Arabic-French Code switching in the Maghreb: An Examination of Changes in Syntax and Perceptions

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Abstract

This paper examines Arabic-French code switching in the Maghreb using data found on Twitter. Using the work of Bentahila & Davies (1983) as a reference, I found that the syntactic rules governing Arabic-French code switching in this region have remained the same; namely, code switching can occur at all boundaries beyond word boundaries as long as it does not violate restrictions within the two languages. Moreover, by considering the results of past studies concentrating on perceptions regarding code switching in the Maghreb, I conclude modern perceptions of Arabic-French code switching in the Maghreb are less negative than past perceptions. Finally, despite Arabization movements in each country post-independence, it seems that French is still regarded as a more sophisticated language and is still taught in schools and used heavily in more technical fields.

0 Introduction

Code switching is the linguistic phenomenon in which more than one language is used in a single utterance. This is a characteristic of speech in the Maghreb region as residents typically speak more than one language. This thesis will examine examples found on Twitter to determine whether Arabic-French code switching has continued to follow the same patterns found in previous studies such as Bentahila & Davies (1983) who found that code switching can happen in nearly any syntactic location, the only exception to this rule being within-morpheme switching. This thesis will also look at the potential motivations for code switching. Researchers have been trying to understand code switching between Arabic, French, and Amazigh languages in the region for decades, often focusing on trends within the individual countries. However, a few researchers have looked at the trends and differences across the region. As a result, we know that code switching is more common in Algerian television than in

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1 While the Maghreb region now is considered to be Morocco, Algeria, Tunisia, Libya, and Mauritania, the historic Maghreb was only comprised of Morocco, Algeria, and Tunisia; additionally, Libya and Mauritania do not share much of the history that connects the other three countries. For these reasons, when I refer to as ‘the Maghreb,’ I will only be referring to Morocco, Algeria, and Tunisia.
Moroccan or Tunisian television which we can extrapolate to code switching also being more common in Algerian society (Amazouz, Adda-Decker, & Lamel, 2017). This makes sense given that Algeria was the last of these countries to gain independence from the French.

Despite these cross-nation studies, there are still findings, typically focusing on a single nation, which present conflicting data. For instance, a study focusing on Tunisian Arabic-French code switching found that code switching was more frequent among university-educated individuals, but that gender had no influence on the frequency of code switching (Sayahi, 2011). However, another study found that the level of education was not necessarily important, but that social contact had a stronger effect on how frequently an individual code switched (Rouchdy, 2003). Yet another study found that in Morocco, the location of code switching was affected by the gender of an individual (Luomala, 2016).

I will be using data from Twitter because Twitter is a medium where people can constantly produce content, particularly when compared to the traditional book or article which are published less frequently and are edited more frequently than Tweets which therefore are more accurate representations of typical speech. Additionally, Twitter is an inexpensive way for people to produce writing, especially for languages that are less common or that are typically not written such as less understood dialects of Arabic. The code switching detailed in this thesis will be between different spoken dialects of Arabic and French; thus, while it is not impossible that publications exist which incorporate these particular language varieties, it is much less likely that an author would choose to publish their work in one of these dialects, if only because it would limit their potential audience size, especially for Maghrebi dialects which are typically regarded as the most difficult for speakers of other dialects to understand. This paper will first give a brief history of the Maghreb (Section 1) followed by an overview of the linguistic situation in the Maghreb (Section 2), then a discussion of codeswitching (Section 3) followed by a discussion of some of the motivations for code switching (Section 4), followed by a summary of code switching in the Maghreb (Section 5), then an explanation of the methods used to obtain data (Section 6), followed by an
explanation of my findings (Section 7) which were consistent with the Bentahila & Davies (1983) findings which stated that the only syntactic constraint to Arabic-French code switching is a ban on within-morpheme switches.

1 North Africa (Maghreb): A Short History

The Maghreb is a region in Northwest Africa with a long history of being ruled by colonial powers. The land in what is now known as Morocco, Algeria, and Tunisia was originally populated by various indigenous Amazigh communities. In the seventh and eighth centuries, Arabs brought Islam and Arabic to those communities (BBC, 2018). Later, in the sixteenth and seventeenth centuries, Tunisia and Algeria became a part of the Ottoman Empire. In the nineteenth and twentieth centuries, the French and Spanish split the land into the zones they wished to control and imposed their languages on the people. These occupations ended recently with the French expulsion from Algeria in 1962 (“Algerian War”, 2016).

Because of these countries’ colonial histories, they are home to a number of languages: Morocco has fourteen languages including Arabic varieties\(^2\), Amazigh languages\(^3\), French, and Spanish; Algeria has eighteen languages including Arabic varieties\(^4\), Amazigh languages\(^5\), and French; and Tunisia has seven living languages including Arabic varieties\(^6\), Amazigh languages\(^7\), and French. Each of these countries’ spoken Arabic is called Darija; these dialects are a part of the broader spoken Arabic dialect continuum that covers much of North Africa, the Horn of Africa, the Sahel, and the Middle East. These Darijas in particular are nearly mutually intelligible with the exception of the words that come from the Amazigh languages and some of the words that come from Spanish in Moroccan Darija and Turkish in Algerian

