Borgatti et al' (2013) view, centralization degree correlates, statistically, with "the extent a network is dominated by a single node" (p. 170), and this explains the low centralization level in Issam's network. In stark contrast to Chahinaz's network, which is dominated by one central vertex (Chahinaz), Issam's network is composed of many vertices with powerful central positions.

5.5.2 Multiple Cohesion Measures: Node Network Level

The aforementioned findings asserted that Issam's network is more cohesive and tightly nested than Chahinaz's network. While the analyses at network level provided insights into the dynamics of ethnic relations among actors of different ethnic roots, it is equally enlightening to consider the type and ethnic strength of each node at a personal level, foregrounding properties of ethnic density, centrality and homphily. Tables 5.55 and 5.56 present the multiple cohesion measures of each actor:

Table 55

Homophily, Ethnic Density and Centrality of each Node in Chahinaz's Network

Node	Homophily	Ethnic Density	Centrality and Power (in-/out-degree)
Chahinaz	Mixed	0.95	**10.00**
Belkis	Mixed	0.98	**2.00**
Fatima	Mixed	1.5	**3.00**
Nessma	Mixed	0.99	**2.00**
Ghaydaa	Mixed	0.97	**3.00**
Khawla	Mixed	0.97	**3.00**
Saida	Mixed	0.86	**2.00**
Malek	Homo	2.00	**2.00**
Dounia	Homo	2.00	**1.00**

The ENSS of each actor in Issam's network is notably high, whereas only three (out of nine) actors' scores in Chahinaz's network are above average (≥ 1). In this study, we adopted Freeman's (1979) approach of centrality of the node (or vertex), whereby in-degree refers to the "number of arcs it receives", whereas out-degrees refer to "the number of arcs it sends" (De Nooy et al, 2011, p. 74). Chahinaz seems to be the most 'central' actor in her friendship network with the highest number of in/out degrees (10 paths). Issam's network, however, is more complex and is dominated by many central actors: Issam and Salah (23 in/out degrees for each), Bouha (20 in/out degrees), Okba, Azeddine and Abdelhadi (19 in/out degrees for each). As a rule of thumb, strongly centralized networks are composed of less number of central vertices and vice versa. The unequal distribution of in-degrees and out-degrees in Chahinaz's network elucidates its high centralization. To put it otherwise, because Chahinaz's network is dominated by one actor (Chahinaz), it is strongly centralized (0.40), as opposed to the relatively less centralized of Issam's network (0.32), which is essentially composed of many central actors.

Table 56

Homophily, Ethnic Density and Centrality of each Node in Issam's Network

Node	Homophily	Ethnic Density	Centrality and Power (in-/out-degree)
Issam	Homo	2	23.00
Fateh	Homo	1.92	19.00
Ammar	Homo	1.85	14.00
Raouf	Homo	1.6	16.00
Selman	Homo	1.77	7.00
Hakim	Mixed	1.57	5.00
Lahcen	Homo	1.85	13.00
Noureddine	Homo	2	16.00
Halim	Mixed	1.35	15.00
Chabaan	Homo	1.92	5.00
Bilel	Homo	1.42	4.00
Fouzi	Mixed	1.33	6.00
Abdelhamid	Homo	1.33	18.00
Saleh	Homo	2	23.00
Rachid	Homo	2	11.00
Bouha	Homo	1.71	20.00
Abdelhadi	Homo	1.78	19.00
Abdelali	Homo	2	19.00
Nacer	Homo	2	16.00
Souleimen	Mixed	2	13.00
Ahmed	Homo	2	15.00
Okba	Homo	1.85	19.00
Toufik	Mixed	1.28	16.00
Azeddine	Homo	1.92	19.00
Yazid	Homo	1.92	18.00

Wouter De Nooy et al (2011) note that "A network is highly centralized if there is a clear boundary between the center and the periphery. In a highly centralized network, information spreads easily but the center is indispensable for the transmission of information" (p. 141). In Chahinaz's network, it is clear that Chahinaz is the *center* or *core* member as she has the highest number of in-degrees (10); the other eight female participants, who are joined by low in-degrees (1 to 3 paths), are characteristically *peripheral* or *secondary* members.

Furthermore, one can also infer that Chahinaz is the *broker* member as she brokers (or mediates between) distinct, rather unrelated, *cliques* and *triads* in the network. Interestingly enough, she brokers tightly nested Chaoui cliques, Arab-Chaoui cliques, and purely Arab cliques in the network. In keeping with De Nooy et al.' (2011) idea that brokers are *gateways* through which new information are transmitted, it is equally enlightening to explore how Chahinaz plays a role in diffusing new speech norms, Arabic and Chaoui, among her peers in the network. Sociolinguistic correlates of *Brokerage* will be tackled, quite comprehensively, in the next chapter. In contrast, due to its high connectedness and low centralization degree, it is quite difficult, at least in practical terms, to draw a clear-cut boundary between core members and peripheral members in Issam's network. The average in/out degree of the whole network is 14.76, and almost all youngsters are members in more than one sub-group or clique.

5.5.3 Friendship Networks, Ethnic Contact, and Lexical Change

This section considers the analysis of all the 52 lexical variables in the data. The two friendship networks contrast with one another not only in terms of their social cohesiveness and ethnic strength, but also in terms of the socioethnic distribution of lexical variants under study.

5.5.3.1 Chahinaz's Friendship Network

The next step is to chart, graphically, all the lexical variables and to analyze the proportions of their variants in both friendship networks. Figures 5.46, 5.47 and 5.48 display the results of three semantic fields in the speech of Chahinaz's friendship network, namely: adjectives, verbs and animals, respectively.

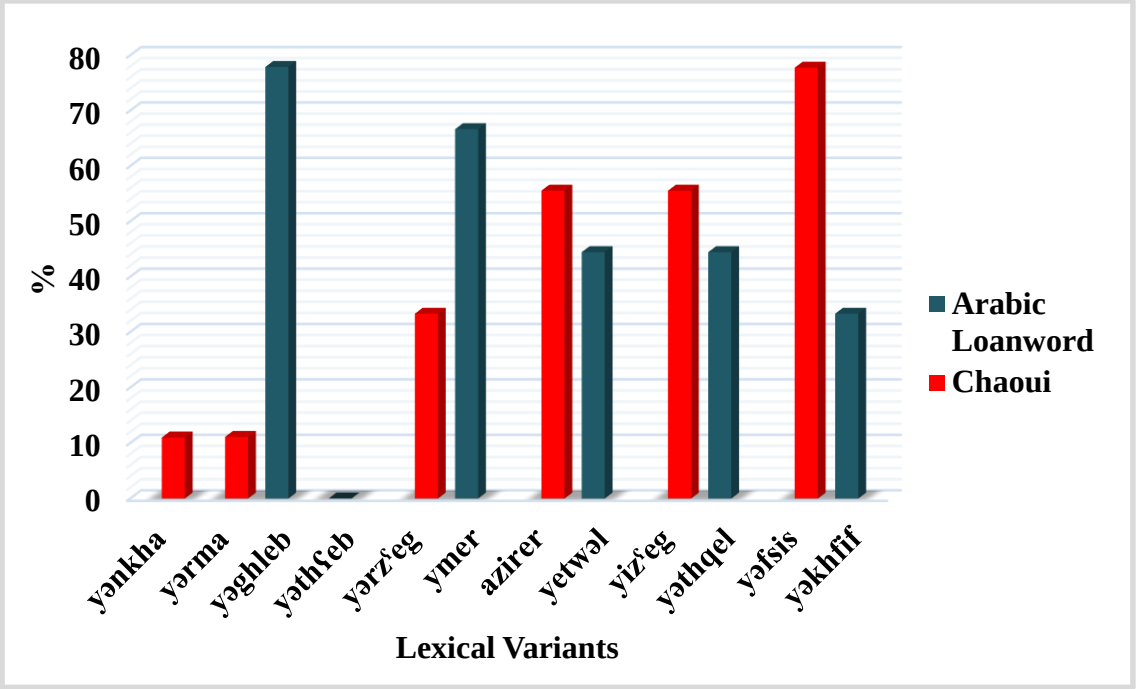

Figure 5.46 The Distribution of Five Adjectives in Chahinaz's Friendship Network.

The Arabic loanwords *yəghleb* and *ymer* are, quite remarkably, major preferences among all female youngsters. The Chaoui variant *yərzʿeg* [yərzˤɑːg] makes a fair showing, whereas the variant *yəthʕeb* seems to be virtually avoided by all female teens. As for the variables *tall* and *heavy*, the competing variants *azirer* vs. *yetwəl*, *yizʿeg* vs. *yəthqel* make a fair showing in the speech of all female respondents. Female youngsters use both variants, Chaoui and Arabic loans, interchangeably in different social contexts. The Chaoui adjective *yəfsis*, meaning light, seems to be the only exceptional case in Chahinaz's network data. It is also used with higher proportions among females.

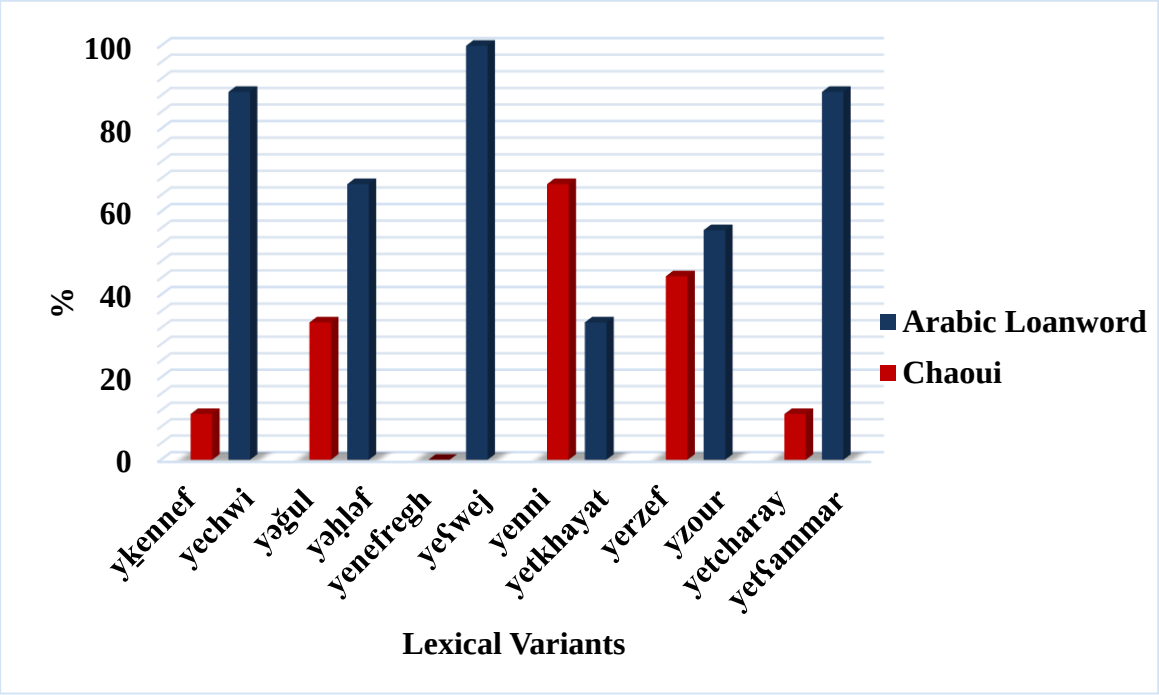

Figure 5.47 The Distribution of Six Verbs in Chahinaz's Friendship Network.

The eclipse of Chaoui verbs appears to be so prominent and higher than adjectives. This is the case of *yechwi*, *yəḥləf*, *yetʕammar* and *yeʕwej* which are used much more extensively by all females. In stark contrast to the Arabic loans, the Chaoui verbs *yḵennef*, *yədğul*, *yetcharay* and *yenefregh* are underrepresented in the data. The latter, *yenefregh* is virtually uknown to all female youngsters, who reported that they neither know the meaning of the verb nor do they use it in day-to-day social encounters.

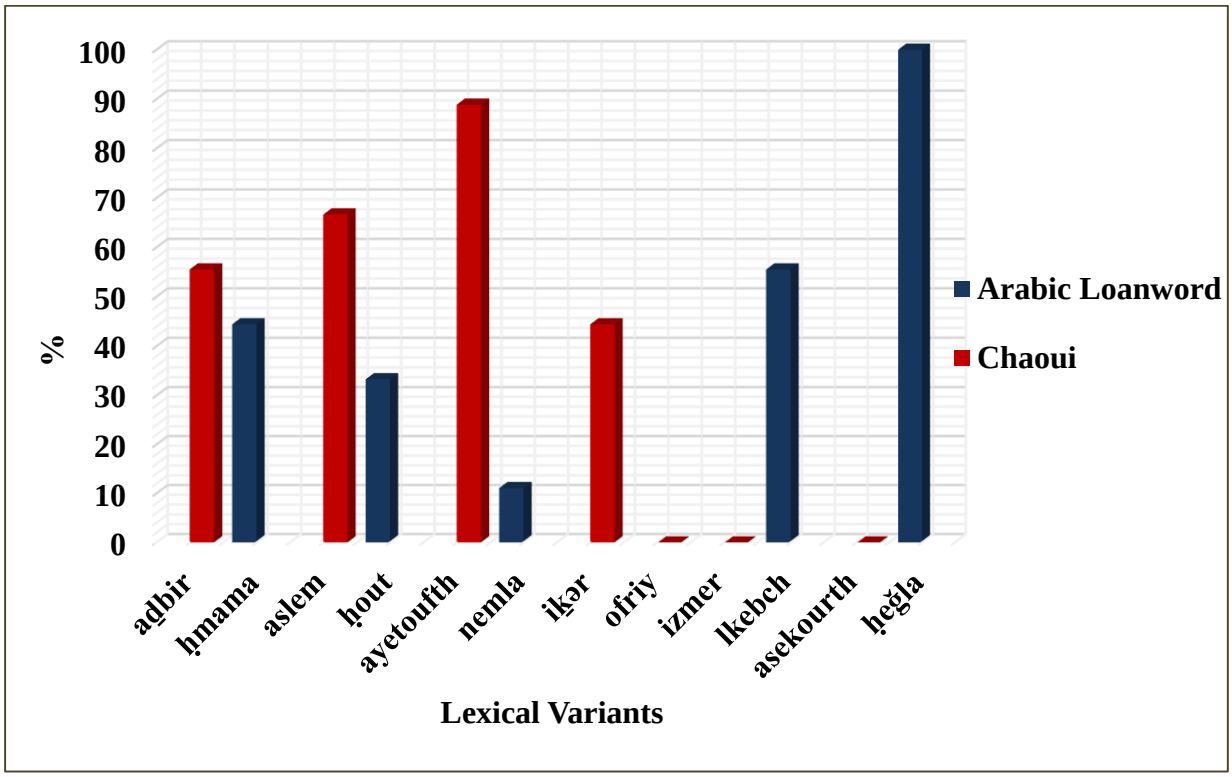

Figure 2.48 The Distribution of Five variables (Animals) in Chahinaz's Friendship Network.

The impact of Arabic lexical borrowing is clearly low in animals' semantic field. Female youngsters still maintain the Chaoui variants *aḏbir*, *aslem* [esləm] and, quite remarkbly, *ayetoufth* [ʌk̲tɔːfθ]. The Arabic loan *lkebch* is used much frequently than *iḵər* [iːk̲ər], and the other two variants *izmer* [ɪzmər] and *ofriḵ* [uːfrɪk̲] are almost ousted from the speech of females. While the Chaoui word *asekourth* [esəkurθ], meaning partridge, is almost absent from the data, the Arabic loan *ḥeğla* is still highly adopted by females.

5.5.3.2 Issam's Friendship Network

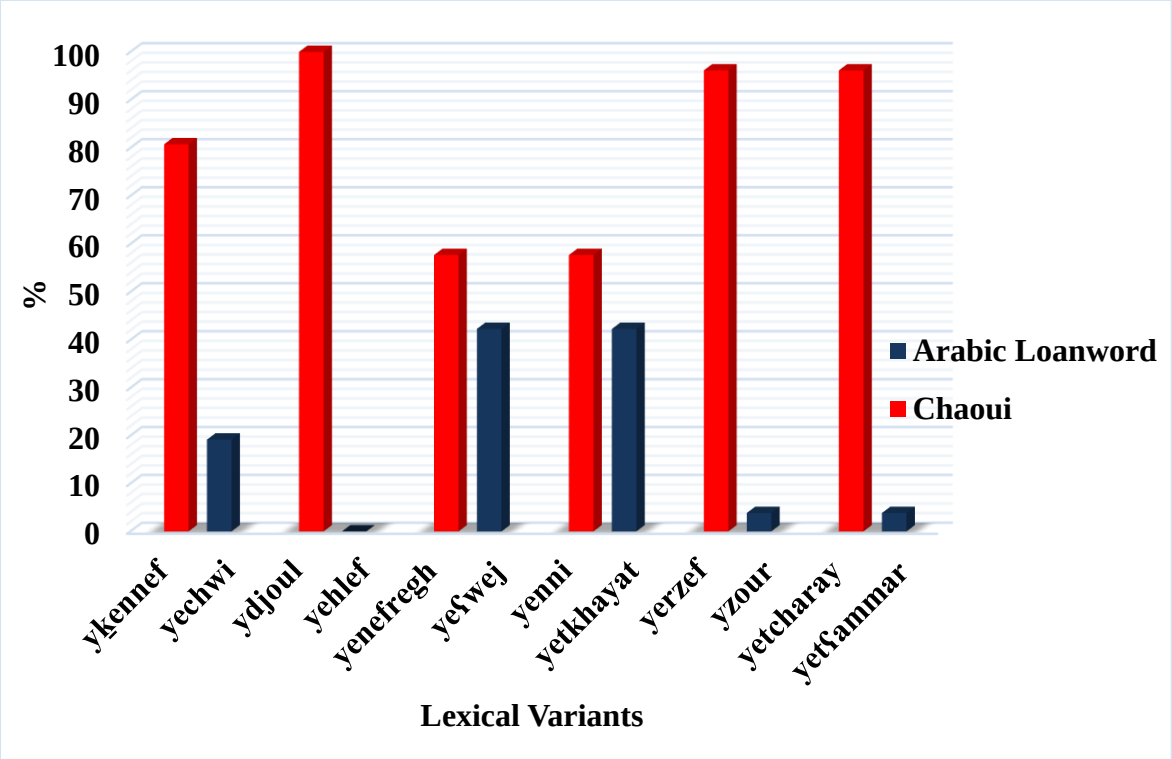

Figure 5.49 The Distribution of Six Verbs in Issam's Friendship Network.

In stark contrast to Chahinaz's network, Issam's network seems to be, without dispute, strongly conservative, socially and linguistically, and is less amenable to the influence of Arabic lexical borrowing. Male youngsters retained almost all of their native Chaoui words in all semantic fields, especially verbs, adjectives and animals. By way of example, while *yḵennef, ydəğul* and *yetcharay* are preserved in speech, the loanwords *yechwi*, *yəḥləf* [jəḥləf] and *yetʃammar* are represented with extremely low proportions.

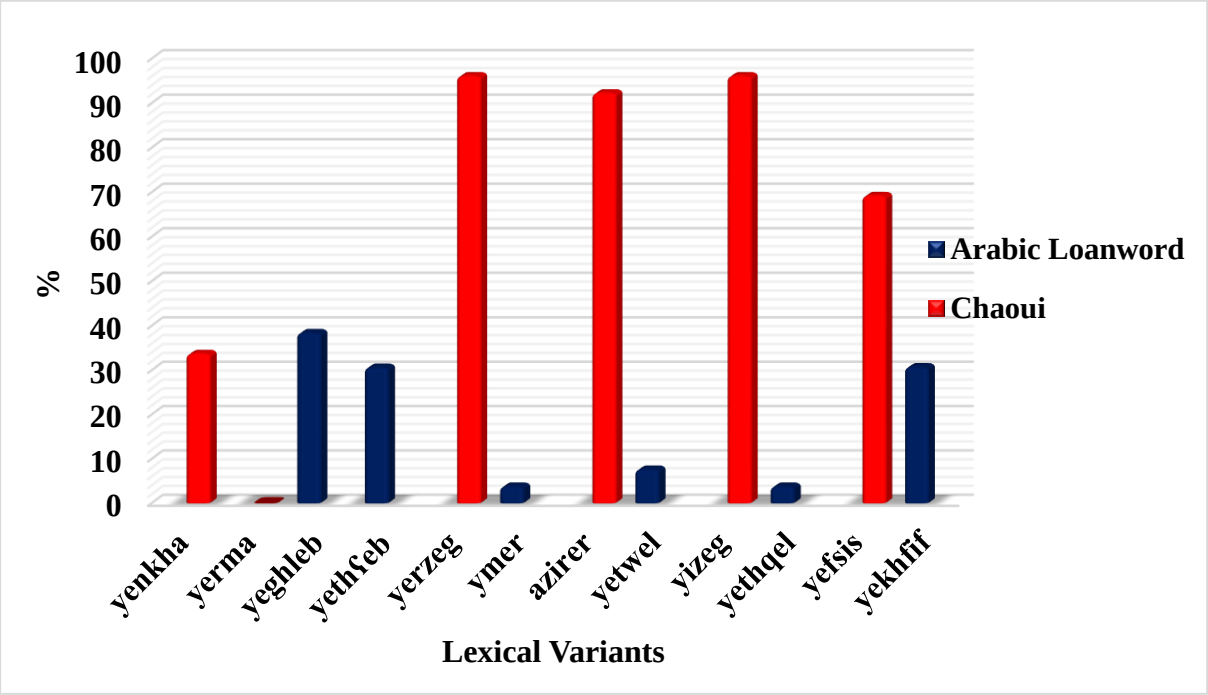

Figure 5.50 The Distribution of Five Adjectives in Issam's Friendship Network.

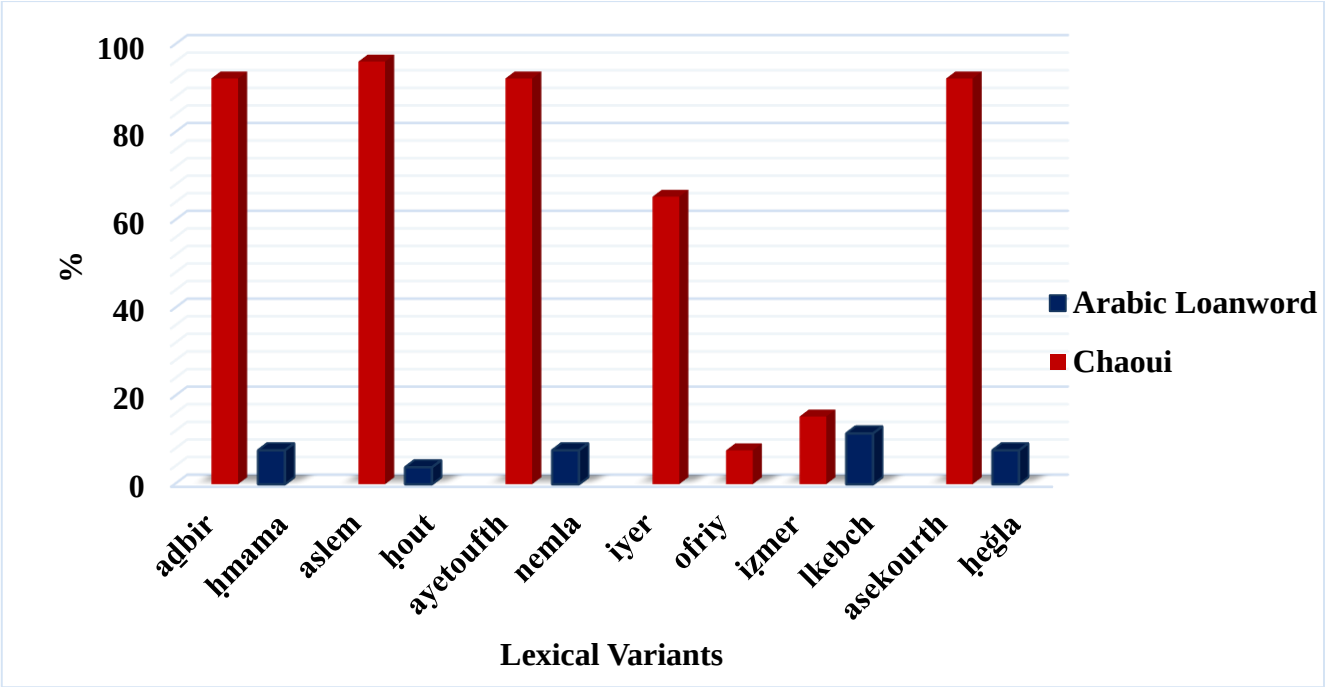

Figure 5.51 The Distribution of Six Variables (animals) in Issam's Friendship Network.

By the same token, while the adjectives *yenkha*, *yeghleb* and *yethʕeb* are used with relatively comparable proportions, the archaic word *yerma* is completely ousted from speech. As for animals category, Arabic influence is extremely low. The Chaoui variants of the lexical variables pigeon and Partridge are major preferences for all participants, whilst the Arabic loans for the same category are disfavored and absent from the speech of male youngsters.

Table 57

Proportions of Chaoui Variants in Chahinaz's Friendship Network and Issam's Friendship Network

Chaoui Variant	Chahinaz's Friendship Network (%)	Issam's Friendship Network (%)
	Verbs	
yərɣa	44.44	76.92
yneğəm	33.33	84.61
yəterğay	66.66	100
yənoum	50	11.11
yfunzər	33.33	96.15
yrouzi	44.44	34.61
yərwəs	55.55	46.15
yəsser	50	84.61
	Adjectives	
yəsʕməd^{ʕ}/yəsʕqəd^{ʕ}	50	84.61
Yzəd	66.66	84.61
mizrey	77.77	100
	Human Body	
hmerth	33.33	61.53
ɣil	50	69.15
ḥimith	66.66	88.46
haḏount	44.44	88.46
Allən	44.44	80.67
hiẓəlth	33.33	92.30
iloudayən	50	100
	Colors	
azizaw	66.66	80.76
awṛaɣ	66.66	96.15
	Weather	

aḏfəl	66.66	96.15
tağrəst	00	19.23
haməthna/nawəth / elgarəth	القرث 22.22 النوث 00 مثنا 22.22	القرث 23.07 النوث 00 مثنا 61.53
Kinship		
ayaw	11.11	92.30
ayuğil	66.66	92.30
aniğiw	66.66	92.30
Other Semantic Fields		
haẓult	77.77	96.15
hisenth	50	100
urəɣ	77.77	100
tirğith	50	92.30
aẓrəf	66.66	92.30
hisith	77.77	100
aɣmərth	00	19.23

Table 4 displays 33 Chaoui variants along with their proportions in both friendship networks. Issam's network seems to be linguistically conservative and more immune to lexical borrowing. All Chaoui variants are used with high proportions-e.g., *haḏhount, hizʿelt, azizaw, awragh, yessur*. Furthermore, of all the Chaoui variants, six lexical items are invariably (or categorically) used by all members in Issam's network-e.g., *yeterjay, iludayen, ouregh.* Therefore, it stands to reason that in all semantic fields male participants are less amenable to lexical borrowing. In stark contrast with Issam's network, the speech of female teens (Chahinaz's network) is less immune to the impact of lexical borrowing, especially in the case of verbs, adjectives and human body. Comparatively, Chaoui items-e.g., *yruzi*, *yenfuzer*, *yneğəm*, are adopted with low frequencies. Other terms, such as tejrest, *aɣmərth* [ʌɣmərθ] and *tirğith* [tɪrʒiːθ] seem to be unknown to all female youngsters. On closer examination, of all the 52 variables under study, 13 items are variably adopted by 50 % of participants. In fact, female participants reported using both variants, Arabic and Chaoui,

interchangeably in different social contexts. Such high inter-and intra lexical variations are indicative of ongoing lexical changes and, by extension, language death among female participants.The variants *ayaw* [ʌjaw], *tajrest* and *aɣmərth* [ʌɣmərθ] went out of use and eclipsed from the speech of all female participants.

5.5.4 Linguistic Practices and Identity Formation

5.5.4.1 Linguistic Profiling in Interethnic Contexts

That ethnicity and language are inextricably connected is crystal clear (Fought, 2006). This section addresses this relation, and pays a close-grained attention to how Chaouia identity, bi-ethnic identity and Arabic identity are constructed and co-constructed by participants in both friendship networks. The examples below elucidate how youngsters in both networks *agentively* employ speech norms to index a set of stances, characteristics and affiliations. Based on extensive field observations, recording sessions and ethnographic interviews, we set the task to analyze and explore, quite comprehensively, ethnicity-based language practices, most notably linguistic profiling and ethnic crossing, and will discuss, in details, the language ideologies surrounding them. The story stated in the excerpt below is the epitome of the so called *Linguistic Profiling* (Baugh, 1999), a type of language prejudice whereby listeners act discriminately against someone based on specific linguistic cues. Yazid is a Chaoui peer of Issam and one of those migrants who moved from Kef Laarous [kef leʕrɔːs], a rural village, to Batna ville in 2001. In the following excerpt, he talks in details about his pre-migration and post-migration life style, discussing the difficulties he faced to assimilate to the mainstream culture of Batna urban city:

...الواحد اصلو ما ينكروش مهما كان..نتش ذي ليغ سكنغ ذي هبعليث (منطقة في غوفي-باتنة) ليغ توثلايغ غير شاويث
..ايمدوكالن ذي اعشيرن اينو ذين اوكل ذيشاوين.. و لكن ذي لافيل كلشي يثبدل فلانغ..

əlweḥəd mʌ jənkərʃ ʌsˤlɒ mehmʌ ken..nətʃ d̠i: hbəʕli:θ (a region in Ghoufi-Batna) li:ɣ tu:θleiɣ ɣir ʃʌwiθ..imədu:kelən d̠i: iʕʃi:rən inu: ukəl d̠iʃewiən ..wʌ lʌkin d̠i: lʌ vil kulʃi jəθbedəl fəlenəɣ

"…one should always be proud of his ethnic roots..when I lived in Habeʕlith (an isolated, close knit village in Ghoufi, Batna), I used to speak Chaoui..my friends and my neighbors are of Chaoui roots..but when we moved to 'la ville', everything changed…"

Yazid, then, reported the difficulties he faced in learning Darjia after he, and his family, moved to the city:

"الدارجة ثاني بمثابة اللغة الثانية..و مليحة لازم نتعلموها..مادام رانا في بلاد خاطينا..جينا من الدوار ما نعرفو والو..و حنايا البلاصة هاذي..البلاد هاذي واعرة شوي..المهم.. تعلمنا شوي ماعليش ..نفكو رواحنا..."

derğʌ θeni bimeθebət luɣʌ θenjʌ…wə mliḥʌ lezəm nətʕəlmu:hʌ..medem rʌna fi bled xʌṭina.. ğinʌ mən dɒwʌr mʌ nʌʕrfu wʌlu.. wə ḥʌajʌ ləbləsˤʌ hʌd̠i weʕʌ ʃwi.. əluhim.. tʕəlemnʌ ʃwiə meʕliʃ..nfəku rwʌḥnʌ…

"Dariğa is like the second language..and it's good..we had to learn how to speak this language..because this is not our homeland..we migrated from 'douar' and we know nothing about the city..but still! we learned to speak it (Dariğa)..somehow.."

In the following excerpt, Yazid recalls a story in which he openly discusses language and identity-related issues with a store owner in the neighborhood:

يزيد: ما اذفغ غرك امخضافث اكتعلاقن فلاس القش؟
Yazid: mʌ ʌd̠efəɣ ɣərk ʌməxdˤefθ iktʕʌlʌqən fəles lqəʃ
(Yazid: (Chaouia) can I find a tool on which we hang objects and home clothes ..)
البائع: امم. ما فمتكش!..
Store owner: mʌ fhəmtʃ
(Store owner: amm. I did not understand!)
يزيد: هاذيك المخضافة اللي نعلقو عليها الحوايج.
Yazid : hed̠ik ʌlməxdˤʌfʌ li jʕelqɒ ʕlihʌ lʌḥwʌjəğ
(Yazid: (Dariğa) can I find a tool on which we hang objects and home clothes..)
البائع: < يضحك >..نتا باين عليك شاوي..جبايلي صح..
Store owner : <laughing > : ntʌ bʌjən ʕlik ʃʌwi.. ʒbeili sˤʌḥ
(Store owner: <laughs>.. you must be Chaoui..purely *Djbayli*)
يزيد:... < غاضب > وش معناها كلمة جبايلي.
Yazid: wəʃ məʕnʌhʌ ʒbeili
(Yazid: <angry>.. what does the word 'Djbayli' stand for?!!)
البائع: جيت من الجبل.
Store owner: ğit mən ləğbəl
(Store owner: ..that you originally lived in mountains..)

يزيد: هيه انا جيت من الدوار.
Yazid : hih ʌnʌ ğit mən dɒwʌr
(Yazid: yes! I used to live in douar)
البائع: كيفاه ما تولهتش للكلمة هاذيك (يقصد مخضافة).
Store owner : kifeh mʌ twələtʃ ləlkəlmʌ hʌdik
(Store owner: why did not you make notice of that word (that is: المخضافة).
يزيد: جينا من الدوار .. ناقصين الله غالب. بالشوي نتعلموها
Yazid : ğinʌ mən dɒwʌr.. neqsin ʌɬʌh ɣʌləb. bəʃwi nətʕelmu:hʌ
(Yazid: we lived in douar .. we don't speak Dariğa very well .. we will learn this language in the course of time..)
البائع: < يضحك >... ماكانش وش راك تحوس.
Store owner : mekenʃ wəʃ rʌk tḥewəs
(Storeowner: <laughs> … we do not have what you are looking for.)

In the neighborhood, it must be noted, Yazid speaks Chaouia with his Chaoui peers, relatives and family members. For all the Chaoui inhabitants in the neighborhood, the use of Chaouia has a socioindexical function, along with other cultural factors of belongingness and solidarity. Though migrated to a predominantly urban setting, Yazid maintained, as it is often the case with other Chaoui migrants, his pre-migration socio-ethnic ties with his Chaoui contacts and Berber culture. After he began learning Dariğa as a second variety, he availed himself of both linguistic codes, mixing and switching between Chaoui expressions and Dariğa dialect in different contexts. He uses Dariğa in public spheres and with other interlocutors who do not speak Chaouia. Yet, because Yazid does not have a good command of Dariğa, it was quite easy for the store owner to hazard a guess about his ethnic (Chaoui) and regional origins (نتا باين عليك شاوي..جبايلي صح [ntʌ bʌjən ʕlik ʃʌwi.. ʒbeili sˁʌḥ]). He not only profiled his Ethnolinguistic backgrounds, but, also, *mocked* and made fun of his way of speaking Dariğa and, then, surprisingly enough, he refused to resume the conversation. Yazid added that the store owner understood his offer, but he alluded to the fact he does not want to sell the clothes hanger (المخضافة [ʌlməxdˁʌfʌ])! The conversation between Yazid and the store

owner revealed how some speakers may act discriminately against other speakers on the basis of their way of speaking and, by extension, ethnic roots. Moreover, the excerpt stated above is prototypically one of the examples in which some urban speakers, both of Chaoui and Arab roots, ascribe *mountain life style*, *Chaouism* and *close mindedness* to migrant villagers in the sub-urban areas.

5.5.4.2 Ethnic Crossing

Ethnic crossing, as it is often the case with linguistic profiling, is one of the most remarkable and prevailing sociolinguistic practices among youngsters in interethnic settings. Crossing occurs when individual speakers tend to, deliberately, adopt salient speech norms, such as a single word, a grammatical form or a whole variety, of another ethnic group to which they do not belong (Fought, 2006). The example below is a bona fide, so to speak, of ethnic crossing whereby two Arab teens made comments on the speech of two Chaoui speakers in the bus. The Arab teens, apparently inhabitants in the urban city or la ville, cross into Chaouia to mock Chaouia and to show their distance from Berber identity and rurality ascribed to Chaoui speakers.

عبد الهادي: انخلص هادارث اسنيني.
Abdelhadi: ʌnəxləd^{ʕ} hederθ ʌsnini
Abdelhadi: when we arrive home, we will tell him.
عبد العالي: ان شاء الله.
Abdelali: inʃʌɬʌh
Abdelali: In-Chaa-Allah.
كريم : < يضحك >.. يا خويا يصمض الحال راني ***نترجيجي*** ديريكت..
Karim <laughs>..jʌ xujʌ ! jəs^{ʕ}məd^{ʕ} əlḥel. rʌni nətərğiği dirikt
Karim: <laughs>.. bro! It's cold in here. my body is shivering..
ياسين: العرش ***ايْيين*** .. < يضحك >
Yassin: that El aarch .. <laughs>
Yassin: əlʕərʃ ini:n <laughs>

The conversation took place between Abdelhadi and Abdelali, who are Chaoui friends of Issam. After Karim, an urban Arab teen, noticed that Abdelhadi and Abdelali use Chaouia in their conversation, he turned to his friend Yassin and addressed him in Dariğa and code-switched into Chaouia. The teens, apparently, do not speak Chaoui as their mother tongue, but still can insert some expressions to stigmatize Chaouia dialect. In the excerpt above, Karim used the verb نترجيجي [nətərğiği], meaning to shiver. Yet, it is clear that he uses the verb in this context to mean a body shivering caused by cold weather. Remarkably, and interestingly enough, both teens inserted the Chaoui terms نترجيجي [nətərğiği] and اينين [ini:n], meaning *that thing* or *an object*, not because they do not have lexical equivalents in their Dariğa dialect or due to imperfect learning. It seems obvious that by deliberately importing speech features from Chaouia to Dariğa, Karim and Yassin intentionally 'crossed' into Chaouia to: 1) stigmatize and make fun of Chaouia dialect and, 2) to express their distance from Chaouia identity. This ethnic crossing example echoes deep-seated language ideologies held by many speakers, notably youngster, in Batna urban and interethnic settings. An essential part of these language ideologies is the belief that speaking Chaouia is emblematic of rurality, narrow-mindedness and archaic life style. In some cases, non-Chaoui urban teens import words, expressions and even speak Dariğa with a Chaoui accent (substratum effect) to project *rebellion* against migrants, masculinity and toughness, stances believed to be emblematic of Chaoui identity. Conversely, Dariğa, though not as positively evaluated as standard Arabic and Classical Arabic, is still ascribed to modernity and urban life style. Therefore, it is equally held that anyone who does not speak Dariğa is not characteristically *oueld lebled* (ولاد لبلاد [wled ləbled]), meaning a sedentary urban citizen in Batna Ville.

5.6 Conclusion

This chapter addressed dynamics of lexical variation and change in Batna. The regression results, coupled with diagrammatical illustrations, elucidated how socially embedded variants, both Arabic and Chaoui, co-vary, systematically, with socio-regional determinants. The amount of Arabic lexical borrowing admits of varying degrees of influence on Chaoui lexical features under study. Therefore, statistical analyses yielded various sociolinguistic outcomes on Chaoui words, ranging from a complete lexical obsolescence, to prototypically cross-ethnic categorization and stability (or maintenance). In addition, the second part tackled essential dynamics of lexical change and language use in two different friendship networks which are, quite diametrically, dissimilar in terms of ethnic strength and social cohesiveness. That said, both networks played varying roles in lexical change and stability. Ethnically dense and structurally cohesive, Issam's network is a hard-shelled group that hinders lexical borrowing as male youngsters resisted the adoption of Arabic loans in favor of their native Chaoui terms. Ethnically weak and structurally loose, Chahinaz's network is a gateway through which young females are more amenable to lexical change. This chapter ended up with discussing the different ways in which ethnic identity is constructed and reconstructed in exclusively interethnic encounters, foregrounding how Chaoui and Arab speakers make use of the wider *sociolinguistic pool*, so to speak, stylistically and symbolically to index many stances and affiliations.

6.1 Introduction

Chapter six, entitled *Discussion and Conclusions*, is devoted to the interpretations and discussion of the research findings. Its structure follows a defined scheme, progressing from scrutinizing lexical change and patterns of ethnic density, contact-induced linguistic practices and change among ethnically based friendship networks, to discussion of the Syncretic Social Network Model, along with its theoretical underpinnings and methodological considerations. Part one, '*Lexical Borrowing, Ethnic Identity, and Loanword Integrations'*, considers, in details, Arabic-Chaouia Contact-based lexical replacements, along with their patterns-obsolescence, variation and stasis. In part two, *'Crossing Ethnolinguistic borders: Cultural Hybridity vs. Ethnic pride'*, light is shed on interethnic contact among Chaoui and non-Chaoui teens in Batna Ville and its sociolinguistic correlates, such as stigma, ethnic crossing and linguistic change. Part two, also, foregrounds the ways in which Batnian youngsters deploy speech features, stylistically, to mark group affiliations and/or ethnic barriers. Part three, entitled *'Pulling it all Together: Arabic-Chaouia Interethnic Contact, Convergence and Death'*, discusses dynamics of co-variance between lexical change and its socio-historical setting, and then gradually moves to touch upon its sociological and ideological bases. Basic Arabic-Chaouia linguistic correlates are also addressed, in particular those which pertain to: 1) the role of weak ties and geographically mobile speakers in speech diffusion, 2) trajectory of Arabic loanwords dissemination and, 3) issues of community integration, cultural hybridization and dialect death and stasis in Batna urban landscapes. The last section *'Rethinking Milroy's social Network Model: Towards an Interdisciplinary Approach'* suggests an extended version of Milroy's social network model. This interdisciplinary

framework, labeled as the Syncretic Social Network Model, will be discussed, along with its preponderant methodological guidelines.