\(^2\) Hassaniya Arabic, Moroccan Judeo-Arabic, Moroccan Arabic, and Standard Arabic (Eberhard, Simons & Fennig, 2019)
\(^3\) Ghomara, Senhaja Berber, Tachelhit, Central Atlas Tamazight, Standard Moroccan Tamazight, Tarifit, and Tazmatit (Eberhard, Simons & Fennig, 2019)
\(^4\) Algerian Saharan Arabic, Algerian Arabic, Hassaniya Arabic, and Standard Arabic (Eberhard, Simons & Fennig, 2019)
\(^5\) Chenoua, Kabyle, Tachawit, Tachelhit, Tagargrent, Tamahaq, Tamazight, Tarifit, Tazmatit, and Tumzabt
\(^6\) Tunisian Judeo Arabic, Tunisian Arabic, and Standard Arabic (Eberhard, Simons & Fennig, 2019)
\(^7\) Sened and Tachawit (Eberhard, Simons & Fennig, 2019)
and Tunisian Darija. However, these dialects are not monolithic; these terms are used colloquially to group the dialects and varieties within these countries which form a within-country dialect continuum. This means that speakers from within the same nation would not necessarily be able to understand each other. My consultant, Youssef Kharrat, is from Tunis, which is located in the north of Tunisia, and cannot understand everything a speaker from the south of Tunisia would say. Within dialects, there are also variety shifts depending on what communities speakers belong to; for instance, communities in the south of Morocco and Algeria speak Hassaniya Arabic due to their proximity to Mauritania and Mizrahi Jews speak a different variety of Arabic.

This paper will address code switching in French and Arabic, and, as these are both languages spoken in each country, will not distinguish between the different Darijas present in the data. I will instead refer to them as Darija, Colloquial Arabic or Spoken Arabic. As in all Arabic speaking countries there is a diglossic\(^8\) situation where two distinct language varieties exist within the same speech communities. The High Variety and the Low Variety are used in distinct contexts. The Low Variety “is acquired through the normal processes of language acquisition” while the High Variety “is acquired through some kind of explicit, formal educational process” and only the High Variety is standardized (Hudson-Edwards, 1984 cited in Al-Sobh, Abu-Melhim, Bani-Hani, 2015). In this case Spoken Arabic is used in colloquial settings while Modern Standard Arabic, also known by the moniker Fusha, is used in formal settings such as at universities, in the media, and during political speeches while Darija is used for everyday speech. Thus, Fusha is the High variety and the dialect or Amiyah\(^9\) is the Low variety.

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\(^8\) In Arabic, the situation is actually multi-glossic as Classical Arabic and Modern Standard Arabic co-exist, although Classical Arabic is used exclusively for religious purposes. There is also an intermediary variety known as Educated Spoken Arabic which falls between the High Variety and Low Variety (Al-Sobh, Abu-Melhim, Bani-Hani, 2015). However, this paper will not focus on the multi-glossia within Arabic varieties and so, will continue to use the term diglossia to describe the within-Arabic language hierarchy.

\(^9\) Amiyah is the Arabic word used to refer to Colloquial Arabic and Arabic dialects. Some argue that the difference between these varieties are great enough that they should be thought of as different languages however, it is widely agreed upon that these are all in fact the same language with “slight variations” (S’hiri, 2003, 152).
2 Linguistic Situation and Hierarchies in the Maghreb

Prior to the arrival of French colonizers¹⁰ in 1830 (Algeria), 1881 (Tunisia), and 1912 (Morocco), Amazigh-Arabic bilingualism existed. The Amazigh language communities in Morocco can be split into three groups: Tashlehat spoken in the south-west, Tamazight spoken in the Atlas Mountains region, and Tarifit spoken in the north. In Algeria, Amazigh language communities can be split into Tahaggart Tamahaq in the south; Tidikelt Tamazight, Tazn nat’t, Korandje, Taznatit, Tumzabt, Tagargrent, and Ternacine Tamazight across the center of the country, and Chenoua, Kayble, and Tachawit in the north. Finally, in Tunisia, the only Amazigh language communities are Shilha located in the south and Tachawit which is spoken near the Algerian border.


¹⁰ Technically Tunisia and Morocco were French protectorates as opposed to colonies (Talbi et al, 2019; Barbour et al, 2019)
Moroccan, Algerian, and Tunisian Darijas have been influenced by the Amazigh languages, French, Spanish, and Turkish and differ from Fusha in phonology, syntax, and lexicon. These Amiyahs also differ from each other in phonology and lexicon\(^\text{11}\) largely due to the aspects of different languages present in each Darija. Arabic dialects form an intelligibility continuum in which Amiyahs that are geographically close are also more similar linguistically and are thus more or less mutually intelligible but whereas dialects from countries further away are nearly incomprehensible\(^\text{12}\). These dialects exist in their individual countries in diglossia with Fusha. Because MSA is used in more formal settings, it is considered the prestigious or High variety (H) while the dialect, in this case Darija, is considered the Low variety (L) and is spoken colloquially. This is notable because for most people, Darija is the L\(^\text{1}\) as all Amiyahs are in the Arab world and MSA is the L2.

Today, a large number of Moroccans, Algerians, and Tunisians are Arabic-French bilinguals and French is still considered a language of prestige. This association of French with prestige comes from calculated policies implemented by the French during their reign over these countries. During the occupation in Morocco, the French introduced their own education system which was imposed on the people as “a means of conquering the country” (Bensnard quoted in Bidwell 1973, p. 237 quoted by Bentahila, 1983, 6) by “encourag[ing] the Moroccans to forget their own culture and adopt the French one” (Bentahila, 1983, 6). “The imposition of a French education system was in fact a means of conquering the country” (Bensnard quoted in Bidwell 1973, p. 237 quoted by Bentahila, 1983, 6). The French education system that was introduced was “very selective, competitive and even aristocratic”

\(^{11}\) I was not able to find any definitive evidence that these particular dialects also differ from each other syntactically. However, many studies such as (Wilmsen, 2010) and (Brustad, 2000) have shown that geographically separated dialects do differ significantly from one another in terms of syntax so it is possible that these dialects also differ from each other syntactically.

\(^{12}\) This is generally true, however the Egyptian media industry has been a dominant force in the Arab world for centuries and thus, the Egyptian dialect is one of the most widely understood dialects.

\(^{13}\) In Amazigh communities, an Amazigh language is the L1 and Darija is the L2 or speakers are simultaneous bilinguals.
which likely served as a foundation for modern day language attitudes (Bentahila, 1983, 8). In 1930, the French attempted to further separate Arabs and Amazighs in Morocco by establishing the Dahir Berbère or Berber Decree. This law established schools where students would be taught in French and an Amazigh language\textsuperscript{14} which differed from the pre-existing Franco-Islamic and Franco-Jewish schools that they had established earlier where students were taught religion courses in Arabic and students studied Classical Arabic or Hebrew. The goal of this decree was to integrate Amazighs into French Christian culture; however, this integration attempt led to public outcry and the establishment of private Islamic schools which taught exclusively in Arabic. The people who supported these Arabic Islamic schools were traditionalists and these schools continued to teach children in the traditional way which was largely memorization based while the French schools taught more subjects in a different fashion; these clashes reinforced the idea that French was the language of modernism and advancement. French was described as

The language for those who wanted to participate in what was called “le Maroc Utile” (Useful Morocco) (Lamalif No. 58, 1973, pp. 12-13)—the modern sector, which was developing industry, mechanized agriculture, transport, banks, insurance and commerce. In contrast, Arabic remained the medium of operation for the traditional Moroccan sector, which dealt with traditional agriculture, craftsmen's work, and so on. (Bentahila, 1983, 9)

After Morocco achieved independence in 1956, education was available to more people. Today, the curriculum is still strongly influenced by the French educational system and in private French schools in Morocco, Arabic is taught as a second language. Since independence, arguments to remove French from the Moroccan educational system have been brought up but it persists to this day because it is a means “of having an opening into the West” (quoted in Zartman 1964, p. 158). Additionally, some argued that

\textsuperscript{14} In 2003, a standardized writing system for Amazigh languages called Neo-Tifinagh was adopted in Morocco. Before then, these languages were written using Roman characters.
The more advanced a child gets in his studies, the more he has to use French; in secondary school French is still the medium of instruction for all scientific subjects… It is the only language of instruction used in the faculties of medicine, science and engineering…” (Bentahila, 1983, 12)

Despite past Arabization attempts in Morocco, Bounfour (1973) found that secondary school students perceived French to be a civilized language “necessary for modernization, economic and technical progress.” These students also considered Arabic to be the language “used to talk about the past, religion, and morality” (Bentahila, 1983, 28). Consequently, Arabic monolinguals were seen as uncultivated and uneducated individuals belonging to an older generation.

Bentahila’s studies inform us that in 1983, French was still essential for work in government, science, technology, and medicine and this seems to still be true today, although English is also becoming useful and sometimes necessary in these fields. Given French’s practicality, it seems there are two diglossias in Morocco, the traditional MSA-Dialect diglossia and the French-Arabic diglossia, creating a multi-glossic situation.

Similarly, in Tunisia, French and English are used for scientific disciplines, but Arabic is used in the literary sphere, likely because of the long tradition of poetry, philosophy, and literature in the Arab world and because Arabic is seen as the more beautiful language (Talbi et al, 2019). Given this, we can assume that in Tunisia, the language hierarchy is also MSA > French > Darija > Amazigh and that the same dual diglossic system exists.

In Algeria, by contrast, the Arabization movement was more successful, likely due to the fact that the incredibly bloody end to the 130 year French occupation as well as the conditions during the occupation led to more national resentment directed towards the occupiers. In Algeria, after violence erupted in 1954, independence, and thus the Algerian national identity, became associated with Islam and Arabic. After independence Arabic was declared the national language in 1962 and the official language in 1963 (Boucherit, 2003, 58). The new government, led by President Ahmed Ben Bella, opened hundreds of new
masjids, nationalized industries, joined the Arab League, and made Arabic the national language which meant that Arabic would be taught in schools (Abdulrazak, 1982). Arabic had no standardized place during the period of French colonization in fact, it was only taught in schools as a foreign language beginning in 1938, nearly a century after the beginning of the colonization (Boucherit, 2003, 58). Now, Arabic is the primary language of instruction in primary and secondary schools and is used in the scientific and technical fields. Furthermore, unlike Morocco, which relied on French expatriates to teach, Algeria recruited Arab teachers from other countries and in 2000, Arabic replaced French at universities. Amazigh language and literature studies are also available at universities which do not seem to be available in the other two countries (Brown et al., 2019). However, elite private schools still teach in French, and English, is also valued, so it is likely that two language hierarchies exist in Algeria: the cultural MSA > Darija > French > Amazigh hierarchy and the economic MSA > English > French > Darija > Amazigh. This situation is unique as the national culture is anti-French even as the language continues to be valued in some industries.