6.2 Lexical Borrowing, Ethnic Density, and Loanword Integration

A key issue in Arabic-Chaouia contact induced linguistic change pertains to lexical borrowing, its socio-historical motives and morphosyntactic adaptations. A related concern is associated with the role of ethnic strength in the acceleration and/or hindrance of Arabic borrowing into Chaouia speaking areas. As evidenced in chapter five, the expected and well-attested pattern is that Arabic lexical borrowing exerted a great influence on all the semantic fields, be they weather, animals or otherwise, with varying degrees, though. The next issue to be tackled pertains to the amount of loanwords importation into Chaoui speech norms. To begin, 52 lexical variables were grouped into four categories in the lexical borrowability scale, which ranges from *low* lexical borrowing (5-25 %), to *medium* lexical borrowing (26-50 %), *high* lexical borrowing (51-75 %) and *very high* lexical borrowing (76-100 %). The borrowability scale of each variable is determined by quantifying the percentage of informants who adopted the Arabic loanword. Accordingly, lexical borrowability scale echoes the amount of Arabic impact on Chaouia lexicon, with low percentage reflecting dialect maintenance and very high percentage reflecting lexical obsolescence. Twenty words fit into the first category, low percentage, and hence are less permeable to lexical replacement. Medium percentage is represented by 19 lexical features-e.g., to sew, fish, kidney. Categories of high and very high are well-attested for 13 lexical features in the data. Hence, of all the lexical variables under examination, only twenty Chaoui words seem to be, to some extent, retained by Chaoui speakers, though with varying degrees.

Evidence from age-based patterns suggests illuminating findings about the trajectories of some of these lexical forms. Terms such as *to dream*, *powder* and *snow*, which are substantially decreasing in use across age, are more likely to eclipse from local Chaoui norms. Medium borrowability, represented by 19 words, mirrors a relatively high lexical variability on the one hand, and a high *competition*, so to speak, between different functionally lexical equivalents in Chaouia on the other. Social dialectologists concur that any process of linguistic change, be it phonological, lexical or syntactic, is proceeded by a *linguistic variability* stage, whereby two or more competing forms co-exist in one speech community (Holmes, 2001; Wolfram, 2005). Furthermore, *linguistic variability* phase can also be found within smaller aggregations, such as social networks. In keeping with the same line of reasoning, many Chaoui words, which fit into medium category, are more likely to disappear from speech and be continuously supplanted by Arabic loanwords. With the wisdom of hindsight, the verbs *to sew*, *to pay someone a visit* and *to twist*, due to their high borrowing degrees in the research sample, are comparatively more prone to dynamics of lexical erosion. As for the third category, high borrowing, nine Chaoui words, which were disfavored by most Chaoui respondents, reached an advanced stage in lexical erosion.

The sociolinguistic character of the last four variables-to get used to, to look like, rain, winter- is that of a complete dialect obsolescence. The high, advanced Arabic influence reached its final stage with Chaoui forms being completely cast aside by their Arabic counterparts. Indeed, most Chaoui words fit into the first two categories (low and medium), while only 13 Chaoui variants went out of use from day-today interactions. Therefore, one can simply infer, with confidence, that Arabic impact on Chaoui lexicon has reached an advanced phase.

A related issue pertains to the impact of Arabic on the semantic fields in Chaoui speaking areas. In essence, it is assumed that culturally exclusive domains favor lexical borrowing more than universal domains (Kossmann, 2013). An eye catching pattern is that Arabic impact on Chaouia lexicon tends to be higher in weather and time fields and less prominent in the case of metals, kinship and basic-colors, followed by animals-exclusive terms. As for word classes, comparatively, the permeability of lexical borrowing tends to be higher in verbs than adjectives. The expected and well-attested pattern is for basic vocabulary to be less amenable to change than non-basic vocabulary. Of all the 52 words, only six words are part of the Swadesh list (Swadesh, 1971), and eight make a part of the Leipzig–Jakarta list (Haspelmath & Tadmor, 2009). As predicted, color-labels (yellow and green), cold, arm, bitter and heavy are the most resistant concepts to the process of Arabic borrowing. This impermeability is quite attested for many core vocabulary shared by all cultures all over the world. Therefore, culture-independent words, such as basic color labels and body parts, which are universally common to all communities, are unlikely to be borrowed in interethnic contact situations, and Chaouia-Arabic contact is a case in point. However, four basic vocabulary terms appear to be highly amenable to lexical borrowing into Chaouia, namely: *salt* and *rain*, *fish* and *ant.*

Interestingly enough, such findings are consistent with several linguistic typology results and hierarchical arrangement models. To begin, Thomason and Kaufman's (1988) hierarchical scale suggests that content words are more borrowable than the other categories. Field (2002) asserts that content words, contrary to prepositions and suffix markers, favor semantic transparency, and thus tend to be highly permeable to lexical borrowing and replacement. Weinreich (1953) asserts that nouns, adjectives and verbs are free-standing

morphemes, and thus tend to be highly borrowable. In keeping with the same line of reasoning, it stands to reason that most of the 52 lexical variables under research are, to some extent, less resistant to dynamics of lexical changes due to their structural autonomoy and semantic transparency. Also, a plethora of studies in linguistic typology realm confirmed that nouns are the most borrowable word class in languages, followed by adjectives and verbs (Haugen, 1950; Muysken, 1981). Indeed, the results in this study, by the same token, vindicated these aforementioned borrowability scales, and went further to suggest that nouns- weather, time or animals- appear to be, to a great extent, more borrowable than adjectives and verbs. Taken together, Arabic impact on Chaouia lexicon is partially linked with form-meaning transparency and structural autonomy. That is, semantic transparency accelerates the permeability of lexical borrowing of many native Arabic loans in Chaouia speaking areas. It must be stressed that the aforementioned explanations are purely linguistic factors. Yet, semantic transparency and structural autonomy, notwithstanding their roles as accelerators of borrowing, are not the only factors that account for lexical change in Batna community. For in order to account for dynamics of lexical replacements, one must foreground other non-linguistic, sociogeographical motives as well.

A related issue pertains to the role of ethnic structures in accelerating/hindering the importation of Arabic loans into Chaouia. Intriguingly, 12 Archaic words are used by less than 20 % in both ethnic categories-e.g., *yəzmər, anẓar, miḡis, yəbga, yərma*. Such Chaoui variants were completely cast aside from Chaouia speaking areas in Batna and became almost dead words. Worst, most of them are virtually unknown to young Chaoui speakers. Lexical obsolescence was aobserved in nine Chaoui terms which are adopted by less than 25 % of speakers in both ethnic categories-e.g., *amədith*, *aɣmərth, anezayth*, *tağrəst*. The permeability

of lexical borrowing in these variables is highly remarkable as Arabic loans substantially replaced their Chaoui counterparts in the speech of most Chaoui speakers. In 21 lexical variables, Arabic impact is high in ethnically cohesive speakers and is relatively low in weakly nested speakers. Dialect stability is highly represented by variables wherein Chaoui words are frequent either in both ethnic categories. Therefore, color terms- *azizaw* and *awṛaɣ-* are still retained by most Chaoui speakers. We argue that ethnic network strength is an essential motive and a *facilitator* of Arabic borrowing into Chaouia dialect. The results indicated that Arabic loans tend to be so frequent among speakers with weak ties than speakers with strong ethnic ties. Chaoui speakers who contract with speakers of different ethnic roots are more likely to substitute their native Chaoui words with Arabic counterparts. Because of their strong Berber contacts, and because of their affinity for Berber culture, Chaoui speakers preserve their native Chaoui terms. Said differently, weakly nested groups not only favor lexical borrowing but also accelerate the transmission of loanwords, whilst strongly nested groups hinder the process of lexical replacement. Hence, internal, structural criteria, along with ethnic density, are facilitators of borrowability of Arabic loans into Chaouia vernacular norms. Winford (2010), however, asserts that a full explanatory account of lexical change and borrowability requires an account for not only linguistic factors but also for external factors as well. A full discussion of such sociohistorical impetuses will be tackled in section 6.4.

Sociolinguistic changes in the Aures province is preponderantly traceable to the long extensive Arabic-Chaoui interethnic contact between Arabs and Chaoui speakers. Historical conditions, coupled with multiple linguistic and non-linguistic constraints, have been, and are still, major impetuses for the sizeable amount of lexical borrowing into Chaouia variety. Yet,

most Arabic loans, once borrowed, were partially or completely modeled on the Chaoui inventory system. Some loanwords were subjected to phonological changes. By way of example, the Arabic loans تعب [tʌʕibʌ] ,صباح [sˁʌbaːḥ] and عشية [ʕʌʃijʌ] shifted into [jəθʕəb], اصبحيث [ʌsˁə bḥiːθ] and اعشويث [ʌʕəʃwiːθ], respectively. Lamri (2013) notes that the alveolar [t] shifted into the dental [θ] in the ending position of many Arabic loans, such as aḥmemth [ʌḥʌmʌmθ] (حمامة [ḥʌmʌmʌ]) and *lkəlyəth* (*lkəlwa*). Another partial phonological adaptation pertains to the so called Prothesis and Epenthesis (or Anaptyxis). The former refers to the insertion of a new sound at the beginning of the word, whereas the latter pertains to the insertion of a vowel or a consonant in the middle of the word (Crystal, 2008). Arabic loans لمشتا [lməʃtʌ] (الشتاء[ʌʃɪteʔ]) and يتشاباه [jətʃebeh] (يشبه [jʊʃbɪhʊ]) are the epitomes of prothesis and epenthesis, respectively. Hence, the phonological adaptation of شتاء [ʃiteʔ] involves the insertion of [l] , [m] and [ə] as in لمشتا [lməʃtʌ], and the phonological adaptation of يشبه [jʊʃbɪhʊ] involves the insertion of [tʃ] and [e] as in يتشاباه [jətʃebeh] (also يتماثال [jətmeθel]), and which in return resulted in the breaking up of the cluster consonants /jʃb/ into different syllables. Other phonological developments involve the replacement of the alveolar [d] with the dental sounds [ð] or [d̪] as in احفيذ [ʌḥfɪd̪] and يبرذ [jəbrəd̪] and the substitution of ق [q] with the alternative velar sound [g], as in [riːg], meaning saliva.

Yet, some of the examined Arabic loans were modeled altogether, both in form and meaning. For instance, the Arabic loans القر [elqɒr], القوة [elqɒwʌ] and يلمع [jelməʕ], once borrowed into Chaouia speaking areas, expanded their semantic identities to convey new meanings. The term القر [elqɒr], by way of example, which originally means *heavy cold* (Ibn Manzūr, 1883), is used by Chaoui speakers in Batna to mean rain. The sound [q] was supplanted by the alveolar sound [g] and the dental [θ] was inserted in the final position to

mark gender agreement. By the same token, القوة [elqɒwʌ], meaning power and يلمع [jelməʕ], meaning to brighten, expanded their semantic fields and are nowadays used by Chaoui speakers to mean *to be able* (يقاوا [jqʌwʌ]) and mirror (aləmeʕ), respectively.

These examples and many other loanwords were integrated ,fully or partially, into Chaouia vernacular system, phonologically, morphologically and syntactically. In some examples, loans integration was so drastic that it was quite difficult for non-linguists to hazard or trace back their etymological roots. Indeed, native speakers of Chaouia would be completely astounded if someone told them that, for intance, the words *nawəth* [newəθ] and *elgarəth* are, by their very nature, Arabic loanwords. Yet, this is quite discernible provided that such words were completely integrated, phonologically and morphologically, into the Chaouia inventory system.

6.3 Crossing Ethnolinguistic borders: Cultural Hybridity vs. Ethnic Pride

6.3.1 One Speaker, Two Ethnic Varieties, and Three Identities?

It is enlightening to discuss the interplay between weak ethnic networks, crossing and profiling. Ethnic crossing is a widely prevailing phenomenon in ethnically loose subgroups, and Chahinaz's friendship network is a case in point. As noted in Chapter five, Chahinaz and some of her peers tend to contract ties with Arab and Chaoui peers. Due to her central position in the friendship network, Chahinaz brokers both Arab cliques and Chaoui cliques. When asked about her ethnic affiliation, she replied that she does not see herself as purely Chaoui, but rather as half *Arab, half Chaoui*, a clear indication that she identifies herself as a *bi-ethnic* speaker. She, also, added that she is ethnically perceived as *half Arab, half Chaoui* by most of her peers in the network. Sociolinguistically, this explains why she avails herself of Chaoui words and Arabic loans, and makes conversational moves between both varieties in one

speech event. Put otherwise, She *agentively* code-switches between both varieties in in-group discussions to index three interrelated identities *Chaoui, Arab* and *Bi-ethnic.* This *Polyphonous Identity* (Barret, 1999) was also indexed by Selman, a friend of Issam, in many of his social encounters. In the ethnographic interview, Selman noted that he used to interact with peers from different ethnic origins. He used Chaouia with Chaoui peers to show his belongingness to Berber groups (ethnic identity), Dariğa with his neighbors to index his belongingness to Batna ville (local/regional identity). Interestingly enough, he also reported using Chaouia in in-group discussions with his peers to project toughness! Based on extensive field observations in both networks, we noted that Chaoui youngsters and their Arab counterparts tend to insert Chaoui *taboo* words and expressions in their in-group conversations to mark *rivalry* and as a teasing and/or humorous strategy.

The aforementioned results corroborate Kiesling's (2013) idea that identity is not static but rather fluid and flexible. Thus, it stands to reason that crossing has positive and negative connotations: Chaouia is emblematic of *Bi-ethnic* identity, *toughness*, *solidarity*, and *distance*. Likewise, it is used in verbal teasing, rivalry, mockery and as a humor strategy among Arab teens and Chaoui teens.

6.3.2 The Role of Brokers in the Diffusion of Arabic Loanswords across Ethnic Networks

The discussion of friendship structures noted that Chahinaz's network is ethnically weak and more amenable to linguistic change, whereas Issam's network is ethnically dense and more resistant to Arabic impact. That said, the permeability of linguistic change among weakly nested groups raises the following questions: 1) what is the role of Brokers in the transmission of new words? and 2) How does the diffusion of loanwords operate inside

friendship networks and across different networks? First, we are at pain to stress that, in order to understand the mechanisms of diffusion, one must account for several ideological and sociocultural forces (Britain, 2013)

Chahinaz, the core member in the females' network, gains a strong foothold as a *central* actor who bridges and brokers distinct ethnic cliques. Presumably, she is an early adopter of Arabic loanwords in her friendship network. She contracts weak ethnic ties, interacts much extensively with Chaoui and non-Chaoui peers, and adopts Arabic loans much extensively in the network. In stark contrast with Issam, Dounia and Ahlem, Chahinaz engages in different ethnic cliques in the network. Hence, it is possible that she adopted new lexical variants, mainly Arabic alternatives, through extensive interethnic contact with her non-Chaoui friends. Indeed, De Nooy et al. (2018) assert that persons with central positions in the network are subjected to innovation, be it technological, linguistic or otherwise. Provided that Chahinaz is situated in the center of her network, she servers as a focal point of linguistic innovation. Yet, Chahinaz is not only an early adopter of innovation, but also a Broker or a cosmopolite (De Nooy et al., 2018) of speech transmission. To put it otherwise, due to her preponderant position in the network, she links between all other ethnic cliques, Chaoui and Arab, through Brokerage. Based on the ethnographic fieldnotes, Chahinaz propagates information, news that pertain to school, education and other walks of life. In brief, she mediates between all members in her personal network. Linguistically, she acts as a *boundary spanner* of loanwords diffusion, most notably the transmission of Arabic loans into other Chaoui contacts.

In De Nooy et al.' (2018) theorizing, innovation diffusion is similar to the process of 'social contagion' whereby "many innovations diffuse in a pattern that is similar to the spread

of infectious diseases" (p. 200). In hindsight of wisdom, thus, core members would spread innovations (and news) to their close friends, peripheral members, who in return would diffuse the same innovations into other members, and so forth. Early adopters, like Chahinaz, tend to be carriers, so to speak, of Arabic loan words into other Chaoui, secondary peers in the network. De Nooy al. (2018), also, remind us that whether innovations diffuse in a swift or slow fashion depends on two basic triggers, namely: personal characteristics and type of innovation. Both criteria are well attested for the swift transmission of Arabic loans across speakers in Chahinaz's network. First, because of her powerful and central position (in/out degree=10), and because of her tight relations with all friends, Arabs and Chaoui, Chahinaz serves as a focal point of linguistic innovation adoption and diffusion in the group. The second criterion pertains to the type of linguistic innovation. In stark contrast to grammar and phonology, lexicon, be it content words or otherwise, is the most susceptible speech level to social awareness of speakers- both individual speakers and communities of speakers (Chambers, 2000). Due to its vitality and dynamism, lexicon tends to be the most amenable linguistic aspect to change and propagation (Chambers, 2000; Tagliamonte, 2016; Von Schneidemesser, 2000). Thus, in keeping with the same line of reasoning, it is asserted, extensive interethnic contact made it possible for Chaoui female youngsters to adopt new Arabic words from their Arab peers. As for diffusion, Arabic loanwords propagated from early adopters (e.g., Chahinaz) into later adopters (.e.g., Dounia and Nessma) in a quick pattern. In hindsight of wisdom, these early adopters, who contract weak ethnic ties, would diffuse Arabic words into other sub-groups and networks-e.g., classmates, family members, and relatives.

6.3.3 Friendship Networks, Dialectal Variation and Identity Construction

6.3.1.1 New Ethnolinguistic Practices among Youngsters in Batna Urban Areas

Ethnographic observations of both friendship networks yielded crucial insights into ethnlinguistic practices among youngsters in public and educational spheres. It was found that both young groups differ on many sociocultural, attitudinal and linguistic grounds. Issam's friendship network is an ethnically homogeneous group, with common positive orientations towards Chaoui identity and, by extension, Berber cultural heritage. They are all migrants who, after moving to urban city, engaged in workforce and local economy (Jewelery business). Conversely, Chahinaz's friendship network is ethnically hetergenous, that is, composed of young females who belong to different ethnic and regional groups. They have positive ethnic orientations towards both modern, local social norms, while other females have ambivalent, mixed feelings about both ethnic cultures, Berber and local Arabic folkways. Most of Chahinaz's peers were born and grew up in predominantly urban settings, while others grew up in rural areas (see section 1.2)

We know from separate areas of research disciplines, such as anthropology, ethnology, biology and sociolinguistics that youngsters form culturally distinctive subgroups, characterized by their specifiable cultural, ideological and linguistic norms. Viewed in this way, Eckert (2004) notes that the use of global terms as 'Teen culture' and 'Youth culture' in social and scientific arenas is rather too simplistic, and goes further to add that:

> Adolescents are as diverse as any other age group. First of all, they do not constitute a unified place in the path to adult status. While they all have in common their subjection to the national discourse of adolescence, they vary hugely in the extent to which they fit into this discourse and the ways in which they deal with this subjection (p. 368)

Ethnographic fieldnotes reported in this study indicated that different youth friendship networks in Batna differ in their life expectations, cultural backgrounds, community integrations and linguistic practices. This raises several issues and questions: what is the role of contact induced practices in ethnicity? Why do ethnolinguistic practices differ from one friendship network and another in Batna urban cultural landscapes? To what extent do they play a role in preserving and maintaining ethnic boundaries or assimilation? It must be noted that ethnocultural diversity among Chaoui youngsters in both networks are, also, visited in their dialectal norms and interethnic communications. As evidenced in Chapter five, the strong ethnic cohesiveness of Issam's network served as a *barrier* against lexical change and, by extension, a normative pressure for maintaining Chaoui linguistic norms. Chahinaz's weakly ethnic network, conversely, served as a facilitator of lexical change and diffusion across female youngsters.