Interestingly, while French is considered to be the more sophisticated language, Fusha was and has continued to be thought of as the most beautiful language. In a 1978 study done in Morocco, Ibaaquil gave participants a list of ten epithets: “practical, dead, rich, versatile, beautiful, able to keep up with the modern world, useless, lively, necessary, and outdated” (Bentahila, 1983, 30). Ibaaquil (1978 as cited by Bentahila, 1983) then instructed participants to assign these epithets to whichever language (Moroccan Arabic, MSA, or French) they felt best fit. In this study, MSA was thought of as the most beautiful or richest by a majority of participants and was deemed to be the “language Moroccans should use above all” (Bentahila, 1983, 32). This study informs us that the hierarchy of languages as seen by Moroccans at this time was Fusha > French > Darija. This hierarchy is consistent with the ideas of nationalism and patriotism that are present in Morocco in that Arabic, the language associated with the national and cultural identities, is valued over French, the language of the colonizer, but also reflects the reality that
Moroccans need French in order to gain social mobility. However, this hierarchy may appear counterintuitive because it places speakers’ native language at the bottom of the ladder and values second and third languages. For speakers of Amazigh languages, this hierarchy which is really Fusha > French > Darija > Amazigh places the onus on speakers to learn not only a second language to communicate with members of their larger community but at least a third language to be seen as a valued member of society. Unfortunately, this is fairly common in smaller language communities and in indigenous language communities which are often devalued by society and often by speakers themselves; the generational transmission for Amazigh languages for people living in non-rural areas may also be put aside in favor of learning more international languages such as English. These hierarchies give the highest position to a language that is typically not spoken in day to day life, likely due to Classical Arabic’s ties to the Qur’an and poetry. Thus, in order to find economic success, citizens must have some mastery of all three languages. This multilingualism makes code switching commonplace in the Maghreb.

3 Code Switching

Code switching (CS) is used to describe situations in which more than one language is used in a single utterance. Code switching differs from borrowing in that borrowing takes a lexical item from one language and integrates it into a second language. According to Poplack (1980), a borrowed item is comprehensible to speakers of the second language and may have been changed phonologically, morphologically, and syntactically before its acceptance into the second language.

Contrarily, if a lexical item from one language shows either only syntactic integration, only phonological integration (intrasentential), or no integration at all (intersentential) into a second language, it is considered to be an instance of CS (Figure 2). Borrowings in the intermediary stage are considered to be nonce borrowings; defined as syntactically and morphologically integrated into the base language without phonological integration (Boztepe, 2003, 6).
<table>
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<tr>
<th>Type</th>
<th>Levels of Integration into Base Language</th>
<th>Code Switching?</th>
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<td>Phonological</td>
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*Figure 2: Table of Identification of Code Switching Based on Integration into Base Language. Adapted from “Issues in Code-Switching: Competing Theories and Models,” by E. Boztepe, 2003, 6 Adapted from Poplack (1980)*

Both Arabic and French contain borrowed or loan words from the other language. In Standard French, North African French and likely other dialects of French that coexist with Arabic in a community, Arabic loan words are typically linked to culture (Examples 1-2) but can also come from colloquial speech (Example 3).

(1) French: hijab/hidjab

   Arabic: حجاب/hijab

   English: Hijab (type of scarf)

(2) French: Abaya

   Arabic: عباية/abaayaa’

   English: Abaya (type of clothing)

(3) French: Kiffer

   Arabic: كيف/kif
English: To like, enjoy (French, familiar)

A state of relaxation gained through the use of cannabis (Moroccan Arabic)

The same (Algerian Arabic)

(4) French: Gazelle
Arabic: ﻏﺰال/ghazaal

English: Gazelle, deer

In Arabic, French loan words can refer to a variety of things (Examples 5-7) although some of these words (Example 7) could have also come from English or a Romance language as they are the same across these languages.

(5) Arabic: ﺣﺮسﻮن/garsuun

French: Garçon

English: Waiter

(6) Arabic: ﻣﺎﻛﯿﺎج/maakiiyaaj

French: Maquillage

English: Makeup

(7) Arabic: ﺑﻠﻔﺰﯾﻮن/telefiisyuun

French: Télévision

English: Television

These loan words are adopted into the new language and can then be used like any other word in that language (e.g. verbs can be conjugated (Example 8), nouns and adjectives will agree (Example 9)) while code switched words are not considered to be a part of the new language and thus cannot be conjugated using the rules of that matrix language. Poplack (1980) also introduced the Free Morpheme Constraint: “Codes may be switched after any constituent in discourse provided that constituent is not a bound morpheme” and the Equivalence Constraint: “Code-switches will tend to occur at points in discourse
where juxtaposition of L1 and L2 elements does not violate a syntactic rule of either language.” The Free Morpheme Constraint limits code switching to word boundaries as seen in examples (Examples 10-11). The Equivalence Constraint limits code switching to places where syntax overlaps such as when the natural word order is the same.

(8) Je kiffe ce film.
   I like.1SG that film
   ‘I like that film.’

(9) Garsuun jayid
   Waiter.M.SG good.M.SG
   ‘A good waiter.’

(10) I am studying le conflit en France.
    I am studying the.FR conflict.FR in.FR France.FR
    ‘I am studying the conflict in France.’

(11) *I am studyer le conflit en France.
    I am studying.EN-FR.INF the.FR conflict.FR in.FR France.FR
    ‘I am studying the conflict in France.’

However, Bentahila & Davies (1983), Berk-Seligson (1986), Belazi, Rubin and Toribio (1994), and Boztepe (2003) have all provided counterevidence for both constraints. Boztepe’s (2003) example (Example 12) shows a case where a Turkish possessive pronoun is bound to an unintegrated English root which violates the Free Morpheme Constraint but is perfectly grammatical.

(12) Sen-inle bu konu-da conflict-imiz var.
    you.TK this issue.TK.PREP conflict.EN-POSS.1PL exist.TK
    ‘We (you and I) have a conflict (disagreement) over this issue.’ (adapted from Boztepe, 2003, 9)
The Equivalence Constraint states that “CS will occur at points where the surface structures of the two languages map onto each other” meaning switches between nouns and adjectives in a noun phrase in English/French CS would not be possible because English adjectives typically precede the head noun while French adjectives typically follow it (Boztepe, 2003, 8).

Within code switching theories, the concept of asymmetry seems to apply to the data I found. Asymmetry is based off of the idea that there is a matrix language and an embedded language which must meet the syntactic conditions of the matrix language’s grammatical frame (Aabi, 1999, 16). In fact, some definitions of code switching like that of Myers-Scotton (1993) are based on the idea of asymmetry. Myers-Scotton says, “CS is the selection by bilinguals or multilinguals of forms from an embedded language (or languages) in utterances of a matrix language during the same conversation (4, quoted in Boztepe, 2003, 9). Bentahila & Davies (1998) determined that there exist three mechanisms speakers use to code switch: alternation, where there is a clear distinction between speech in both languages; insertion, where there is a clear matrix language and embedded language; and leaks, where elements from the "psycholinguistically dominant language infiltrate into discourse from the other one” (Jacobson, 1997, 49). Within the observed data, I saw evidence of each of these mechanisms although I do not believe I looked at enough data to say which of these is used most frequently on Twitter.

4 Motivations for Code Switching

Research on code switching suggests that people tend to code switch for one of six reasons: Firstly, vocabulary available; speakers tend to use the language that they perceive to have a wider vocabulary for a specific subject so that they can be more nuanced. We can see this example in the Moroccan context where French is seen as the language best equipped to handle scientific discussions. Speakers also tend to choose to code switch if they simply forget a word in one language but remember it in another. Secondly, rhetorical device; speakers may choose to code switch when they wish to emphasize something, show
contrast, or change topics. Code switching can also be used as a means of getting an audience’s attention, Nerghes (2011) found that code switching “draw[s] the participant’s attention and will enhance their motivation to carefully scrutinize the message presented” (Rihane, n.d., 9). Thirdly, showing solidarity; speakers may “switch to another language as a signal of group membership and shared ethnicity” with an addressee (Holmes, 2000 cited in Rihane, n.d., 5). This reason for code switching is likely particularly pertinent in the Maghreb where so many different communities reside in one region. Fourthly, reflecting status; code switching can be used to imply social status distinguish oneself from another social class. Shabt (2007) suggests code switching can be used “to sound elitist or classy” and Al Khatib (2003) found that code switching can be used “to show power over the less powerful” (Rihane, n.d., 6). Similarly, Suleiman (1999) reported that code switching “is looked upon as something prestigious and [as] a sign of education and competence in more than one language” (Rihane, n.d., 6). Given the already existing diglossic relationship between French and Arabic in Morocco and Tunisia, it seems likely that this reason serves as a motivation to a number of speakers. Fifthly, emotions; speakers tend to speak about topics related to positive emotions in their native language. Holmes (2000) found that language switches were “often used to express disapproval” (Rihane, n.d., 8). They are also more likely to pick the language tied to a particular memory; Kim (2006 as cited by Rihane, n.d.) found that Korean-English bilinguals will often speak about their memories in Korea in Korean because their experiences in Korean society prime them to speak Korean. Speakers often tend to switch languages if speaking about a topic in one language is taboo (Rihane, n.d., 7). Finally, audience; speakers may start an interaction in one language then switch if it appears their interlocutors are not competent in that language.

S’hiri (2003) studied the accommodations made by Tunisian Arabic speakers when speaking to Arabic speakers from the Middle East; these results can be generalized to address the habits of speakers from Algeria and Morocco due to the fact that their dialects are even further away geographically and thus more different from Middle Eastern dialects, these speakers will inevitably experience the same thing.
S’hiri applies the Communication Accommodation Theory which attempts to explain “the cognitive and affective processes underlying speech convergence and divergence” (Beeb & Giles, 1984, 7 cited in S’hiri, 2003, 150). “Convergent accommodation is defined as ‘a strategy whereby individuals adapt to each other’s communicative behaviors in terms of a wide range of linguistic-prosodic-nonverbal features including speech rate, pausal phenomena and utterance length, phonological variants, smiling, gaze, and so on’” (Giles et al., 1991, 7 cited in S’hiri, 2003, 150). Conversely, divergent accommodation is used to accentuate differences between speakers, such as when accentuating ingroup status, and involves speakers emphasizing the linguistic differences between their ingroup’s speech and some outgroup (S’hiri, 2003, 150). A third type of linguistic accommodation, stereotypical convergence, occurs when speakers “converge toward the speech style they believe their interlocutors to possess” (S’hiri, 2003, 151). This type of speech accommodation may be used when a speaker is motivated to code switch based on their audience.