Making a World for Themselves

That ethnicity based linguistic practices (Ethnic crossing and linguistic profiling) are socioculturally embedded is crystal clear (Fought, 2003, 2006). Viewed in this way, in order to understand these linguistic practices, one must account for the social and historical impetuses which shaped and gave rise to the local cultural ideologies in Batna community. Chaoui rural families lived in the Eastern rural regions (e.g., Arris), and then moved into specific neighborhoods in urban and suburban localities in the city. Some of them lived in *Ethnic enclaves*, along with other families of relatively similar ethnic and regional backgrounds. Yet, these migration waves were not favorably welcomed by some sedentary dwellers, who perceived them as a *contamination* and *invasion* of their homeland- La Ville. These brief sociohistorical conditions, discussed in details in

chapters one and six, set the stage for occasional ethnic conflicts between young Chaoui migrants and their urbanite counterparts, which in return were maintained by ethnolinguistic divisions and practices.

Issam's and Chahinaz's friendship networks, coupled with their cultural life modes, are the offsprings of extensive contact between youngsters of analogous and dissimilar cultural backgrounds. In fact, both networks reflect, to some extent, varying shades of multiculturalism in the Aures province. Sociolinguistically, interethnic communication between youngsters in ethnic enclaves and their sedentary, Chaoui and non-Chaoui, neighbors is by all means the focal point of language practices, such as ethnic crossing and language prejudice. It is not surprising, then, that issues pertaining to identity, ethnic solidarity and regionalism are called for in predominantly urban, multicultural landscapes. In essence, both ethnic networks pursued social differences. Chaoui male migrants' maintenance of Chaoui norms is emblematic of their sense of language loyalty and ethnic pride. Preserving Chaoui lexical, and, by and large, other linguistic norms would situate Issam and his peers not solely as loyal to their pre-migration traditional social life, but also, on a more negative note, indexes their distance from the local mainstream culture in Batna Ville. Ethnographic interviews revealed that Chaoui youngsters and their families, as well, voiced their worries about their cultural Berber values. Hence, it stands to reason that preserving Chaoui words reflects their resistance against the mainstream culture which, they assume, is a *threat* to their Berber cultural folkways and mores. Yet, interethnic communication might also yield sociolinguistic practices, most notably between minority groups and dominant groups (Fought, 2006). Arab youngsters who live in Batna urban settings are cases in point. The majority of

sedentary youngsters would die of embaressment if someone told them that they look like or talk like Chaoui people do. For many of them, the use of Chaouia is emblematic of *backwardness, rockmindedness* and *inferiority*.

The excerpts discussed in Chapter five provide us with illuminating insights into how ethnic identity and orientation are, implicitly and explicitly, projected in interethnic encounters. Sedentary Chaoui and non-Chaoui youngsters make conversational moves, such as codeswitching into Chaouia, adopting salient expressions and words, to mark ethnic boundaries on the one hand, and distance from their Chaoui neighbors on the other. The use of ethnic crossing and linguistic profiling, for instance, situated them as superior, modern and the *rightful owners* of the city.

Female Youngsters: Cultural Hybridity

While male youngsters comprise a relatively homogneous group, female youngsters constitute a culturally heterogeneous group. They vary on several regional and ethnic grounds. Some of them live in rural areas and villages, while others, as Chahinaz, were born and grew up in predominantly urban areas. As college students, they form an education-based culture and spend most of their daily social practices and activities at the university in Batna city. Taken together, university, like high school, sets the stage for the development of multiethnic networks. In this regard, language is a crucial component, not least because it marks ethnic diversity but also because it serves a socioindexical function of membership and biculturality. The great amount of Arabic loanwords in the speech of females, both of urban and rural roots, is partially attributed to the extensive ethnic contact with non-Chaoui peers in the network and in educational avenues more generally. While this is true, it is enlightening to say that researchers working on ethnic based linguistic

practices concur that interethnic contact alone is not adequate for explaining dynamics of speech divergence and convergence (Fought, 2003, 2006).

Education, prestige and identity formation are, also, plausible triggers of lexical change among female youngsters. Education is a preponderant basic factor in a sense that extensive exposure to Arabic, Classical Arabic and Modern Standard Arabic, through schooling accelerated the replacement of Chaoui terms with Arabic alternatives, such as winter, grandson and corner among females in Chahinaz's network. Education aside, another line of explanation pertains to prestige and symbolism. Because Arabic is emblematic of *elitism* and *intellect*, it is more favorably adopted by female youngsters in their daily social encounters. These explanatory accounts, it must be asserted, which correlate females' linguistic habits with prestige and literacy have been widely addressed in a plethora of introductory books and surveys on language and gender (Chambers & Trudgill, 2004, Labov, 1966, Trudgill, 1974).

The next question to be resolved is: why do females cross into Arabic in their interethnic discussions? A plausible answer to this question pertains to social identity construction. Indeed, females oscillate back and forth between Chaouia and local Dariğa to mark biculturalism. Thus, the use of Chaouia would situate them as Berbers, while the use of local Arabic vernacular would situate them as modern, youth and urban. Crossing both codes, Chaouia and local Dariğa, has an ideological basis in that females tend to express their bicultural identity in spoken discourse. Within the locally deep-seated ideologies in Batna, females and males tend to agentively avail themselves of this *Ethnolinguistic pool*, so to speak, to index a wide range of ideologically-related social meanings and personal stances.

The sociolinguitic character of the two friendship networks varies in many social and linguistic facets. The degree of Arabic impact on Chaoui norms is associated with education, gender practices, and ethnic structure, all of which intersect with deep-seated local ideologies. Chaouia dialect maintenance among migrant youngsters is a reaffirmation of ethnic membership and loyalty. Patterns of ethnic crossing among non-Chaoui youngsters is a reaffirmation that they are the *rightful owners* of the neighborhood on the one hand, and an index of their *distance* and *alienation* over Berber culture, on the other. Ethnolinguistic variability among females youngsters indexes their bicultural identity and belongingness to the local urban culture.

6.3.1.2 Ethnically Dense Subgroups vs. Ethnically Weak Subgroups

That both friendship networks differ, quantitatively and qualitatively, is crystal clear. At the macro level, Issam's friendship network is, to a great extent, more cohesive, closely tight and ethnically more dense than Chahinaz's network. The latter, in contrast, is ethnically weak as it is composed of teens who belong to two distinct ethnic groups. Likewise, male youngsters in Issam's friendship network contract *multiplex* relations, whilst female youngsters in Chahinaz's network contract characteristically *uniplex* relations. Taken together, Issam's friendship network is purely monoethnic, whereas Chahinaz's network is, by its very nature, mixed-ethnic. The ethnographic observations, coupled with ethnic density and homophily results, revealed insights into the strength of both ethnic networks. To begin, it appears that most female teens contract relatively weak, ethnically loose Chaoui ties. In contrast, almost all male youngsters contract relatively strong, ethnically dense Chaoui ties. Therefore, a quick glance over both ethnic networks indicates that Issam's and Chahinaz's networks are diametrically different in terms of Cohesiveness, ethnic density and, by

extension, social structure. In keeping with Milroy and Milroy's (1978) *Norm Reinforcement* idea, Issam's ethnically dense network acts as a *hard-shell* against the adoption of Arabic loanwords, whilst Chahinaz's ethnically loose network is prone to lexical change. Put it otherwise, because all members in Issam's network contract ethnic ties with Chaoui peers, they are more resistant to lexical borrowing. Conversely, participants in Chahinaz's network, who contract ethnic ties with Arabs and Chaoui peers, are more amenable to adopt Arabic loanwords.

6.3.3 Cousinhood, Kinship Ties, and Dialect Stasis

The historical sketch of *Ichawiyen* groups revealed that their social organizations are genealogically based, and their ethnic composition comprises of families with analogous kinship ties. Some of these pre-migration ethnic groups were also aggregated by, genealogically, unrelated agnatic Chaoui families (Ben Idir, 2016, Bourdieu, 1958/1962). Some of the well-known Chaoui extended families in the Eastern parts of Batna community include Eth Mloul [eθ mluːl], Eth Mensour [eθ mn sˤ ɔːr], Eth Muhand Rahmoun [eθ mʊḥend rəḥmɔːn], Eth Fateh [eθ fetəḥ], Eth Weryech [eθ wərjeʃ], Ewled Dawed [wled dewəd], to name but a few (see section 2.1). Apart from the common history, blood and sense of place, cousinhood, usually labelled Ben Ammis [bni ʕəmiːs], serves not only as a symbol of Chaoui ethnic identity, but also as emblematic of ethnic solidarity and distinctiveness (Tillion, 1938). Some of these Chaoui families migrated in groups and individually to Batna urban city, and lived in ethnically dense, hard-shelled neighborhoods.

For Many other migrant Chaoui groups and also sedentary inhabitants, maintaining kinship ties in Batna urban landscape appears to be a far-fetched goal if not magical, provided that Chaoui migrant families broke into new social and ethnic ties, and became dispersed

geographically into different areas in Batna ville, most notably in sub-urban areas and on the fringes of the city. Yet, the opposite also holds for some other extended families, especially those which migrated from the eastern villages of Batna. Ethnically and culturally homogenous, Chaoui migrant families in these ethnic enclaves struggled to maintain their pre-migration ethnic ties and life modes. For many of them, preserving their heritage dialect Tachawit serves as a linguistic barriers and, by extension, ethnic barriers against Batna mainstream local dialect norms. Viewed in this way, it is not surprising that *Kinship* criterion is one of the most significant determinants of ethnic cohesiveness in Issam's friendship network (mean= 2.00). migrant families, by virtue of their monoethnic fabric, sustained their ethnic homogeneity and kinship ties for almost three decades. There is a deep-seated belief among these Chaoui indigenous people that Chaoui kinship system must, at best, be *purified* from any non-Chaoui roots. Within the same migrant families, for instance, Chaoui elders view ethnic admixture with non-Chaoui inhabitants as a *threat* to their ethnic membership. Not surprising, then, that interethnic marriage, to take one example, is still banned in many migrant *extended families*, such as Beni ʕmer [bni ʕmər], Eth khellaf [eθ xəlef] and Eth Rahmoun [eθ rəḥmun].

As noted in Chapter one (section 2.1), Several massive migrant families, most notably those who moved from villages as Arris, T'Kout and Ghassira, sought ways to preserve their ethnic membership and kinship ties. Therefore, the inextricable link between *cousinhood* and dialect stasis among friendship networks of the kind observed in Issams's ethnic group is highly conceivable. There are two ways to explain this strong connection. At the macro level, the ethnographic fieldnotes revealed that Issam, his peers and their Chaoui parents, too, use Chaouia in almost all social domains-e.g., home and workplace. Issam, Yazid and many of

their peers are not only intimate friends but also relatives, cousins and coworkers who grew up together and sustained their kin relations from infancy. All members prefer to befriend peers with whom they share similar ethnic and kinship roots. Viewed in this way, the high use of Chaouia is central for preserving their friendship networks, not least because it is emblematic of ethnic membership, but also it marks their ethnic loyalty and attatchement to their pre-migration rural and cultural folkways. At the micro level, equally, findings reported in chapter five revealed that individual males in Issam's network are resistant, to a great extent, to patterns of lexical replacement, and hence are more conservative in their use of Chaoui lexical features. In addition to the strong ethnic engagement and group cohesiveness, impermeability of lexical borrowing is attributed to the strong genealogy-based ethnic relations. Indeed, preserving Chaoui dialectal norms does not only situate them as Imazighen, but also construes their strong kinship ties and genealogical roots. So related are cousinhood and Chaouia in Issam's friendship network that, the use of a single Arabic utterance or code mixing is not accepted in the group. Indeed, if a Chaoui speaker uses Arabic words, or does not know the meaning of some Chaoui words, his Chaouism and ethnic affiliation will be questioned. In brief, the fabric of Issam's friendship network is glued by a shared history, a sense of ethnic belongingness, and kinship relations, all of which are maintained by a shared heritage dialect and linguistic norms. Presumably, their sense of cousinhood plays a major role not only in their sense of ethnic solidarity, but also in their ethnic isolation and linguistic isolation in the neighborhood.

6.4 Pulling it all Together: Arabic-Chaouia Ethnic Contact, Convergence and Death

As strongly evidenced in previous sections, the expected and well-attested pattern is for the permeability and advancement of lexical replacement to co-vary tightly with the density

of Chaoui ethnic structures. Put plainly, the general sociolinguistic profile that best accounts for Arabic-Chaouia contact is for strong, multiplex Chaoui ties to promote dialect stasis and for weak uniplex ties to favor the adoption of Arabic loanwords. Chaoui respondents, notwithstanding their distinct regional identities, and whose ethnic contacts are of chaoui descent in most domains-e.g., family and relatives- tend to be conservative in their use of Chaoui vocabulary and, by extension, Chaoui dialectal norms. The opposite, also, holds true for Chaoui respondents with weak ties, that is, those whose personal networks are composed of Chaoui and non-Chaoui contacts. Said differently, Chaoui respondents whose intimate friends, relatives and co-workers are ethnically ascribed as non-Chaoui or of mixed ethnic roots, are at the leading edge of Arabic loanwords importation. In keeping with Milroy's (1980) social network theory, densely nested Chaoui networks exert normative pressures on individuals' linguistic habits, be they code-switching, interactional and communicative devices, and even fine-tuned speech segments, such as lexicon and phonetic details. This inextricable link, it is argued, may possibly pertain to the so called Peer Effect, wherein "members police each other's behavior (consciously or unconsciously) because of the intensity of their contact." (Meyerhoff, 2006, p. 187). Indeed, as a rule of thumb, any person would try to adjust his/her behaviors to those of the people with whom he/she contracts tight socioethnic relations. Conformity and peer effect, it must be noted, account for not solely linguistic behaviors per se, but also social behaviors, life modes and life expectations more generally.

Viewed in this way, specifiable, ethnic networks of mutual support tend to, deliberately or undeliberately, monitor individuals' life-modes, ideas, aspirations and ways of speaking. Unless individuals conform to their peers, socially and linguistically, they might possibly be

excluded from the group and their membership will be questioned. It is not surprising, then, that Chaoui respondents with tight ethnic relations are more resistant to Arabic impact and more prone to preserve their native Chaoui lexical features. The opposite also holds true for weakly, nested Chaoui respondents. Provided that respondents' personal networks are composed of mostly Arabic or ethnically mixed origins, chances are that they, consciously or subconsciously, conform to their close contacts linguistically, such as substituting Chaoui words with Arabic borrowings. Furthermore, because they engage in groups of different ethnic groups, such as Arabs, Chaoui and Chaoui interlocutors who do not speak Chaouia, respondents with weak ethnic ties do not feel the *pressure* to conform to one ethnic group, and hence tend to be more susceptible to lexical borrowing and linguistic innovation. Thus, the hypothesis put forth in this research work seems to be confirmed. The predicted and approved pattern is for differences in ethnic network strength to be maintained by sharp linguistic demarcations. Arabic impact appears to be less advanced among respondents with dense Chaoui ties than respondents with weak ethnic ties.

Dialect Accommodation and Obsolescence

The findings reported in chapters five and six, demonstrated, quite convincingly, that a sizeable amount of Arabic loanwords supplanted native Chaoui equivalents, though with varying degrees. The generalization that, it is assumed, accounts for these linguistic developments is that Chaoui variety is gradually converging to the Arabic dialectal norms in Batna community. As convincingly elucidated throughout this thesis, the inescapable linguistic developments in Batna community suggest quite strongly that many Chaoui speakers accommodate to dialectal speech norms associated with urban landscapes, most notably in the realm of lexicon. Convergence patterns of the kind described in this research

have been widely researched, theorized and documented elsewhere in several linguistic contact situations (Auer et al., 1998; Bell, 2007; Bortoni-Ricardo, 1985). In addition, such linguistic developments could be taken as a strong evidence of progressive dialect obsolescence in Batna community, in particular in the urban areas and regions on the fringe of the city (e.g., Tazoult). In as much as a long body of Chaoui words were eclipsed and is cast aside by Arabic competing equivalents, it is quite evident that a gradual lexical obsolescence is taking place.

The intricate connection between dialect obsolescence and ethnic structures is, to some extent, conceivable. Dynamics of convergence and gradual language obsolescence increment among ethnically weak and mixed networks than ethnically cohesive Chaoui networks. The erstwhile categories are less immune and resistant to lexical borrowing, because they are highly ethnically diverse, less susceptible to norm reinforcements, and thus are more likely to promote the adoption of new lexical segments. Furthermore, our core understanding of Chaoui ethnic structures is that, in stark contrast to dense networks, ethnically weak and diverse networks accelerate and facilitate dynamics of dialect accommodation and convergence, which are, in return, the corollary of ongoing dialect change and dialect obsolescence in Chaouia in Batna community.

Dialect Change in Chaouia and its Social Constraints

The slogan “each word has its own history” has commonly been suggested as a trenchant criticism to Neogrammarians’ views of sound laws. Its veracity, as repeatedly evidenced in this study, still holds true in the case of lexicon. On closer inspection, Arabic impact on Chaouia ranges from high borrowability, with some Chaoui words being completely eroded, to low borrowability, wherein Chaoui terms being highly retained. Two recognizable

examples would be *tağrəst* and *ayuğil*, wherein the former is completely replaced by *lməchta*, whilst the latter sustained its currency in daily speech. While some Chaoui terms are associated with two social constraints, other terms are associated with four external factors. However, this study noted that some recurring socioethnic explanations hold true for most variables under examination. By way of example, in addition to ethnic strength, ethnic orientation towards Berber culture is a strong factor in dynamics of lexical replacement. Based on specifiable cultural, ideological and linguistic criteria, Chaoui speakers fit into either high or low engagement in Berber culture and folkway, which are in return sustained by sharp and variable lexical demarcation. So any Chaoui speaker in Batna has positive orientation towards Berber culture if he: is strongly attached to Berber folkways and lifestyle, is loyal to Chaoui and Berber identity, reads and watches TVs in Berber and listens to the Radio in Berber and Chaoui. The same speaker is said to have low ethnic engagement in Berber culture if: he is less attached to Berber life modes, has negative attitudes towards Chaoui groups (and variety) and interacts much extensively with Chaoui inhabitants. Provided that language is essentially dovetail with culture in any locality, it goes without saying that highly engaged respondents would be linguistically conservative, whilst their less engaged counterparts tend to be more open to lexical innovation and change.

Interestingly enough, women tend to be relatively susceptible to lexical change, whereas men tend to be linguistically conservative. In this regard, we assume an ideological basis to these consistent gender-based patterns. The extensive adoption of Arabic loans by Batnian Chaoui women echoes their desire to sound urban and Beldiyette (i.e. sedentary), two deep-seated language ideological motives associated with local, urban speech norms. In keeping with Eckert (2000) and Myerhoff (2006) standpoints, we argue that Batnian women's

susceptibility to prestige and style could be an impetus to their tendency to use more Arabic words, along with the positively evaluated language, French. Historically, patriarchy and gender roles demarcations, which have been shaping the Batnian sociological reality ever since late 1960s, became increasingly blurred as Chaoui women sought ways to strengthen their social positions in society and searched for salient ways to engage more in the public life. Women's search for ways "to signal their social status by how they appear and behave (including linguistically) than by what they do" (Chambers & Trudgill, 2004, p. 84), was marked by their adoption of salient socioindexical forms, such as Arabic features and French expressions. The association between women and patterns of lexical change cannot be assumed to be found in other social contexts, especially those in which 'patriarchy' is the norm or in which women are deprived of education and engagement in workforce.

While geographical mobility does not feature in almost all regression analyses, ethnic homophily patterns with the distribution of many Chaoui words. For while heterophilous friendship networks promote the propagation of Arabic words, homophilous networks and, to some extent, mixed ethnic groups support dialect stasis. In this regard, it is important to reiterate the role of peer effect in patterns of lexical differentiations. Friendship networks, which are ethnically homogeneous, are resistant to innovation from outside the group, as opposed to heterphilous networks (composed of mostly Arabic peers) which play preponderant roles in the dissemination of loanwords to other Chaoui members. Though ethnic homophily has been widely theorized and researched in sociological and cultural disciplines, its veracity in sociolinguistic enquiry is far from obvious (Wassink, 2016). With this research gap in mind, even if this research study provided some insights into the role of ethnically homophilous groups in language change, it should not be generalized to other

contexts. A large body of research must be conducted in different multicultural landscapes, the objective of which will be to cast light on (ethnic) homophily and language variation in other unexplored settings.