Research shows that Fusha is not the only language speakers of different Arabic Amiyahs choose when in contact situations (Abu Melhim 1991, 1992 cited in S’hiri, 2003, 152). “Crossdialectally, Arabic speakers code switch to Fusha, to other “prestige” varieties, and to foreign languages (Abu Melhim, 1992) and even used “‘hybridised’ forms” (Holes, 1995, 5)” (S’hiri, 2003, 152). Because of the prevalence of the Egyptian and to a lesser extent Levantine dialects in popular culture, most people in the Arab world have been exposed to and thus understand these dialects. However, most people have not been exposed to Maghrebi dialects. S’hiri’s (1995) study followed broadcasters and journalists at work and focused primarily on their interactions outside of reporting as reporting in the Arab world is typically done in Fusha. All Maghrebi speakers in S’hiri’s (1995) study accommodated in some way to interact with their non-Maghrebi interlocutors although they chose different methods of accommodation. However, they all agreed that this convergence was the result of a number of factors. Participants said convergence was “psychologically motivated, allowing them to get closer to their interlocutor;” “for the sake of pragmatism
and practicality… There is no time to explain linguistic differences;” and that convergence was
influenced by Middle Easterners’ “preconceptions and stereotypes,” “arrogant views,”15 and “prejudice,”
which are all based on the idea that Middle Easterners are ‘Arabs’ while Maghrebi people are ‘Amazigh’
and emphasizes French colonization of the Maghrebi people. Middle Easterners were also reported as
perceiving their varieties of Arabic to be closer to Fusha (pure Arabic) and thus placed the responsibility
on the speakers of Tunisian Arabic to change their speech to accommodate them. Participants also noted
that convergence could be based on social context as these speakers were in the minority in this
workplace; based on Tunisians general tolerance of other cultures; and based on Tunisians higher
exposure to Middle Eastern dialects as opposed to the relatively low exposure Middle Easterners have to
Maghrebi dialects (S’hiri, 2003, 157-158). S’hiri (2003) gives us a number of social explanations for the
accommodation exhibited in this context which can be applied to code switching within the Maghreb.

Within the Maghreb, it is likely that, similarly, speakers are motivated to code switch for practical
reasons, either because of the vocabulary available to them or because of the vocabulary available to their
interlocutors; for social reasons, to get closer to or to show solidarity with their interlocutors or
alternatively to reflect a particular social status; or for emotional reasons.

5 Code switching in the Maghreb

Because people in the Maghreb typically speak Darija, Fusha, and French to some extent, code
switching is commonplace. However, perceptions of code switching in these countries vary. Moroccan
opinions regarding code switching are diverse: Bentahila (1981) found that 9.25% of respondents
suggested that the act of code switching was a sign that users “suffer from psychological problems of
some kind, that they lack confidence, have no sense of identity, or are disturbed in their conscience”
(Bentahila, 1981, 38). Others see code switching as a reflection of French colonialism and that code

15 One speaker cited a colleague informing them that “The Arabic language was born in Egypt, thrived in Lebanon
and died in Tunisia” (S’hiri, 2003, 157).
switchers fail “to show a proper pride in their nationality and their national language,” “are still colonized,” and “are not able to express themselves without resorting to the colonizers’ language” (Bentahila, 1981, 38). Only 9.17% of respondents said they had “no objections to this mode of speech, but find it an acceptable strategy of communication” while only two respondents “suggest[ed] that code-switching can actually serve a useful purpose, in allowing the bilingual to express himself more easily or more clearly” (Bentahila, 1981, 39).

In a later study, Bentahila (1983) collected information about bilinguals’ attitudes towards speakers speaking in Arabic, French, and a mixture of the two. His results showed speakers viewed the code switchers the most negatively, as victims of colonization (31.91%), incompetent in both Arabic and French (29.78%), showing off (23.4%), stupid (17%), uneducated (12.76%), mixed up (10.63%), and lacking in personality (6.38%). However, when the same speakers spoke only in French they were seen as intelligent and important. Additionally, those with accents in French close to those of native speakers in France, particularly those who spoke in the Parisian dialect, were regarded highly. While most of these attributes are negative because they assume code switchers are unintelligent, the “showing off” characterization is consistent with the idea that code switching can be motivated by a desire to reflect social status as it is likely that participants assumed speakers were motivated to switch for that reason. In the 1980s and 90s, many students would study abroad in France, making a mastery of French synonymous with being well educated and well travelled.

Bentahila (1981) found that bilinguals take perceived attributes regarding Arabic and French and unconsciously change their thinking and behavior to fit these narratives in each language. In a sentence completion task, where he asked bilinguals to complete the same sentences in Arabic\textsuperscript{16} and French, he found that bilinguals “alter their attitudes and outlook when changing from one language to another” (Bentahila, 1981, 40). Arabic was associated more with religion and in a simple sentence completion task,

\textsuperscript{16} The variety of Arabic was not mentioned in this study but it is likely that he presented the beginnings of the sentences in Moroccan Darija and speakers completed them in the same language.
respondents were more likely to complete sentences in Arabic in a way that tied back to religion. This included references to charity, helping others, going to the masjid, and fate; which was consistent with another Bentahila (1983) study which found that speakers tended to complete sentences with passive answers in Arabic and active answers in French. Examples (13-14) show that when presented with “One needs a good job to…” and “Rich people can afford…,” participants tended to provide shallow, materialistic responses in French and responses related to duty that showed a connection to their community when completing the sentences in Arabic. When completing “Rich people can afford…,” 41.42% of respondents referred to helping the poor in Arabic compared to 21.42% in French while for other sentences, charity was mentioned exclusively in Arabic (Example 15) (Bentahila, 1983, 41).

(13) French: One needs a good job to live happily.

Arabic: One needs a good job to be able to spend one’s last days praying in the mosque.

(Bentahila, 1983, 41)

(14) French: Rich people can afford whatever they like.

Arabic: Rich people can afford to help their Muslim brothers. (Bentahila, 1983, 41)

(15) French: I like to spend my money on useful things.

Arabic: I like to spend my money on charity. (Bentahila, 1983, 41)

Responses in Arabic were more likely to contain “references to the family, and concern for family welfare” as well as ideas related to patriotism. Respondents also indicated they were more likely to read newspapers, periodicals, and scientific materials in French and poetry, religious texts, and romantic texts in Arabic. These responses support the idea that there is a diglossic relationship between French and Darija in Morocco. Given the similarities between the state of these languages in Morocco and Tunisia, we can presume this diglossic relationship exists for similar reasons in Tunisia.