Apart from ethnic engagement, gender and homophily, regionality is proved to be a strong determinant of lexical replacement in particular and dynamics of dialect obselescence more generally. The predicted and well-attested geography-induced pattern is for urban areas to be focal points of high ethnolinguistic change and for rural areas to be focal areas of dialect stability and maintenance. Put plainly, high Arabic impact on Chaouia is highly noticeable in urban settings, whereas speech conservatism is highly prominant and pervasive in rural settings. However, even though such explanatory accounts hold true for many geographical areas, we argue that such causative equations are too overtly simplistic. Geography, we assume, crisscrosses with several sociocultural forces, most notably the ethnic composition of the region, proximity and migratory processes. As elucidated in section 5.3, polyethnic settings of the kind described in Batna ville, Tazoult and Ain Touta, give rise to high linguistic diversity and change, whilst monoethnic settings are ethnolinguistically less heterogeneous, promoting dialect stasis, instead. Monoethnic areas dominated by Arab inhabitants are, like polyethnic areas, the center of speech change in Chaoui. Indeed, provided that Dariğa is spoken by the majority of unrbanites in Batna, Tazoult and Barika, Chaoui groups unavoidably accommodated to the mainstream local Arabic norms. As for monoethnic Chaoui villages of the sort found in T'Kout and Ghassira, Chaouia is the privileged variety and is used in almost all social encounters and economic transcations. In southern, monoethnic areas, wherein local Arabic is the dominant variety, Chaoui speakers are highly influenced by local Arabic vernacular norms. Because of the extensive ethnic contact between different

ethnicities in polyethnic and monoethnic Arabic settings, Chaoui speakers adopted many Arabic loanwords, as opposed to their Chaoui counterparts in monoethnic Chaoui areas, who appear to be highly conservative in the use of Chaoui forms. To put it otherwise, in the erstwhile two ethnic categories, Chaoui groups converged linguistically to the local Arabic speech norms associated with the dominant Arabic groups. In the latter category, conversely, Chaoui groups constitute the majority of inhabitants, and hence preserved most of their native Chaoui norms.

These correlations lead up to ask the following question: to what extent are ethnic composition, geography and dialect obsolescence interrelated? dialect obsolescence in Batna community appears to be highly remarkable in urban, polyethnic areas and rural areas dominated by Arabs. Dialect obsolescence is less pervasive in monoethnic Chaoui villages. Put it plainly, it appears that the sociolinguistic status quo of Chaouia in urban areas and outlaying areas is highly *vulnerable* and tends to be more amenable to dynamics of dialect erosion, whereas Eastern rural settings are, to a great extent, conservative and more immune to Arabic influence.

Evidence from cross-generational patterns, also, provided conclusive results about lexical change in Batna community. In almost all logistic regression distributions, wherein age is statistically significant, Chaoui variants are strongly associated with the oldest generations, whilst Arabic loans are strongly associated with younger generations. Age-correlated lexical differentiations of the sort examined in this study can be foregrounded and explained in terms of the so called *Apparent-Time* hypothesis which postulates that:

> The speech of, say, 40-year-olds today directly reflects the speech of 20-year-olds twenty years ago and can thus be compared and contrasted meaningfully to the speech of 20- year-olds today.

> Differences in the speech of 40-year-olds and 20-year-olds with respect to some linguistic variable are attributed to the progress of a linguistic innovation in the twenty years that separate the two groups. (Chambers & Trudgill, 2004, p. 151).

Linguistic innovations, be they lexical or otherwise, tend to increment in use as one moves down in age spectrum; that is, from the oldest age cohort to the youngest cohort. Synchronically based projects of the kind described in terms of Apparent-Time assumption have been well-attested for lexicon realm (Boberg, 2010; Chambers, 1995; Johnson, 1996), and also for other linguistic levels, such as phonology (Bailey et al, 1991; Labov, 1963).

Based on the Apparent-Time hypothesis, the linguistic habits of Chaoui elders in their seventies, reflect, to some extent, the speech patterns characteristic of Chaouia dialect norms spoken 50 years ago, that its, in the 1970s. Statistical differences between Chaoui speakers in their seventies and speakers in their twenties would mirror the progress of lexical change in the last half-century. On closer inspection, two distinct profiles of age-based differentiations emerge. First, 16 words displayed a prototypical cross-generational pattern, with Arabic loanwords *progressively* substituting native Chaoui alternatives-e.g., *to grill* (meat), *to look for*, *salt*. In the second profile, however, age-correlated differences are *sharply stratified* in a sense that there is a large gap between in the oldest age-groups-60s and 70s-and other age groups. Frequencies of Chaoui words reach their peak stage in the oldest age-cohorts, then *abruptly* drop in the other age groups, a strong indication that lexical obsolescence is taking place, most notably in urban areas. Taken together, elders and middle aged speakers retained their Chaoui words, whereas youngsters adopt more Arabic loanwords. Provided that Arabic impact advances as one moves down in age spectrum, one can infer that youngsters are at the leading edge of ongoing lexical changes

in Batna community. Socially, Chaoui elders constitute insular, homogeneous age-cohorts in Batna society. Their use of Chaoui words marks their strong desire to preserve Berber ethnic ties. Also, since most elders are illiterate and geographically non-mobile, they are less amenable to Arabic impact. Because of their insularity and illiteracy, elders are less integrated in the local cultural norms and more resistant to the social and linguistic developments in the community. In stark contrast with elders, young adults and teens go at length to differentiate themselves from their parents and grandparents, both culturally and linguistically. Because Chaouia is emblematic of rurality and traditional life modes, young Batnian speakers avoid the use of Chaoui words and adopt more Arabic words and, by extension, Arabic local norms. Therefore, negative evaluative norms ascribed to Chaouia, and which are deeply ingrained in Batna local ideologies, gave rise to these sharp linguistic demarcations across age groups and to the high patterns of Arabic lexical borrowing in the speech of younger generations. Furthermore, the sharp lexical demarcations of the sort described in the second profile explains the mutual intelligibility problem found between generations in Batna ville. Indeed, young Chaoui speakers find it quite difficult to understand and communicate with their parents and grandparents, who are sociolinguistically competent in Tachawit.

Another line of explanation is related with geographical mobility and education. Indeed, most Batnian youngsters, both urban and rural, have a broader spectrum of opportunities to move to different places and to interact with speakers with whom they differ on several sociocultural grounds. Also, most youngsters were, still, extensively exposed to Arabic (Classical Arabic and Modern Standard Arabic) through schooling, interaction with non-Chaoui speakers, media and TV. These two factors-mobility and

education-coupled with stigmatization of Chaouia, are significant external forces behind the sizeable amount of Arabic loanwords in youngsters' speech. Presumably, due to their social dominance, it is plausible that young Chaoui speakers will lead other generations in the process of dialect convergence in Batna city.

Touching the Past: Real Time Verification

In attempt to trace back the historical trajectories of some ongoing lexical changes, we set the task to analyze some old Berber dictionaries and dialect surveys carried out in different points in time. On closer examination, earlier texts and survey reports of the kind scrutinized in this research posit some methodological concerns in as much as they differ from synchronic surveys with regards to: 1) sample characteristics; 2) methodology; 3) variables examined and 3) historical settings. While this study recruited respondents who differ on many socioregional grounds, yielding a heterogeneous sample, earliest descriptions relied on relatively homogeneous samples, composed of solely native, rural elderly speakers (Basset, 1961; Mercier, 1896, 1900). Also, although earliest studies relied on the use of questionnaires and introspections of native Chaoui speakers, they did not account for many lexical variables examined in this study. Third, even though earliest dialectologists recorded Chaoui words in naturalistic, conversational contexts, they failed to account for their variability and frequencies in speech. However, despite the fact that such textual sources do not provide strong evidence for data comparability, they provided us with an idea about some lexical features which are favorably used in earliest lapses of time axe. By way of example, in 1883, René Basset reported that *aziza* and *yəsˤmədˤ* [jəsˤmədˤ] were dominant in the speech of many Berber speaking areas in the Aurés. Gustave's groundwork on T'Kout region in 1896 and 1900 reported eight Chaoui terms as

the dominant choices; namely: *hisith, haḏount, haẓult, ykenəf, hamәthna, anezayth, amədith, yizʿag*. Intriguingly, these eight chaoui variants are used in the 21 texts reported in Gustave's work (also documented in Lafkioui & Daniela, 2002). This eye-catching insight can be taken as an evidence that these eight words were common choices in T'Kout speech norms in early 1900. In 1961, Basset published a book entitled *'Textes Berbéres de L'Aurés'*, in which he documented local stories and fables (Hiksiḏin) retold by native Chaoui speakers in some Batnian rural localities, such as Aït Frah in Ain Zaatout, Southern Batna. The analyses of these texts revealed that 19 Chaoui variants were commonly used by Chaoui speakers in early 1960s: *aḏfəl, hmerth, yizʿag, yezirəth, yzəd, awẓraɣ, azizaw, ayuğil, aẓrəf, urəɣ, hisenth, ygeni, yədğul, tağrəst, yur, anezayth, amədith, hamәthna, yəbga.*

The aforementioned textual data provided insightful information about patterns of lexical variation and change in earliest lapses in history and in several Chaoui speaking areas, such as T'Kout in the East, Ouled Sellem (Alexander, 1912) in the west and Bni Freh in the South. A dearth of historical records noted that *anezayth* [ʌnəzeiθ] and *amədith* [ʌmədi:θ] were favorably used in the Aurés in early twentieth century (Mercier, 1896, 1900) and also in early 1960s (Basset, 1961). This work provided a strong evidence that *anezayth* and *amədith* are completely ousted from the speech of youngsters, most remarkably in rural and urban settings. A comparison of Real-Time data with Apparent-Time data provided insights into the trajectories of both variants in the last 100 years. *anezayth* and *amədith* have been the only preponderant lexical choices as of 1880s until early 1960s. Historically, the period that lasted from 1962 to 1980 represents the rise of Arabization and establishment of educational institutions in many cities in Algeria.

Presumably, the Arabic alternatives *asebəbhith* [ʌsˤəbḥiːθ] and *aʕchwith* made their ways to different educational and public avenues, gaining a strong foothold as novel competing forms for the native Chaoui terms *anezayth* and *amədith*. Since late 1980s, *asebəbhith* and *aʕchwith* gradually replaced the Chaoui equivalents and continued to disseminate into different social and regional groups. In the last two decades, while *asebəbhith* and *aʕchwith* became dominant choices in speech, *anezayth* and *anezayth* were almost cast aside from speech such that they became virtually unknown to the majority of Chaoui youngsters in Batna. Viewed in this way, then, preexisting data of the sort used in this research work, notwithstanding their methodological concerns, provided us not only with Real time verifications of current synchronic examinations, but also with insights into how specifiable lexical forms vary and change in the course of time. The lines of explanations discussed above lead up to two essential results (or axioms):

a. Each word has not only its own history, but also its culture and social meanings.
b. Lexical changes must be contextualized within its socio-cultural milieu. Following somewhat from Young and Bayley (1996), the trajectory of lexical change and diffusion of each word, socially or spatially, cannot be understood or examined without reference to other socioethnical forces. Indeed, dynamics of dialect assimilation or stasis in Batna must be examined with reference to various interrelated facets: spatial (regionality and mobility), ideological (attitudes), social (gender and age), ethnic (ethnic orientation, ethnic strength, ethnic composition and ethnic homophily) and historical impetuses.

Multiethnic as it may seem, Batna ville and the other outlying urbanized regions represent a conurbation landscape wherein new ethnic network enclaves evolve, existing social networks are established, hierarchies of community integrations fluctuate and new contact-induced linguistic developments take place. In essence, Batna community admits of varying degrees of cultural integration. This research demonstrated that what appears to be, linguistically and socially, homogeneous is in reality heterogeneous in as much as different Chaoui groups and individuals participate differently in dialect convergence and divergence dynamics. By the same token, it was demonstrated that multiethnic networks support the dissemination of innovations into various strong networks. In Batna ville, multiethnic young groups of the sort found in Chahinaz's network are ethnically less cohesive and culturally more integrated in the urban mainstream local norms and life modes. Many of these networks are culturally hybridized in a sense that teens of distinct ethnic roots are more prone to acquire new cultural norms, ethnic life styles and *ethnicities*.

Provided that urbanized Arabic culture is socially privileged, along with French, in Batna city, many Chaoui migrants, most notably youngsters, accommodated their folkways, social behaviors and speech norms to the dominant Batna mainstream urban culture. The corollary sociolinguistic counterparts of such multiethnic networks are: high degree of Arabic lexical borrowing, codeswitching practices and subtractive bilingualism. Indeed, the high permeability of lexical change among female youngsters marks their strong desire to project *new* ethnic life modes associated with modernity. They, also, avail themselves of Arabic and Chaoui forms with salient socioindexical functions to cross ethnically from one ethnicity into another. Therefore, Batna urban city represents a linguistic pool, so to speak, for many youngsters who adopt new forms to mark social and

personal affiliations. Milroy and Llamas (2013) assert that weak ties outnumber dense social networks. This is well-attested for urban cities as Batna ville, in which different ethnic groups and individuals engage in different networks and communities of practice. Because female youngsters of the sort described in Chahinaz's network contract weak ethnic ties, they serve to be not only as *adopters* of innovations, but also as *carriers* of innovations, social and linguistic, into other groups. In this regard, Milroy and Llamas (2013) add that "mobile individuals who have contracted many weak ties but occupy a position marginal to any given cohesive group are in a favorable position to diffuse innovations." (p. 419). Thus, this study tried to revisit some established core understandings of migratory processes, ethnic contact and linguistic changes in urban and multicultural settings.

An eye-catching result is that not all migrant families and groups assimilate to the urban communal ethos and mores. migrant families of the sort examined in this research preserved, to some extent, their pre-migration life modes, and thus are less socioculturally integrated in the local norms of Batna ville. As of 1990s, the migrants lived in some geographically confined, insular neighborhoods, characterized by their distinct cultural and linguistic practices. Most of these hard-shelled aggregations sought ways to sustain their sociocultural distinctiveness against the local mainstream urban norms in Batna. For instance, interethnic marriage is prohibited within these local Chaoui families and interethnic relations with non-Chaoui inhabitants is kept to the minimum, except for daily economic transactions. Women do not participate in daily public life and migrant Chaoui men work as jewellery salespeople inside and outside the city. Most of young adults, such as Issma's friendship networks, did not attend school, preferring to work in jewelry

business at an early age. These socioeconomic conditions gave rise to insular, less-integrated ethnic groups, both ethno-culturally and linguistically. Viewed in this way, Chaoui networks of multual support, such as those of Issam's network, tend to be resistant to dialect assimilation patterns and change in Batna urban landscape.

As noted in chapter four, we embraced Wallace's (1961, as cited in Duranti, 1997) suggestion that ethnographers need to give more weight to cultural diversification. However, despite the seemingly ethnolinguistic diversity that characterizes Batna community, most speakers, Arabs and Chaoui, share certain *commonalities* that make them members of one community, such as a common history, religion and local dialect. The latter, Dariğa represents the commonly used variety in the city, shared and used by speakers who identify with different ethnic and regional groups-e.g., Chaoui, Arabs, Arabized Berbers, commuters, sedentary and migrants. In Batna ville, the Dariğa *version*, which is used by villagers and migrant Chaoui speakers, is comparatively more influenced by Chaouia linguistic inventory-substratum effect- than Dariğa version spoken by their sedentary counterparts. Thus, with the absence of visual clues, it is quite easy for a sedentary speaker to guess the regional/ethnic roots of another speaker as *ğbayli* [ʒbeili], for instance. Furthermore, these subtle linguistic segments tend to trigger local ideologies and linguistic practices among speakers in interethnic communication situations (e.g., the conversation between the storeowner and Yazid, see Chapter five).

Connecting the Dots

This research vindicated one of the basic axioms in social network theory: dense socioethnic networks support dialect stasis, whereas weak socioethnic networks promote dialect change and diffusion. Likewise, the results documented in this study fit into a

growing body of literature demonstrating the role of migratory processes and contact in language change in monolingual settings (Bortoni-Ricardo, 1985) and multilingual settings-e.g., Milroy and Li Wei (1995) on migrant Chinese families, North England, Zantella (1997) on Puerto Ricans in New York City, USA, Gal (1979) on the speech of Oberwart, Eastern Austria, Gumperz's (1982) documentation of his groundwork on code-choice and social networks in many Slovenia-German bilingual contexts. Yet, in this work we tried to go further to demonstrate that dynamics of ethnic contact and migration admit of varying degrees of sociolinguistic impacts on migrant Chaoui families in urban settings. In keeping with Fought (2006), we also argue that migratory processes and interethnic contact do not necessarily entail linguistic convergence (or divergence) in all ethnic migrant groups. While previous research studies paid a close grained attention to the role of migration and weak ties, they, however, did not foreground the role of ethnically cohesive, dense networks in dialect stability and maintenance in urban and multiethnic settings. In contrast, this work foregrounded all varying degrees of mainstream integrations, distinct ethnic networks and their sociocultural correlates in Batna city. Some ethnic groups, which are fully integrated in the urban sociocultural norms, are amenable to ethnoconvergence, cultural hybridization and dialect assimilations into local urban norms. Other ethnic groups, conversely, which are economically and culturally insular, struggle to maintain their ethnic cohesiveness and, equally, ethnolinguistic distinctiveness.

The examination of friendship networks vindicated the major role of individuals with weak ethnic ties in the transmission of Arabic loanwords into other speakers and communities of speakers. In their discussion of weak ties, Milroy and Llamas (2013) report that "persons central to a close-knit, norm-enforcing group are likely to find innovation of any kind socially risky but the adoption of an innovation already on the fringes of the group

less so." (p. 419). Indeed, Selman, to take one example, recalled that he used to be a member in two friendship groups. He added that his extensive interactions with peers of different ethnic roots made it possible for him to acquire many local Arabic speech forms along with his native Chaoui dialectal norms. This, presumably, explains his low lexical variation index (1.00). Field observations of Selman's linguistic behaviors showed that he makes conversational moves between Chaouia and local Dariğa norms and his speech patterns are highly influenced by Arabic lexical borrowing. In keeping with Milroy and Llamas (2013), explanation of speech diffusion, regionally mobile female speakers, such as Ghaydaa, Fatima and Khawla, act as early adopters and carriers of Arabic loanwords into different regional areas. Indeed, geographically mobile individuals, such as itinerants, commuters and college students, who contract weak ethnic ties, act as gateways through which innovations and loanwords propagate spatially into monoethnic, less populated areas in Batna community.

Triangulation

This research work set the task to approach Arabic-Chaouia contact through two distinct, yet interrelated, frameworks: variationist sociolinguistics and anthropological linguistics. Data from both approaches revealed consistent findings: dialect stasis in Chaouia is strongly associated with dense ethnic network with mutual support, whilst linguistic change and convergence are strongly associated with weakly nested ethnic networks. In addition, both paradigms, variationist and ethnographic, demonstrated the major role of weak ties, mobile speakers, commuters and itinerants in the dissemination of novel terms into other social groups and regions.

6.6 Rethinking Milroy's Social Network Model: Towards an Interdisciplinary Approach

Milroy's (1980) Social Network Model, and several second wave variation studies are framed around one basic axiom: dialect stasis correlates with dense network, whereas dialect change correlates with loose network. As noted in chapter three, notwithstanding its impact on our understanding of social structures and dynamics of language variability, Milroy's model has been criticized on several grounds, especially methodology and scope. In addressing the aforementioned lacunas, an 'Interdisciplinary' paradigm that accounts for the complexities of social networks vis-à-vis synchronic and diachronic approaches is desirable. It must be stressed beforehand that we do not claim that there should be a perfect social network model that can, quite fully and comprehensively, account for the complexity of speech change and diffusion in all social contexts. Rather, we call for a syncretic framework that integrates and combines methods and concepts from variationist and ethnographic fields. An interdisciplinary approach would, at best, provide a more holistic picture of the interplay between social network and language change in monolingual and multilingual regions. The Syncretic Social Network Model (SSNM), summarized in the graph 6.1 below, stipulates a focus on the interplay between social (or ethnic- networks) and contact as a point of departure. This complex interplay can be approached from two distinct, yet interrelated, angles. Fieldworkers can simply take a variationist sociolinguistic approach which involves starting out with predetermined categories, followed by recruiting an even number of people in a community across different social categories.

It must be stressed that network strength scale should reflect, to a great extent, the most determinant domains that characterize and play a role in the socioethnic profile of research

site under investigation. By way of example, in addition to workplace and neighborhood, our ENSS accounts for 'kinship' ties. The focus on genealogical relations stems from our deep understanding of the Chaoui cultural makeup and from the fact that *'kinship'* is one of the most preponderant aspects of Chaouia social organization. Fieldworkers can, simultaneously, engage in participant observations, observing and taking fieldnotes of the community under examination. By adopting observation guidelines-e.g., Dell Hymes's (1974) S.P.E.A.K.I.N.G grid, or Saville-Troike (2003) suggestions- fieldworkers can draw a clearest image of the general cultural makeup of the research site, as for instance, whether it is patriarchal, egalitarian, Matriarchal or class-stratified. These general descriptions can be a jump-off point for finding any specific *emerging* cultural groupings in the fieldwork. By way of example, although this research work is framed within a variationist sociolinguistic perspective, it is, also, highly informed by works from sociology and cultural anthropology. It introduced and operationalized new concepts, such as Ethnic Homophily, connectedness, Power and Centrality and Cultural Hybridization. By adopting these notions, we were able to discover insightful results which not only cast light over the complex nature of ethnic nature, but also deepened our understanding of how lexical replacements operate in ethnically-based friendship networks.

Our predilection for Syncretism requires a two-way analysis of network cohesiveness; namely: whole level and node level. In so doing, fieldworkers can explore linguistic practices and speech change across social networks (inter-group variation) and across individuals (intra-variation). A full account of both levels would generate fruitful qualitative and quantitative data about the community speech patterns. By comparing the results of both

approaches (Triangulation), it is possible for fieldworkers to examine the extent to which research findings are consistent.

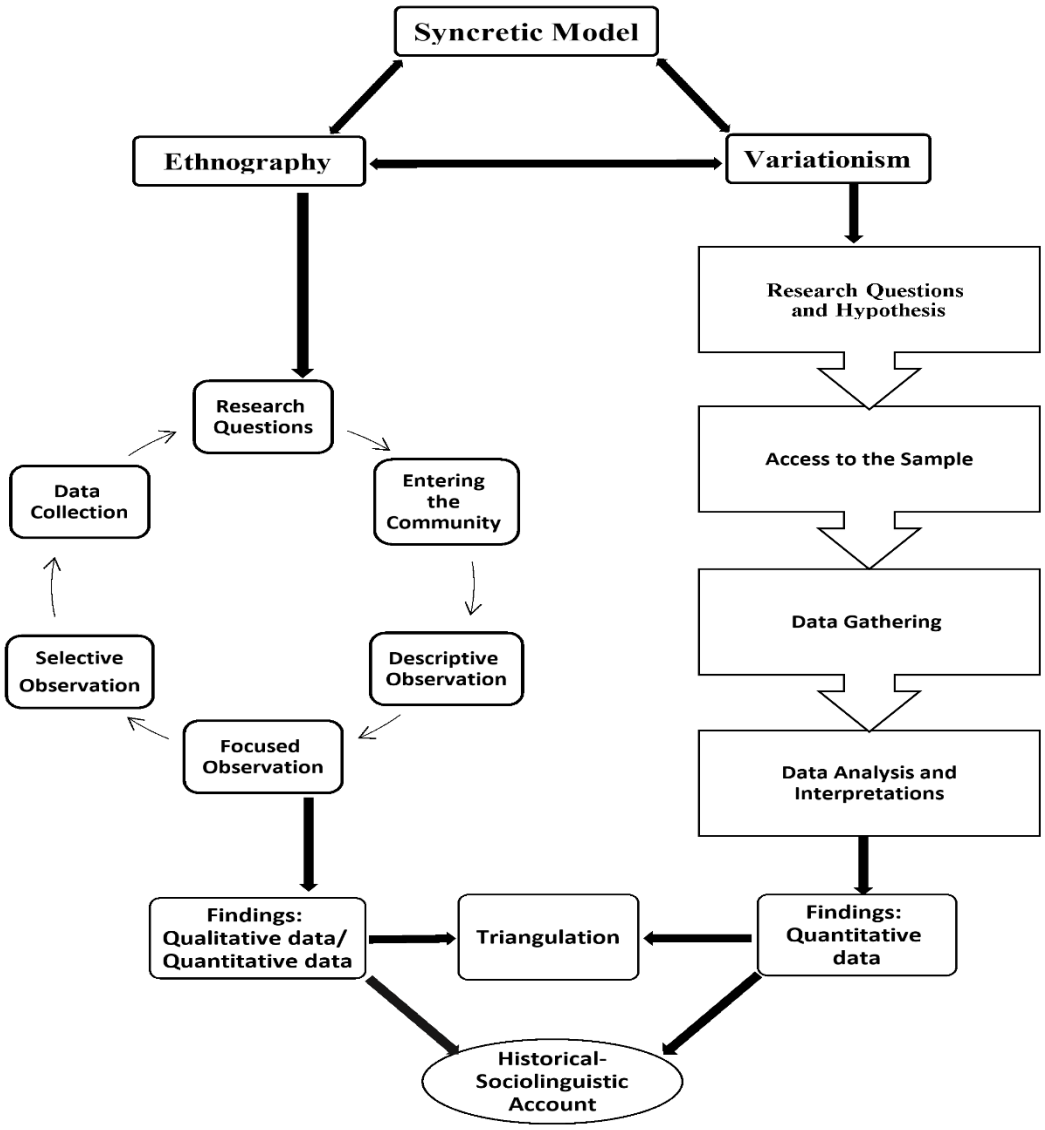

Figure 6.1 Syncretic Social Network Model

Finally, the Syncretic framework sets the task to make connections between *synchrony* and *diachrony*. In practical terms, fieldworkers can scrutinize pre-exiting historical documents, monographs, diaries, and earlier dialectological reports to have an idea about the sociological realities and historical conditions of the research site in specific lapses in time axe. The advantages of such historical-sociolinguistic examination is twofold. First, fieldworkers can scrutinize social networks in *motion*, probing into how dense social networks *break*, evolve, and change (or persist) in different points in history. Second, earliest local histories, dictionaries and dialectological reports would serve as real time verifications of current synchronic surveys. However, we argue, care must be taken to scrutinizing the authenticity and vernacularity of the textual data on the hand and to data comparability issues on the other. Therefore, approaching the interplay between network structures and language in interethnic contact settings requires an examination of the research sites through variationist and anthropological lens. This examination must be crisscrossed with social, cultural and ideological motives. We now know from separate areas of research that spatial innovations interact with migratory processes, modernization and mobility (Britain, 2013). Had interdisciplinary or syncretic framework been painstakingly and appropriately implemented, ingenious fieldworkers can bridge the gap between practice and theory and, also, deepen their knowledge about the universal theories and laws that govern language variation and change more generally.

6.7 Conclusion

In this chapter we tried to overview and discuss preponderant issues associated with patterns of lexical change, speech diffusion and ethnicity-based linguistic practices in Chaouia dialectal norms. Throughout the chapter, we foregrounded the connection between

linguistic change and its sociological merits on the one hand, and the role of heritage language, Chaouia, as a socioindexical marker of ethnical and personal identities, on the other. Also, we asserted that ethnic identity is not static, but rather fluid and dynamic, constructed and negotiated in in-group and out-group discussions.

Following somewhat from Eckert (2008), and indeed from recent social constructivist views, this work attempted to demonstrate the ways in which Batnian youngsters, both Arabs and Chaoui, deploy Chaoui lexical items and expressions to project ethnic and linguistic boundaries or Ethnolinguistic membership. Put plainly, for many Batnian speakers, Chaouia is an embodiment of ethnic affiliations and distinctiveness. This chapter, equally, vindicated repeatedly one of the basic axioms of social network theories: ethnic networks of mutual support are less amenable to dialect change, whereas weakly dense networks promote dialectal change and diffusion. So connected are ethnic structures and borrowing that Chaoui words are preserved in ethnically-cohesive networks, whereas Arabic loans are highly adopted by speakers with weak ethnic ties. Furthermore, this chapter outlined a discussion of lexical change against various social and regional facets, such as gender and region. As convincingly elucidated, predictable trajectories of social and regional innovations' diffusions are well-attested to many social groups in Batna community. By way of example, the dissemination of innovations (Arabic loans) into dense networks and rural areas is spearheaded by: a) socially and geographically mobile speakers, b) speakers with weak ethnic ties, and c) social actors on the fringe of ethnic networks. These socially and geographically mobile categories, it was asserted, are carriers of innovations from urban settings, conurbations to less populated, rural areas. Historically, the changing social makeup of Batna in the last century, motivated by massive migration processes and modernization, resulted in

crucial developments in Chaouia ethnic structures, maintained by linguistic changes and ideologies. This chapter, also, discussed the established Milroy's social network model, its pitfalls, and suggested an alternative synergic model of network density that can, at best, account for linguistic change in all unexplored monolingual and multilingual contexts.

GENERAL CONCLUSION

This research study set the task to investigate dynamics of linguistic change and innovation diffusion in different urban and rural areas in Batna community. Following somewhat from recent interdisciplinary research paradigms, it draws from different sociolinguistically and ethnographically theoretical and empirical insights to examine how lexical variation operates in ethnically based taxonomies, and how this variation crisscrosses against other social, regional and ideological forces. This research, equally, set the task to explore, in details, the role of ethnic ties in the propagation of Arabic loanwords to Chaoui friendship networks of varying ethnic cohesiveness degrees.

The organization of this thesis follows a defined scheme, progressing from sociohistorical and sociolinguitic accounts of Arabic-Chaoui contact in The Aurés, basic theoretical foundations, linguistic variation and change, social network theories and ethnic cohesiveness, fieldwork methodology and sampling, to data analysis and discussion. Chapter one addressed Berber as a contact language with other varieties in ancient and modern eras, and paid a close-grained attention to Arabic-Chaouia contact in North Africa, along with its sociopolitical conditions. Chapter two is devoted to sociolinguistic variation, its theoretical underpinnings and sociodemographic correlates. Chapter three, which lies at the heart of the thesis, casts light over the relationship between socioethnic networks and language variation in various monolingual and multilingual landscapes. Chapter three, also, touched upon

essential network-related issues, such as the role of Brokers and weak ties in speech transmission and innovation diffusion across space and time. Chapter four foregrounded the methods and research tools implemented in this research, sampling strategies and data collection procedures. Chapter five was devoted to the analysis and interpretation of lexical variation and change in the sample and its link with ethnic strength patterns. It examined the spatial distributions of Chaoui ethnic density scores across polyethnic and monoethnic landscapes. Chapter five, also, discussed the results of the ethnographic fieldwork of two socioculturally different friendship networks in Batna ville. Chapter six provided a general discussion of the main findings in this research, along with its sociocultural and political implications.

The findings in this study displayed predictable patterns of linguistic variation and change. First, the expected and well-attested pattern is for Arabic loanwords to be tightly associated with weak ethnic ties and for Chaoui words to be tightly associated with strong ethnic ties. Following somewhat from Milroy (1980), these causative equations are attributed to the role of reinforcement norms of personal and socioethnic networks in preserving and diffusing linguistic and social innovations across individual speakers and communities of speakers. These linguistic developments, it is asserted, are indicative of an ongoing dialect convergence and dialect obsolescence more generally, most notably in predominantly urban areas-e.g., Batna ville.

This research, likewise, tried to elucidate predictable patterns of lexical change across other external correlates. It was found that the use of Chaoui lexical forms is higher among: elders, males, villagers, speakers with high engagement in Berber cultural folkways, and speakers whose friendship networks are characteristically homophilous. In contrast, the use

of Arabic loanwords is spearheaded by youngsters, females, urbanites, speakers with low engagement in Berber culture, and speakers who contract much frequently with non-Chaoui peers.

The ethnographic study of friendship networks in Batna ville revealed illuminating insights into trajectories of lexical change, speech diffusion and contact-exclusive linguistic practices. Chaoui friendships of mutual support maintain most of their Chaoui words, whereas multiethnic (or weakly nested) networks tend to be more amenable to lexical change and innovation. That said, it was found that Chaoui youngsters in the strongly nested groups police each other's linguistic and social habits, and thus tend to be more conservative linguistically. Conversely, female youngsters in the latter ethnic category act as *'Brokers'* and *'carriers'* of linguistic innovations into different strongly cohesive groups. In keeping with Eckert's (2000, 2008) idea of 'Indexical Field', it was suggested that Chaoui and non-Chaoui youngsters in Batna ville engage in ethnically- based linguistic practices-e.g., ethnic crossing and profiling- to mark social and personal stances. In addition to ethnic strength and other social forces, ideological bases account for the permeability of lexical changes and, by and large, dynamics of dialect convergence and obsolescence in Batna.

The results of the ethnographic fieldwork vindicated, to a great extent, the findings reported by the variationist sociolinguistic survey. One of the consistent findings is that ethnically cohesive groups promote dialect stasis, whilst ethnically weak and multiethnic networks promote linguistic variability and change. Equally, both approaches illustrated the major role of mobile speakers in the propagation of innovations. Indeed, Arabic loanwords and speech innovations tend to diffuse vis-a-vis socially and spatially mobile speakers- itinerants and University students- and Brokers.

One of the basic, recurring themes in this research work is that ethnic identity is neither fixed nor stable. Female Chaoui youngsters, to take one example, avail themselves of Chaoui words, Arabic words and some specifiable linguistic practices to project an array of personal identities and social affiliations-e.g., *biethnic, Tachawit, urbanite*. Urbanite youngsters, also, tend to use salient Chaoui expressions to index their distance from the Chaoui groups. These daily 'ethnic crossing' practices elucidate the fluidity and multifaceted locus of identity and its inextricable link with language.

Although the results in this '*Interdisciplinary'* research project provided intriguing information about how contact-induced linguistic change operates, there are still several questions and issues to be resolved. For instance, it was noted that it is the goal of ingenious researchers to work on sociolinguistic variation and speech diffusion across all levels-phonology, lexis and grammar. Similarly, dynamics of dialect death and shift in Batna and other Berber speaking areas more generally cry out for research in different strands of thought-linguistic anthropology, sociology of language and variationist sociolinguistics. Research on these sociolinguistic phenomena would provide insights into dynamics of language variation and change in many unexplored contexts.

Implications of the Findings for Batna Community

The linguistic status quo of multiculturalism and Berber groups in Algeria and other Maghrebian nations has been, and is still, a hot potato, so to speak, in all political, social and educational avenues. A large body of dialectal Chaoui norms, most notably lexicon, has been substantially cast aside by Arabic lexical equivalents. Provided that linguistic change and social change are intertwined, it is enlightening to consider some of the basic sociocultural implications of Chaouia linguistic situation in its wider social spectrum.

Loss of Cultural Heritage

In essence, language is, by its very nature, dovetail with culture. The growing consensus finds grounds for the inextricable link between language behavior and its cultural setting. Social scientists from all strands of thought concur that linguistic behavior is not only a means of conveying information, but also an embodiment of local history, customs and rituals of honor-roll-status. In brief, any cultural change is unavoidably marked by linguistic change. This intricate link is evidenced in the interplay between attachment to Berber cultural heritage and permeability of lexical replacement. High engagement in Berber culture co-varies with speech conservatism, whereas low engagement co-varies with linguistic change. Yet, the fact that substantial linguistic change in Chaouia echoes culture loss seems to be highly plausible and conceivable. Put it plainly, the disappearance of archaic, old-fashioned Chaoui terminology reflects the loss of indigenous Berber folkways and life modes. The massive modernization processes, coupled with geographical mobility, resulted in several social impacts such that many Chaoui cultural mores were gradually cast aside by urban mainstream cultural norms. By the same token, Berber culture has declined not only across horizontal channels, that is, among groups of varying ethnic cohesiveness degrees, but also across vertical channels and generations. Indeed, this study demonstrated, quite convincingly, that remarkable linguistic demarcations are prominent across age cohorts. Yet, these generational differences mirror cultural differences and distinct folkways on the one hand, and echo varying degrees of orientations towards Berber heritage, on the other. As one moves down in age spectrum, from elders to adults and youngsters, a gradual cultural loss/change takes place. The former cohort, elders, still preserve many of their Berber customs, archaic communal ethos and traditional songs. Underrepresented in Batna society, Chaoui elders constitute

Insular, homogenous groups which retain most of their archaic cultural norms. Due to their strong affinity for the traditional Berber cultural mores, Chaoui elders ascribe any social change to what they perceive as 'cultural decay' and to the emergence of 'youth cultures' in Batna urban city. The latter, youngsters, are less attached to Berber heritage, linguistically and socially, and more engaged in modern lifestyles and youth cultures. Likewise, the impact of globalization is so pervasive in youth cultures such that many of them affiliate themselves with western cultures-African American culture, Hip-Hop culture,…etc. Chaoui youngsters would feel so embarrassed if someone told them that they look like or sound like Chaoui inhabitants, linguistically and culturally. That said, Culture loss, it must be noted, is also motivated by the negative social attitudes towards Chaouia culture in Batna community. Youngsters perceive Chaouia culture as emblematic of rurality, backwardness and what they usually label *El Jbel*, meaning the mountain. Therefore, these cultural differences and divergent ethnic orientations across generations are fueled by ideological reasons and deap-seated evaluative norms associated with Chaouia in Batna mainstream urban city.

Limitations

This research work yielded insightful information about predictable patterns of dialect variation and change in Chaouia, arrayed across distinct ethnic network degrees, and crisscrossed with various sociodemographic facets. Yet, this section considers some basic limitations and pitfalls that should be borne in mind. The preponderant shortcomings discussed below pertain to methodological concerns, research scope and data comparability.

The scope of this study was mainly restricted to Chaouia variety associated with Batna community. Due to time constraints, it was impossible to broaden the scope of this research to other Aurès cities-khenchela, Oum el Bouaghi, Souk Ahras and Tebessa. Second, even

though this research foregrounded lexical change across social domains, such as verbs, animals and human body, it did not, however, account for other semantic fields, as for instance, religion, clothes, fruits, and word-classes-e.g., adverbs, pronouns and numbers. By the same token, while this research work addressed lexicon and other ethnicity-exclusive language practices, it did not tackle dynamics of linguistic change across other linguistic levels; namely: phonology, morphology and syntax. Admittedly, a full examination of all these speech levels, though practically a complex endeavor, would yield eye-catching insights into the trajectory of dialect stasis and shift in Chaouia. As for representativeness, the sample composite echoes, to a great extent, the socioregional characteristics of the targeted population in Batna. It was quite impossible to sample respondents from all urban and rural settings, due to time constraints and practical considerations. On a more negative note, the number of respondents is relatively small. Had it been possible to recruit potentially more respondents, the findings of this study can be generalized to a much wider population.

Notwithstanding their authenticity and vernacularity, the textual data we analyzed (texts, old Berber dictionaries and dialectological reports) lack information about 'linguistic variability' and statistical reports. That said, it was quite difficult to trace back, at best, the process of incrementation advancements of all lexical variables under examination across time axe. Apart from shortcomings in scope, generalizability and real time verification, there are as well shortcomings in the ethnographic fieldwork. The conservative, stringent social mores of Chaoui families made it difficult to observe the social and linguistic habits of women. Most of them-elders and middle-aged- are not fully engaged in public life, and so we could not gain access to this specific social category. A full synthesis of all linguistic levels against their sociological merits, albeit so challenging, would provide us with fruitful results.

A thorough, well-conceived account of both dimensions, width and depth, in this study is a complex endeavor as almost to be magical. Ingenious fieldworkers working on the same sociolinguistic phenomenon would dutifully have to address these aforementioned lacunas, so to speak, which pertain to research on Berber as a contact variety more generally.

Directions for Future Research

Since the inception of modern sociolinguistics, Berber linguistics, most notably research on Chaouia and Great Kabyle variety, developed as a newcomer compared to other areas of research-e.g., Arabic sociolinguistics. Research on language variation and change in Chaouia and its sociocultural facets have been underresearched, untested and untheorized. Indeed, there is still much to learn about these Berber varieties. Viewed in this way, it would seem the goal of future researchers to consider the role of social networks in patterns of dialect variation and change-interspeaker and interaspeaker- not solely in Batna community, but also in other Aurés urban and rural landscapes.

Ingenious researchers are well served to foreground the inextricable interplay between ethnic density and dynamics of language shift, death and maintenance in all Berber speaking regions, in Batna, Great kabyle and in southern parts of Algeria. Light is to be shed on how Berber groups, such as Chaoui migrant families, diverge with and/or converge linguistically and socially from the mainstream dialectal norms. The role of urbanization and mobility in Arabic-Chaouia contact gained less attention in Berber sociolinguistics. Such research areas cry out for future investigations. The core understanding of these issues would be a jumping-off point for future research on, for instance, the role of geographically mobile speakers-itinerants and commuters-and Chaoui migrants in the diffusion of Arabic loanwords and innovations into other groups. How do Brokers and innovators initiate and propagate Arabic

and Chaoui speech forms, phonetic or otherwise, into other social networks? How do these processes crisscross with other social and regional correlates, such as as education and mobility? To what extent does Chaoui dialectal norms vary across, say, first generations, second generations and third generations of migrant Chaoui migrant families in urban contexts? Addressing these questions would definitely yield breathtaking insights into patterns of linguistic shift, death and innovations transmission in urban, cosmopolitan cities. Much work is needed to explore ethnicity based linguistic practices-code-switching, ethnic crossing, speech accommodation, heritage languages and identity formation, to name but a few.