Despite the attitudes of participants in Bentahila (1983), participants in another study conducted by Bentahila (1983) were more likely to code switch with their friends than with anyone else. Bentahila
(1983) also found that location mattered: respondents reported that Arabic was their preferred language at the hospital, restaurants, hotels, and at the grocery store while French was their preferred language at the pharmacy. Presumably, the preference for Arabic at the hospital is because the scientific or medical characteristic is overshadowed by the emotional state of the person and emotional concepts are typically expressed in Arabic.

These studies examined language choice and found that language choice is influenced by the “background situation” where the speaker must make social considerations and the “immediate situation” where the speaker simply uses a language out of habit. “The choice of language may thus be influenced by factors relating to the individual speaker, to the particular languages and their associations, or to aspects of the social situation” (Bentahila 51-2). Language choice can also be determined by the interlocutor as multilingual speakers must find a way to make themselves understood when speaking to monolinguals. In another study, Bentahila (1983) found that bilinguals tended to use Arabic with beggars, maids, grandparents, parents, and elders because those people did not speak French and a mix of Arabic and French with siblings and friends.

<table>
<thead>
<tr>
<th>Interlocutor</th>
<th>Beggars</th>
<th>Maids</th>
<th>Strangers</th>
<th>Policemen</th>
<th>Doctor</th>
<th>Employer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Language Chosen</td>
<td>Arabic  (100%)</td>
<td>Arabic (97.9%)</td>
<td>Arabic (70.5%)</td>
<td>Arabic (72.8%)</td>
<td>French (53.4%)</td>
<td>French (52.5%)</td>
</tr>
</tbody>
</table>

*Figure 3: Table of Language Choice in Different Situations. Adapted from Bentahila, A. (1983). Language Attitudes Among Arabic-French Bilinguals in Morocco. Avon: Multilingual Matters, 55-59*

17 Percentages are calculated by dividing the number of people who chose “always,” “very often,” and “often” on the Likert scale provided by Bentahila. Additionally, some respondents did not provide answers. Bentahila also removed responses mentioning an Amazigh language.
Bentahila (1983) also asked participants which language they would use to discuss particular topics. In this study, participants were given the choices: Moroccan Arabic, French, Arabic & French, and Classical Arabic\(^{19}\). The results (Figure 5) show that participants reported that Moroccan Arabic dominated the religious and domestic spheres and French the scientific and technical. Interestingly, Classical Arabic was reportedly used less than Darija when discussing religion which is not what I would expect given the results of previous Bentahila studies. Similarly, I was surprised by the findings showing that Moroccan Arabic is not the primary language for discussing personal subjects, sports, or sociological topics. What this data does tell us is that despite the aforementioned results regarding perceptions of each language and its users, people reported using a combination of Arabic and French a similar percentage of the time to discuss almost all of the subjects they were asked about. Religion was the topic for which participants reported using French and the combination of Arabic and French the least which makes sense considering the majority of Moroccans are Muslim.

<table>
<thead>
<tr>
<th>Topic</th>
<th>Moroccan Arabic</th>
<th>French</th>
<th>Arabic &amp; French</th>
<th>Classical Arabic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Religious</td>
<td>47.2%</td>
<td>8%</td>
<td>11.5%</td>
<td>33.3%</td>
</tr>
</tbody>
</table>

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\(^{18}\) Percentages are calculated by dividing the number of people who chose “always,” “very often,” and “often” on the Likert scale provided by Bentahila. Additionally, some respondents did not provide answers. Bentahila also removed responses mentioning an Amazigh language.

\(^{19}\) Bentahila uses the term ‘Classical Arabic’ to refer to what people today would call Modern Standard Arabic. This is likely because the term ‘Modern Standard Arabic’ did not exist or was not widely used when he published his study. Classical Arabic can only be found in the Quran and in poetry. However, both Classical Arabic and Modern Standard Arabic translate to Fusha in Arabic.
<table>
<thead>
<tr>
<th>Category</th>
<th>Scientific</th>
<th>Technical</th>
<th>Industrial</th>
<th>Sociological</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0%</td>
<td>68.6%</td>
<td>24.4%</td>
<td>7%</td>
</tr>
<tr>
<td></td>
<td>2.2%</td>
<td>66.3%</td>
<td>31.5%</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>12.6%</td>
<td>43.7%</td>
<td>35.6%</td>
<td>4.6%</td>
</tr>
<tr>
<td></td>
<td>14.9%</td>
<td>28.8%</td>
<td>37.9%</td>
<td>17.3%</td>
</tr>
<tr>
<td></td>
<td>10.4%</td>
<td>33.3%</td>
<td>35.7%</td>
<td>19.5%</td>
</tr>
<tr>
<td>Culture and artistic</td>
<td>59.5%</td>
<td>10.1%</td>
<td>27.8%</td>
<td>1.3%</td>
</tr>
<tr>
<td>Domestic</td>
<td>31.8%</td>
<td>26.1%</td>
<td>37.5%</td>
<td>3.5%</td>
</tr>
<tr>
<td>Personal</td>
<td>31.8%</td>
<td>26.1%</td>
<td>37.5%</td>
<td>3.5%</td>
</tr>
</tbody>
</table>


Today, this may have shifted as parents today who were counted as youths during Bentahila’s 1983 study, now mostly speak French. Bentahila (1983) also found that similarly, people were more likely to speak Arabic with strangers, and policemen, likely due to the phenomenon of “language loyalty” which associates a language with nationality. People were also slightly more likely to use French when speaking with doctors, professors, employers, or others with whom they had a hierarchical relationship because French was used “as a marker of formality and Moroccan Arabic as a marker of informality” (Bentahila, 1983, 92).