This research work cast light over the role of language practices in indexing ethnic and personal identities among Chaoui and non-Chaoui youngsters. Yet, on a more negative note, identity (re)construction and negotiation in speech interactions is the least examined and explored aspect in Berber sociolinguistic realm. With this research gap in mind, future research works, be they variationist or ethnographic, must be re-orientated towards exploring how individual Chaoui speakers and Arabs employ, stylistically, local speech practices to project personal stances and social affiliations. Researchers working on this area need to conceptualize, operationalize and examine identity through social constructivist lens, that is, as a fluid, multifaceted entity, which is permeable to change and embodied in local linguistic practices.

To move the research field forward, rethinking the established Milroy's (1980) social network model, alongside its applicability in different unexplored, multilingual contexts in hard-shelled and soft-shelled communities, would be a promising area of research. In this regard, we suggest two interrelated points. First, by applying synchronic and diachronic

approaches, fieldworkers can explore social networks in *motion*, that is, as they break, evolve and change in structure and density. Two, adopting an Interdisciplinarity paradigm in studies of social networks would provide us with illuminating scientific breakthroughs about dynamics of human social relations from differents strands of thought, of which language plays a preponderant role.

Prospects for Future Action: What Next?

In this afterthought section, we consider preponderant interethnic concerns in Batna city and suggest some 'to-do' programs and activities researchers may implement to resolve language-related issues. Yet, it must be emphasized beforehand that social scientists, be they sociolinguists or otherwise, are committed not only to certain ethical protocols, but also to their social obligations towards their communities. They are at pain "to apply the knowledge they gain from their research communities for the betterment of these communities, and often for the betterment of society more generally" (Schilling-Estes, 2013, p. 269). To put it otherwise, as sociolinguists begin to take notice of the widely language related problematic issues, they capitalize on their scientific inquiries to *positively* engage in their societies, seeking ways to demystify and explain linguistic concerns and language myths to the general public. As Wolfram (2013) nicely notes, sociolinguists need to work '*on'*, '*for'* and '*with'* communities to address language-related misbeliefs, such as linguistic inequalities, racist talk and discrimination against ethnic varieties in all educational, social and, if possible, political avenues. Viewed in this way, sociolinguists would be *active* social actors in their communities in as much as they communicate their research results with the wider general public and seek ways to better their societies.

This research elucidated, as it was also evidenced in the dearth research works on Berber, that many native Chaoui linguistic features, be they lexical or otherwise, were substantially sidelined and cast aside by Arabic and French equivalents and became categorically obsolescent. Our search for its sociocultural motives revealed that there are wheels within wheels; lexical changes in Batna are arrayed with several, interrelated, social, spatial, historical and ideological processes. With the benefit of hindsight, Chaouia, due to social and ideological reasons, will be on the *brinks of death* in the coming few decades.

Sociolinguistics teachers, researchers and conscious scientists, are socially accountable to work cooperatively in teamworks to raise and promote sociolinguistic awareness about issues like linguistic inequality and legitimacy of ethnic varieties-e.g., Chaouia and Kabyle. An essential sociolinguistic axiom that can be promoted among Berbers and Arabs is that all world languages and language varieties are equal in their expressive and aesthetic potentials and that Chaouia, like Arabic and French and English, is rule governed and socially embdedded. But how, in practical terms, can researchers raise these language awareness issues? How can they make use of their socioliguistic knowledge to educate the public about linguistic diversity? Researchers can, for instance, prepare linguistic tasks, in which speakers, Chaoui and non-Chaoui, are expected to discover the complex grammatical patterns of Chaouia variety. In so doing, community members can learn that Chaouia, like any world variety, has its own self-contained, rule-governed linguistic system. Activities of the sort noted above can help community members realize that Chaouia speakers are not *linguistically deprived* and that they are, like any other speakers over the world, capable to express their desires, needs, wants and aspirations. Community members must know that speech diversity and change are natural and unavoidable phenomena, and that there is no variety which is

inferior, *ungrammatical* or less *correct* than other varieties. Indeed, the use of Heuristic (discovery) method would help them learn more about the nature of linguistic variation and change in the Aurés Province.

We stipulate that researchers can avail themselves of audio-visual materials, both authentic and non-authetic, dummy books and presentations that would address all the aforemetioned language-related issues in Batna community. Backgrounding cultural heritage, history and local ethnic legacy is an essential jump-off point to foreground ethnolinguistic issues. Indeed, Wolfram (2013) reminds us that "When language is linked with culture and history, its significance for the public is heightened" (p. 565). Following somewhat from Wolfram (2013), we believe that addressing the veracity of our Berbero-Arabic cultural heritage, of which linguistic diversity is a key component, would promote a sense of cultural tolerance and affinity for Chaouia and other non-standard varieties. This may take different forms, ranging from documentaries, CDs, language myths' booklets, to arranged group debates and discussions. Such audiovisual aids should, first and foremost, cast light over time-honored Berber cultural folkways, deep seated beliefs and ideologies. Convinced as we are, these programs and activities would be of great use in demystifying issues that pertain to the subordination of Tachawit in the Aurés Province.

For such public outreach efforts to be effective, researchers must avoid the use of any technical terminologies or sociolinguistic register (Wolfram, 2013). In essence, researchers must design these activities and materials in such a way that sociolinguistic information are communicated in a constructive, informative and entertaining way. In addition to dialect awareness projects and booklets, we can also capitalize on all types of social media, such as Youtube videos, Facebook pages and Twitter, to communicate and disseminate such

linguistic favors to the wider social spectrum, especially to younger generations. It should be asserted that these outreach efforts may not necessarily solve all the aforementioned contact-exclusive language issues. Yet, we strongly believe that such projects, if designed properly, can minimize, if not overcome, many language issues in the Aurés province, such as language prejudice, stigma, linguistic profiling, to name but a few. Albeit hard and far-fetched goal, engaging in such outreach programs is by all means a promising endeavor. It is highly recommended that researchers cooperate collectively with community leaders, journalists and public figures to enhance sociolinguistic awareness among community members.

In closing, *Giving Back to the Community*, also known as the principle of *Linguistic Gratuity* (Wolfram, 1993), is dovetail with our academic and scientific community. Scientific enquiry is not only about knowing much more about the world, but also about making it a little bit better. Furthermore, Wolfram (2013) once noted that non-linguists perceive (socio)linguistics as an *esoteric* discipline, that is understood and admired by only a small number of people. We believe that it is within these outreach public programs that sociolinguists can educate non-linguists about sociolinguistic knowledge and its importance for social concerns. Equally, it is within these outreach projects that they can be more, Wolfram (2013) notes, *reactive* and *proactive* in their societies. Further, they can be even more, we assume, *productive* within their societies as they extensively work on producing documentaries, booklets, and audio-visual materials. After all, the three community involvement types, mainly *Ethics*, *Advocacy* (Labov, 1982) and *Empowerment* (Wolfram, 1993) are the best ways to better our societies and also to show our gratitude to community members who zealously shared with us their life stories, linguistic knowledge and life aspirations. Though a complex endeavor, we harbor hopes that journalists, writers,

lexicographers and linguists can work painstakingly in synergy to preserve our Chaoui tongues, various ethnic voices (Arabic and Berber) and, by extension, to revive our time-honored Algerian multicultural heritage.

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Appendix A: Ethnic Network Questionnaire (English Version)

The project

This project aims to study aspects of social life, Arabic-Chaouia contact, and linguistic diversity in Batna. In particular, it focuses on how Chaouia varies and changes in several urban and rural areas in Batna multiethnic city. In so doing, we ask people to share with us their perceptions and views about Berber culture and Chaouia dialect. Also, we provide them with one linguistic task about the use of Chaouia. The responses are crucial for our research. We assure you that the questionnaire's answers will be archived and will be used only for educational and research purposes.

Informant's Information

Demographic Information

Name: (optional) ……

Age: …….. Sex: Male ◯ Female ◯

Ethnic Affiliation

Which of the following terms best describes your ethnic origins?

Chaoui ◯ bi-ethnic (half Chaoui-half Arab) ◯ Arab ◯ Other (specify) ◯…….

Residence History/ Mobility

a. Geographical Mobility

Where do you live?……..

If you lived in different places (for more than 6 months), please list these places in the table below: (indicate village, province, city or country)

Places	Ages (from…to)
	……
	……
	……

b. Mundane Mobility: Commuting/School

Do you live far away from school/workplace? Yes ◯ No ◯

If yes, where? (please specify) ……..

Ethnic Network

Family Network

What term best describes your Father's ethnic origins?

Chaoui ◯ Bi-ethnic ◯ Arab ◯ Other (please specify) : ◯ ……..

What term best describes your Mother's ethnic origins?

Chaoui ◯ Bi-ethnic ◯ Arab ◯ Other (please specify) ◯ ……..

Kinship Network

Do you often stay in touch with your relatives (uncles, grandparents,..etc) Yes ◯ No ◯

Their ethnic origins: most of them are of Chaoui roots ◯ they are of different ethnic roots ◯

Friendship Network

Are your close friends Chaouia? Yes ◯ No. they are of different ethnic origins ◯

No. they are all Arabs. ◯

Are there close Chaoui friend(s) who live(s) in another city (or country) and with who you still maintain contact.? Yes ◯ No ◯

Neighborhood Network

Are your neighbors Chaouia? Yes ◯ No. they are of different ethnic origins ◯

No. they are all Arabs. ◯

Workplace/School Network

Are most of your co-workers (or classmates) of Chaoui origins? Yes ◯ they are of different ethnic roots ◯ they are all Arabs ◯

Is there any friends or relative who you know from workplace or who study with you as well? Yes ◯ No ◯

ethnic identity: Chaoui ◯ they are of different ethnic roots ◯

they are all Arabs ◯

Ethnic Homophily

List ten people, close friends or acquaintances, with whom you interact much frequently on a regular basis (every day, every week,..etc). **DO NOT** write their names. Write their ages and ethnic origins (Chaoui/ Kabyle / Arab)

Person	Age	Ethnic Identity	Person	Age	Ethnic Identity
1			6		
2			7		
3			8		
4			9		
5			10		

Ethnic Orientation

-Do you believe that people should preserve the Berber identity and culture? Yes ◯ No ◯

-Do your family still celebrate some well-known Berber cultural holidays/festivals (e.g. yennar) Yes ◯ No ◯

-Do your family still preserve some Berber cultural customs and folkways? Yes ◯ No ◯

-Would you prefer to live in a neighborhood inhabited by: Chaoui people only ◯

Arab people only ◯ Mixed ethnic neighborhood ◯

-Should youngsters and children learn Chaouia dialect: Yes ◯ No ◯

-Would you prefer to watch TV channels/listen to Radio (e.g, Aures) in: Chaouia/Tamazight ◯ Arabic/ Chaouia (Tamazight) ◯ Arabic/ Darija ◯

-Which dialects (language) you prefer to use in daily social encounters: Chaouia only ◯

Chaouia and Arabic (Darija) ◯ Arabic/Darija only ◯

Linguistic Task

This part considers the words you use when you talk in Chaouia with your peers and family members. Please circle the word you would use ***most often in your everyday speech.*** Circle more than one answer only if necessary. If the word you use is not listed, please write it in.

N.B. In essence, this is a self administered questionnaire and so:

a. Do <u>NOT</u> ask anyone for assistance. **b. Do <u>NOT</u> use dictionaries.**

What would you call….

thin: ازداذ (يزد) / ارقاق ……	**cold weather:** يبرذ / يصمض / يصقض ……
tall: ازيرار(ازڤرار) / يطول ……	**tired:** يبڤا /يرما /يغلب /ينخى / يثعب ……
heavy: ييزاڤ (ييزاي) / يثقل ……	bitter: يمر / يرزاي ……
light (weight): يفسيس (يفس) / يخفيف . ……	**smart**: ميزراي / ذكي / ميغيس ……
to ignite (fire): يشعل / يرغا ……	**to be able:** يقدر / ينجم / يقاوا / يزمر ……
to get used to..: ينوم / يوالف / يتعود ……	**to dream:** يتارجاي / يحلم ……
to look for something (or someone): يروزي / يتفتاش / يتحواس ……	**to bleed from nose:** يرعف / ينفوزر ……
to look like.../to be similar to: يتشباه / يتماثال / يروس ……..	**to mix:** (يسار) يخلط/ يسور ……
to swear to god: يحلف / يتجالا ……	**to grill (meat):** يكنف / يشوي ……

to sew: بيني (يڤني) / يتخياط	**to twist :** يفرغ (ينفرغ) / يعوج .....
to fill the bucket (bottle) with water : يتعمار / يتشاراي	**to pay someone a visit:** يرزف / يزور .....
arm: غيل / ذراع	**beard**: همارث / لحيث .....
fats: الشحمث / هاذونت	**forehead**: حميث/ الجبهث .....
kidney: الكليث/ هيزلث	**saliva**: ايلوداين/ الريق .....
fish: اسلم/ الحوت	brain: (اللن) المخ / أَلل .....
pigeon: لحمامة/ اذبير	**ram**: ايير (ايكر) / الكبش .....
winter: لمشتى / تاجرست	**ant**: النملة/ ايطوفث .....
corner: شوكث /اغمرث	**partidge**: الحجلة / اسكورث .....
green: ازيزاو / اخضري	**yellow**: اوراغ/ اصفري .....
evening: اعشويث / تامديث	**morning**: اصبحيث /انزايث .....
month: يور / شهر	**rain**: انزار / النوث / همثنا/ المطر /الڤرث .....
snow: الثلج / اذفل	**salt**: هيسنث/ الربح / الملح .....
cosmetic powder women use in to darken their eyelids: هازولث/ لكحل	**gold**: اورغ/ الذهب .....
orphan: ايوجيل (اڤوجيل) / ليتيم	**grandson**: احفيذ/ اياو .....
guest: انيجيو / ضيف	**cinder (charcoal):** هرجيث / لفحم .....
silver: الفضة / ازرف	**mirror**: هيسيث / لمري/ الماع .....

Appendix B: Ethnic Network Questionnaire (Arabic Version)

الأستـاذ: ملقاني هارون

البريد الإلكتروني : haroun-alg@hotmail.com

مشروع البحث

يتمحور هذا البحث حول دراسة الابعاد الاجتماعية و التنوع اللغوي في ولاية باتنة. نهدف من خلاله الى دراسة تأثير اللغة العربية على تنوع و تغير اللهجة الشاوية في مناطق عديدة في ولاية باتنة. نطلب من المشاركين ان يشاركوننا اراءهم حول الثقافة الامازيغية و اللهجة الشاوية. على المشاركين ان يجيبوا على بعض الأسئلة المتعلقة باستعمال المفردات الشاوية في الحياة اليومية. الاستبيانات سيتم حفظها و ستستخدم لأغراض تعليمية او بحثية فقط.

معلومات حول المشارك(ة)

المعلومات الشخصية

الاسم : ..... **العمر:** .....

الجنس: ذكر ◯ **انثى** ◯

الانتماء العرقي:

ما هو اصلك العرقي؟ شاوي ◯ شاوي-عربي ◯ عربي ◯ اخر (حدد الاصل) ◯ .....

مكان الاقامة:

اين تسكن حاليا؟ (حدد اسم المنطقة : ولاية... او دائرة... او بلدية....) : .....

اذكر المناطق التي عشت فيها (لأكثر من ستة اشهر). حدد هذه المناطق (بلدية/ دائرة / ولاية / بلد) و الفترة الزمانية لكل منطقة.

المكان	الفترة الزمانية من ....الى.....
.....	.....
.....	.....
.....	.....

هل تعمل/ تدرس في نفس المنطقة التي تسكن فيها؟ نعم ◯

لا ◯ اين تعمل/ تدرس؟ .....

الشبكة الاثنية

العائلة

هوية الاب العرقية: شاوي◯ شاوي-عربي◯ عربي◯ اخر◯ .....

هوية الام العرقية: شاوي◯ شاوي- عربي◯ عربي◯ اخر◯ .....

القرابة

هل انت على اتصال دائم مع اقربائك (الخال، العم، ابناء العم، ابناء الخال...الخ)؟ نعم◯ لا◯

هل كل اقربائك من اصل شاوي؟ نعم◯ لا عرب و شاوية◯

الاصدقاء

هل معظم اصدقائك من اصل شاوي؟ نعم شاوية◯ عرب و شاوية◯ عرب فقط◯

هل عند اصدقاء من اصل شاوي ما زلت على اتصال دائم بهم و يعيشون في ولاية اخرى او بلد اخر؟ نعم◯ لا◯

الحي

هل معظم جيرانك من اصل شاوي؟ نعم شاوية◯ عرب و شاوية◯ عرب فقط◯

مجال العمل / الدراسة

هل معظم زملائك في مجال العمل (او الدراسة) من اصل شاوي ؟ نعم◯ عرب و شاوية◯ عرب فقط◯

هل عندك اصدقاء مقربون اليك (او اقرباء) في مجال العمل (او الدراسة) ايضا ؟ نعم◯ لا◯

ماهي اصولهم العرقية؟ شاوية◯ عرب و شاوية◯ عرب فقط◯

اذكر 10 اشخاص مقربون اليك او اصدقاء تتحدث اليهم بصفة دائمة. لا تكتب اسمائهم. اكتب اعمارهم و اصولهم العرقية (عربي/شاوي/ قبائلي...الخ) .

الشخص	السن	الاصل العرقي	الشخص	السن	الاصل العرقي
1			6		
2			7		
3			8		
4			9		
5			10		

3 .التوجه الاجتماعي/ العرقي

-هل يجب على المجتمع الحفاظ على التراث و الهوية الامازيغية؟ نعم ◯ لا ◯

-هل مازالت عائلتك محافظة على اعياد الامازيغ (مثلا: عيد يناير) ؟ نعم ◯ لا ◯

-هل مازالت عائلتك محافظة على بعض تقاليد و عادات الثقافة الشاوية ؟ نعم ◯ لا ◯

-هل تفضل العيش في حي معظم سكانه: من اصل شاوي ◯ عرب فقط ◯ عرب و شاوية ◯

-هل يجب على الشباب و الاطفال تعلم و التحدث بالشاوية ؟ نعم ◯ لا ◯

-انت تفضل مشاهدة التلفاز و الاستماع الى المذياع و الاغاني باللهجة: الشاوية (الامازيغية) ◯

الدارجة و الشاوية ◯ الدارجة (العربية) فقط ◯

-ماهي اللهجات التي تفضل التحدث بها في الحياة اليومية؟ الشاوية فقط ◯ الشاوية و الدارجة (العربية) ◯

الدارجة (العربية) فقط ◯

الاستبيان

يهدف هذا الاستبيان الى دراسة الكلمات والالفاظ المستعملة من طرف المتحدثين باللهجة الشاوية. عزيزي المشارك **لا تستعن بشخص اخر او بقاموس للإجابة على الاسئلة.** اختر الكلمة التي غالبا ما تستعملها عندما تتحدث باللهجة الشاوية.

ضع دائرة حول الإجابة.

اكتب الكلمة التي تستعملها اذا كانت غير مذكورة في الخيارات. ماذا تسمي....

الجو بارد: يبرذ / يصمض / يصقض	**رقيق:** ازداذ (يزد) / ارقاق .....
تعبان و مرهق: يرما/يغلب /ينخى / يثعب / يبڤا	**طويل القامة:** ازيرار(ازڤرار) / يطول .....
مر الطعم: يمر / يرزاي	**ثقيل الوزن:** بيزاڤ (بيزاي) / يثقل .....
شخص ذكي: ميزراي / ذكي / ميغيس	**خفيف الوزن:** يفسيس (يفس) / يخفيف ..... .
يستطيع فعل الشيء: يقدر / ينجم / يقاوا / يزمر	**التهبت النار:** يشعل / يرغا .....
رأى مناما: يتارجاي / يحلم	**يتعود على...:** ينوم / يوالف / يتعود .....

سال الدم من انفه: يرعف / ينفوزر	**يبحث عن شيء:** يروزي / يتفتاش / يتحواس .....
يختلط : يخلط/ يسور (يسار)	**يشبه شخصا او شيئا:** يتشباه / يتماثال / يروس .....
يشوي (اللحم): يكنف / يشوي	**يقسم بالله:** يحلف / يتجالا .....
اعوج: يفرغ (ينفرغ) / يعوج	**يخيط الثوب:** ييني (يڤني) / يتخياط .....
يزور: يرزف / يزور	**يملأ (بالماء):** يتعمار / يتشاراي .....
اللحية: همارث / لحيث	**الذراع :**غيل / ذراع .....
جبهة الراس : حميث/ الجبهث	**الشحم :** الشحمث / هاذونت .....
الريق : ايلوداين/ الريق	**الكلى:** الكليث/ هيزلث .....
المخ: المخ / أللّ (اللن)	**السمك:** اسلم/ الحوت .....
الكبش: ايير (ايبكر) / الكبش	**الحمامة :** لحمامة/ اذبير .....
النملة: النملة/ ايطوفث	**الشتاء**: لمشتى / تاجرست .....
الحجلة: الحجلة / اسكورث / احيقول	**زاوية المكان:** اغمرث / شوكث .....
اللون الاصفر: اوراغ/ اصفري	**اخضر:** ازيزاو / اخضري .....
اصبحيث **الصباح**: /انزايث	**مساء:** اعشويث / تامديث .....
المطر:/مثنا / لمطر /النوث / انزار / الڤرث	**الشهر:** يور / شهر .....
الملح: هيسنث/ الربح / الملح	**الثلج**: الثلج / اذفل .....
الذهب: اورغ/ الذهب	**الكحل الإثمد:** هازولث/ لكحل .....
الحفيذ: احفيذ/ اياو	**اليتيم:** ايوجيل (اڤوجيل) / ليتيم .....
الفحم: هرجيث / لفحم	**الضيف:** انيجيو / ضيف .....
المرآة: هيسيث / لمري/ الماع	**الفضة:** الفضة / ازرف .....

شكرا.

Appendix C: Friendship Network Questionnaire (English Version)

Friendship Network

1. **Informant's Information**

   a . Name: (optional) ……

   b. Age: …….. Sex: Male ◯ Female ◯

2. **Friendship Ties**

a. Do you have any close friends?

b. Who are they **(name elicitation)**? Which of your close friends is important to you? How often you are in contact? Which language (or dialect) do you use when you talk to them? Tell me about their ethnic origins.

c. Are there any friends or who you know from workplace or who study with you as well? Who are they **(name elicitation)**? Which language(s) you speak when you interact with them? Tell me about their ethnic origins.

d. Are there any relatives (e.g, cousins) who are your best friends as well? Who are they **(name elicitation)**? Which language(s) you speak when interact with them? Tell me about their ethnic origins.

e. Are there close friends who live in another city (or country) and with who you still maintain contact. Who are they **(name elicitation)**? Which language(s) you speak when interact with them? Tell me about their ethnic origins.

f. Where do you usually hangout with your close friends? Restaurants, gym locations, neighborhood, public spheres, school…etc

Appendix D: Friendship Network Questionnaire (Arabic Version)

شبكة الاصدقاء

1 .معلومات حول المشارك

ا. الاسم (اختياري) :.....

ب. السن : ..... ج. الجنس : ذكر ○ انثى ○

2. روابط الأصدقاء

ا . هل عندك أصدقاء مقربون ؟

ب. من هم (ذكر الاسماء) ؟ من هم اقرب الأصدقاء لديك ؟ الى مدى تبقى على اتصال دائم مع اصدقائك ؟ ما هي اللغة او اللهجة التي تستعملها مع اصدقائك ؟ ماهي اصولهم الاثنية ؟

ج. هل هناك أصدقاء يعملون معك او يدرسون معك من هم (ذكر الأسماء) ؟ ما هي اللغة او اللهجة التي تستعملها معهم؟ ماهي اصولهم الاثنية ؟

د. هل تربطك صداقة مع اقربائك ؟ من هم (ذكر الأسماء) ؟ ما هي اللغة او اللهجة التي تستعملها معهم ؟ ماهي اصولهم الاثنية ؟

م. هل عندك أصدقاء مقربون و يعيشون في مناطق (بلد / ولاية) أخرى ؟ من هم (ذكر الأسماء) ؟ ما هي اللغة او اللهجة التي تستعملها معهم ؟ ماهي اصولهم الاثنية ؟

ن. ماهي الأماكن التي ترتادها مع اصدقائك المقربون (مطاعم ، الحي، قاعات الرياضة ، الأماكن العامة ، الجامعة... الخ) ؟

Appendix E: Ethnographic Interview (English Version)

Ethnographic Interview

N.B. information about cultural informants are reported beforehand in the '**Ethnographic Interview Report**'

Pre (& post) Migration Networks

a. Do you think that lifestyle in the village wherein you lived differs quite considerably from life style in the urban city? How? Tell me more about it **(in this case, the fieldworker mentions the name of the village wherein the cultural informant lived)**

b. In the last two decades, many rural families from Arris and T'Kout moved to Batna 'ville'. What are some of the reasons that led Chaoui villagers to migrate to Batna urban areas?

c. Many people, notably migrant villagers, say that lifestyle in the village is easier and far better than lifestyle in Batna 'ville'? what do you think?

d. Do you believe that Chaoui rural inhabitants (especially families) are more conservative and attached to Tamazight traditions than their Chaoui counterparts in the urban areas? To what extend did migration affect their traditions and Chaoui speech norms? How ? why?

e. Do you still visit your first hometown village? Why? Tell me more about it.

I. Have you ever been treated differently or inapproprately in the neighborhood just because you are a new rural migrant or, possible, because you used Chaoui in the conversation? What happened?

Neighborhood

a. How long have been living in this city/ region?

b. Do you remember coming to this city/region? Tell me about it.

c. What made your family live/ move to this region? work? ethnic ties?

d. How did this neighborhood change over time? why?

e. What are the things that you like/hate about your neighborhood?

Peers / Teen Life

a. What kinds of groups (cliques) did you have in your school/ neighborhood?

b. Does ethnic identity play a crucial role in any group membership?

c. if a new teen, say, from another outlaying region moved to your neighborhood, or whose ethnic roots are different from yours, would you accept him to join your clique? Why?

Traditions

a. What are some of the traditions and customs you remember growing up with in your community? / since you moved to this neighborhood?

b. Do you plan to preserve these customs with your relatives/ family? How? why?

c. How do you celebrate _____? **(Berber traditions or Arab traditions depending on the ethnic roots of the cultural informants)**

Language Environment: Ethnolinguistic Contact

a. Have noticed any interesting things about the way people speak Chaouia around here? new words, new ways of speaking...etc

b. A lot of people think that Chaouia has changed a lot/ is changing a lot. Do you think so?

d. Do people in this region speak Chaouia differently?

e. How about differences between old and young speakers? Do you sound the same as your parents or grandparents?

f. Do you sound different from your parents? Why? What kinds of Chaoui words (or ways of speaking) they use that you do non not use?

g. What do you think about the way that youngsters speach Chaoui? What has changed? Why most of them feel embarrassed to use it in day-today life.

h. Do you think that regional background plays a role in how people use Chaouia (pronunciation, lexis…etc) ? give me some examples.

l. Has anyone ever mocked the way you speak Chaouia or laughed at you while speaking Chaouia in public? What did they say? What did you think about that?

n. Do you think that you try to change how you speak Chaouia when you are in certain contexts? Which ones? Why?

Appendix F: Ethnographic Interview (Arabic Version)

المقابلة

ملاحظة: الأسئلة المتعلقة بالمشاركة (الجنس و العمر و الاصل) مذكورة في **'تقرير المقابلة'**

أسلوب الحياة في الريف قبل الانتقال الى المدينة

ا. الا تعتقد ان أسلوب الحياة في الريف (او العرش) يختلف اختلافا جوهريا من أسلوب الحياة في المدينة؟ كيف ذلك؟ حدثني عن هذه الاختلافات (في هذا السؤال اذكر اسم المنطقة التي عاش فيها المشارك)

ب. شهدت العشرين سنة الأخيرة رحيل الكثير من العائلات من منطقة اريس و تكوت و غسيرة الى ولاية باتنة. ماهي أسباب هجرة سكان الريف الى المدينة ؟

ج. الكثير من الناس و خاصة منهم المهاجرون من الأرياف يؤمنون ان الحياة في الريف اسهل و افضل بكير من أسلوب المعيشة في مدينة باتنة. ما هو رايك حول هذا الامر؟

د.هل تعتقد بان سكان الشاوية في الأرياف (و خاصة العائلات منهم) اكثر محافظة و تمسكا بالعادات الامازيغ من الشاوية القاطنين في المدينة؟ هل تخلى الكثير منهم عن عادات الامازيغ و اللهجة الشاوية بعد انتقالهم الى المدينة؟ كيف و لماذا؟

م. هل مازلت تسافر الى الريف؟ لماذا ؟

ن. هل سبق و ان عاملك احد من سكان المدينة بطريقة مستفزة فقط لانك هاجرت من الريف او لانك تحدثت بالشاوية ؟

الحي

ا. منذ متى و انت تعيش في هذا المنطقة / المدينة؟ ب. هل تتذكر اليوم الذي قدمت فيه من الريف الى المدينة؟ اخبرني عنه

ج. لماذا انتقلت عائلتك الى هذا الحي (الانتماء العرقي) ؟ د. كيف تغيرت أسلوب المعيشة في هذا الحي؟

ك. ما هي الأشياء التي تحبها و تكرهها في هذا الحي؟

الأصدقاء / حياة المراهقة

ا. هل تنتمي الى جماعة اصدقاء خاصة في الحي الذي تقطن فيه (او الجامعة او المدرسة) ؟

ب. هل الأصل العرقي/ الاثني مهم جدا للانتماء الى جماعة الأصدقاء؟

ج. اذا انتقل شخص جديد من سكان الريف (او كان اصله العرقي يختلف عن اصلك) هل تقبله كفرد جديد في الجماعة؟ لماذا ؟

العادات و التقاليد

ا. هل تتذكر بعض العادات و التقاليد القديمة منذ ولادك في هذا الحي / منذ انتقالك اله هذا الحي؟

ب. هل ترغب في المحافظة على هذه التقاليد مع افراد عائلتك و اقربائك؟ كيف؟ لماذا؟

ج. كيف تحتفلون ب ..... ؟ **(اذكر اسم العادات و التقاليد عند العرب او الشاوية حسب الأصول العرقية للمشارك)**

المحيط اللغوي

ا. هل لاحظت أي شيء مثير يتعلق باستعمال الشاوية في هذه المنطقة كعبارات جديدة او استعمالات جديدة في اللهجة الشاوية؟

ب. الكثير من الناس يعتقد ان اللهجة الشاوية تغيرت كثيرا في السنوات الأخير. ما هو رايك؟

ج. هل تختلف استعمالات اللهجة الشاوية من فرد لآخر او من جماعة لأخرى في هذه المنطقة ؟

د. ماذا عن الفرق بين الشباب و كبار السن ؟بمعنى اخر هل تختلف اللهجة الشاوية حسب عمر المتكلم؟.. بين ابويك و اجدادك؟

ك. هل الشاوية التي تستعملها تختلف عن الشاوية التي يتحدث بها ابويك؟ ماهي الكلمات الشاوية (أساليب الكلام) التي يستعملونها و لا تستعملها انت؟

ل. ما رايك في الشاوية التي يستعملها الشباب؟ ماذا تغير فيها؟ لماذا يشعر معظمهم بالاحراج لاستعمالها في الحياة اليومية؟

م. هل تلعب الخلفية الجغرافية دورا مهما في اللهجة الشاوية (النطق المفردات) ؟ اعطني امثلة على هذه الاختلافات.

ن. هل حصل و ان ضحك احد على طريقتك في التحدث بالشاوية؟ و هل حصل و ان سخر احد منك فقط لآنك تحدثت بالشاوية في مكان عام؟ ماذا قالو بالضبط؟ ما رايك حول هذا الامر ؟

ف. هل تغير طريقتك في التحدث بالشاوية حسب السياق و المخاطب؟ ماهي هذه السياقات؟

Appendix G: Ethnographic Interview Report (English Version)

Ethnographic Interview Report

Tape Number: …….

1. Interview:

a. Date of interview: …../ ……./……

b. Time: ……c. Duration: ……..mns.

2. Interviewee(s):

a. **N**ame:…… Pseudonym:…….

b. Sex: Male ◯ Female ◯

c. Age: …… d. Ethnicity: …….

d. Address:……...……
……

e. Number of interviewees: one (dyadic) ◯ two (triadic) ◯ more than two ◯

3. Location :

a. Place of Interview :……..……..

4. Interview Incomplete for any Reason(s) :

a. Information noted 1:……..

b. Information noted 2:……..

Additional comments: …….

Appendix H: Ethnographic Interview Report (Arabic Version)

تقرير التسجيل (الاثنوغرافي)

التسجيل رقم: .....

1- المقابلة:

ا. يوم المقابلة: ...../...../.....

ب. الوقت:..... المدة: ..... دقيقة.

2. معلومات حول المشارك :

1. الاسم : ..... اسم مستعار :.....

ب. الجنس: ذكر ◯ انثى ◯

ج. السن: ..... د. الهوية الاثنية : .....

م. العنوان : .....

ن. عدد المشاركين: واحد ◯ اثنان ◯ ثلاثة او اكثر ◯

3. المكان:

ا. مكان المقابلة : .....

4. اسباب توقف المقابلة :

الملاحظة 1: .....

الملاحظة 2: .....

ملاحظات اضافية : .....

ملخص

أدى الاتصال المكثف بين العرب والبربر إلى ظهور تجمعات اجتماعية جديدة وشبكات عرقية من أنواع مختلفة عبر مختلف التراتبات الاجتماعية في مجتمع باتنة. اعتمد الباحث في هذه الدراسة على نموذج معدل ومتكامل يسمى ب***' نموذج العلاقات الاجتماعية التوفيقي'*** من دراسة معمقة للعلاقة بين تغير الشاوية والاتصال بين الجماعات الاثنية العربية والشاوية وانماط قوة الروابط الاثنية في ولاية باتنة. يركز البحث على النقاط الأساسية التالية: أ) دراسة التغير المعجمي في الشاوية و علاقته بقوة الشبكة الاثنية عند المتحدثين بالشاوية، ب) الاقتراض المعجمي و اسبابه الاجتماعية و الثقافية و الايديولوجية، و ج) دراسة التعبير عن الهوية الاثنية عن طريق اللهجة الشاوية في شبكات الصداقة في مدينة باتنة. يندرج هذا البحث في إطار لساني اجتماعي ويستند على النظريات والتوجهات البنائية الاجتماعية الحديثة ويدمج بين مناهج ومفاهيم من تخصصات مختلفة كاللسانيات الاجتماعية والسيسيولوجيا و الانثروبولوجيا. نعتمد في هذا البحث على مناهج وادوات بحثية متنوعة كالاستبيانات والملاحظة بالمشاركة و تدوين الملاحظات و المقابلات الاثنوغرافية. اكدت اهم نتائج هذا البحث ان الروابط الاثنية مترابطة بشكل ملحوظ مع التغير المعجمي في المتغير الشاوي. يستعمل المشاركون ذوي الروابط الاثنية القوية الكلمات الشاوية، بينما يميل المشاركون ذوي الروابط الاثنية الضعيفة الى اقتراض واستعمال المفردات العربية. تم تحليل استبيانات الشبكة الاثنية ل 1003 مشارك متحدث بالشاوية وكذا المفردات التي يستعملونها في الحياة اليومية. بالإضافة إلى ذلك، أجريت دراسة إثنوغرافية مكثفة لدراسة شبكتين الصداقة في مدينة باتنة، والتي تختلف على أسس اجتماعية ثقافية عديدة. أجريت مجموعة من التحليلات والملاحظات الميدانية لقياس التماسك الاثني لكلتا الشبكتين، و كذا ديناميكيات التغيير المعجمي والممارسات اللغوية. اثبتت نتائج البحث الاثنوغرافي في مدينة باتنة ان شبكات الصداقة التي ينتمي معظم أعضائها الى العرق الشاوي تساهم في الحفاظ على استعمال المفردات الشاوية عند كل الافراد، بينما تساهم شبكات الصداقة المتعددة الاثنيات في تسهيل الاقتراض المعجمي وكذا تغير المتغير الشاوي. تختلف اهداف استعمال الشاوية في مدينة باتنة حسب الأصل الاثني للأفراد والجماعات. المهاجرون الشاوية من فئة الشبان يميلون الى استخدام الشاوية للتعبير عن توجهات اجتماعية رمزية كالتعبير عن روح الانتماء للاثنية الشاوية و ثنائية الثقافة و كذا الانتماء الى المدينة. بينما يستعمل بعض من الشبان العرب والمقيمين في مدينة باتنة بعض المفردات و العبارات الشاوية من اجل تأكيد اختلافهم عن الجماعات الشاوية المهاجرة. اكدت النتائج أيضا الدور الفعال للروابط الاثنية الضعيفة والافراد الوسطاء والتنقلية الجغرافية في انتشار المفردات العربية المقترضة الى جماعات اجتماعية مختلفة و مناطق جغرافية أخرى و خاصة منها المناطقة الفلاحية الشاوية. وفي

الأخير اقترحنا نسخة جديدة لنموذج ميلروي للعلاقات الاجتماعية المسمى بنموذج العلاقات الاجتماعية التوافقي. بالإضافة الى ذلك اقترحنا بعض النصائح العملية لتطبيق نفس النموذج.

الكلمات المفتاحية: العربية، الشاوية، الشبكة الاثنية، الروابط الاثنية، الاقتراض المعجمي، التغير المعجمي، تركيبة الهوية، نموذج ميلروي للشبكات الاجتماعية

Résumé

Le vaste contact arabo-berbère a donné naissance à de nouvelles agrégations sociales et réseaux ethniques de différents types dans diverses hiérarchies sociales de la communauté de Batna. En utilisant une version modifiée du modèle de réseau social de Milroy, appelée *'modèle de réseau social syncrétique'* (SSNM), cette étude a fixé la tâche d'examiner l'association entre le contact interethnique, la force du réseau ethnique et les modèles de changement de dialecte chez les locuteurs de chaoui de la communauté de Batna. Cette étude cherche essentiellement à déterminer : a) A quel point l'arabe a influencé le lexique Chaoui dans les contextes ruraux, monoethniques et polyethniques urbains ; b) Comment fonctionne l'emprunt lexical arabe, ses mécanismes et ses motivations socioculturelles et idéologiques. Présentée comme multidisciplinaire et éclairée par les conceptions constructivistes sociales récentes, cette étude intègre des méthodes et des concepts issus de la sociolinguistique, de la sociologie et de l'anthropologied. Elle comprend divers outils de recherche, notamment des questionnaires de sondage, des observations des participants, des prises de notes et des entretiens ethnographiques. Ainsi, les questionnaires sur les réseaux ethniques de 1003 informateurs Chaoui ont été examinés en relation avec leurs choix lexicaux. De plus, des observations ethnographiques intensives ont été menées pour explorer deux réseaux d'amitié basés sur l'ethnie, qui varient sur plusieurs bases socioculturelles. Une série d'analyses en réseau et d'observations sur le terrain ont été réalisées pour évaluer la cohésion ethnique des deux réseaux, la dynamique des changements lexicaux et les pratiques linguistiques. Le résultat prépondérant indique que la force ethnique et la cohésion co-varient de manière significative avec la dynamique du changement lexical du Chaoui. Les répondants qui contractent des liens chaouis forts ont tendance à adopter davantage de mots chaouis, tandis que ceux qui contractent des liens faibles sont moins immunisés contre l'influence arabe et sont donc plus enclins à utiliser des

emprunts en Arabe. L'exploration ethnographique des jeunes Chaouis dans la ville de Batna a révélé que des réseaux d'amitié ethniquement denses soutiennent la stabilité et le maintien du dialecte, tandis que des réseaux d'amitié faibles et multiethniques encouragent le changement lexical. Dans les contextes interethniques urbains, les jeunes migrants chaouis utilisent diverses pratiques linguistiques chaouies, stylistiquement, en tant que fonction socio-index d'"Appartenance", "Loyauté ethnique", "Biculturalisme" et "Urbanité". Les jeunes sédentaires et urbains, quant à eux, respectent les normes dialectales chaouies saillantes pour marquer la « Distance» qui les sépare de leurs homologues chaouis. Les résultats ont également montré le rôle majeur des liens ethniques faibles, des "Courtiers" et des locuteurs géographiquement mobiles dans la diffusion des mots d'emprunt et des innovations arabes dans d'autres groupes sociaux et paysages ruraux. Une version intégrée et étendue du modèle de réseau social de Milroy, appelée '*Modèle de réseau social syncrétique'*, a été proposée, ainsi que ses considérations pratiques et ses directives.

Mots-clés: Arabe, Chaouia, réseau ethnique, liens ethniques, emprunt lexical, changement lexical, Construction d'identité, modèle de réseau social de Milroy.