Given this data, we can conclude that the language hierarchy in Morocco actually looks like this:
Fusha > French > Darija > CS Darija/French (Darija-French code switching) as opposed to Fusha > French > Darija. This preference for French is exacerbated by the large number of expatriate French
teachers in Morocco and the semi-implemented language planning policies which successfully Arabized primary school but not the rest of the education system, creating a system where French is valued and necessary but taught later on creating greater disparities between students’ mastery (Bentahila, 1983). This reliance on French in the education system, and later in the job market, means that despite attempts to Arabize Morocco and negative opinions towards French, Moroccans still need French in order to advance in many spheres of life and thus tend to consider French to be a more useful and prestigious language and thus place it higher on the language hierarchy.

Caubet (1999), found that, in Morocco, code switching is the “‘default mode’ of conversation, a mode which is in the middle of their linguistic continuum, with Moroccan Arabic at one end of the continuum and French at the other” (Caubet, 2003, 234). She also notes that “[b]ilinguals in the Maghreb, when they are among peers… in a safe linguistic environment, often play with languages and find it extremely funny: they mix them, they use calque translations, and make up CS words or sequences” (Caubet, 2003, 234). Code switching also seems to be employed by comedians across the Maghreb. Caubet seems to suggest that society’s impressions regarding code switching have changed since Bentahila (1983) to be more accepting of this phenomenon which comes naturally to these populations.

6 Approach

In order to examine modern-day Arabic-French code switching, I turned to Twitter to find instances of Arabic-French code switching. The data set used in this study consisted of all of the tweets from two days of Twitter data filtered by language. This produced thousands of tweets of which hundreds were filtered for user language and tweet language. Following this, I went through the tweets looking for instances of code switching and based on words frequently used, created a list of keywords that was added to a list of keywords created by Jeremy Fahringer, a member of the Linguistics Department at
Swarthmore College who was kind enough to filter the data for me. From the resulting data set, I was able to find 96\textsuperscript{20} tweets with Arabic-French code switching.

In addition, I will only be using tweets written in Latin characters where the Arabic words have been transliterated. I will do so because speakers do not tend to prefer to change keyboards when typing and additionally, Arabic speakers often use transliteration when chatting informally online, even when they are not code switching. While there is no official spelling system for these transliterated phrases, there exist a number of Arabic chat alphabets that speakers tend to use when transliterating. These different systems use a variety of methods to address the different consonants Arabic has that Latin characters cannot differentiate among. Modern Standard Arabic contains consonants that are not present in Romance languages and there are also emphatic consonants which make a similar sound to another consonant, making it difficult to distinguish between the two using Latin characters. For example, ض (/d/\textsuperscript{9}) and د (/d/) both represent similar phonetic values, but ض represents a pharyngealized /d/ which is a phonemic contrast to د, the plain /d/. To address this difference, alphabets use <d> for د and either <D>, <dh>, or <9> for ض. However, the lack of a cohesive standardized writing system is insignificant as active writing cultures can exist without standardized writing conventions (Lillehaugen, 2016). In the data collected, there are tweets that do not use any clear convention and there are tweets that use a number of different conventions, yet they were all comprehensible to my consultant, Kharrat who is fluent in Tunisian Arabic, French, and English. Kharrat played an integral role in the data interpretation process by translating tweets I found incomprehensible. He also gave his interpretations of language attitudes in Tunisia.

7 Findings

\textsuperscript{20} A number of these tweets cannot be cited due to the Twitter Terms of Service. However, I was still able to use them to look for patterns in the data.
Within the tweets I observed, there were instances of all three of Bentahila & Davies’s (1998) mechanisms used to describe code switching: alternation, insertion, and leaking. The tweets exhibited examples of French acting as the matrix language more frequently than Arabic. This is not entirely surprising because most of the users I looked at self-identified as French speakers on Twitter or identified their tweets as French. In the 96 tweets, there were examples of code switching at nearly every syntactic boundary outside of the morpheme boundary within words.

Example 16 shows a clear case of alternation, where there is a clear distinction between speech in both languages; in this example, the greeting, “good morning” is in Arabic but the rest of the utterance is in French

(16)
Good morning Omar, please give me a course on communication, you who speaks of objectivity…

Example 17 is a case of alternation with a clear Arabic clause followed by a French clause; within the French clause, there is an untranslatable Arabic phrase that was traditionally linked to religion but is now used universally.

(17)

![Tweet](https://twitter.com/djo_alcantara/status/953762151675629570)

**Figure 7:** Tweet by @Djo_Alcantara https://twitter.com/djo_alcantara/status/953762151675629570

Machallah bsahtec akhy tu me donnera les news a la maison inchallah

2:53 PM - 17 Jan 2018

Best wishes for your health my brother, you will give me the news at the house.
Example 18 also shows Arabic being used for an untranslatable phrase; in this case “alayhi al salat wal salam” is one of the phrases that should be said after mentioning Prophet Muhammad. This tweet informs us that this phrase, and similar phrases such as “subhanahu watala” which is said after mentioning God, should be said in Arabic, no matter what language the mentioning is done in.

(18)

Figure 8: Tweet by @dourousnet https://twitter.com/dourousnet/status/954261617797156864

Mais que signifie prier sur le prophète alayhi al salat wal salam? - Nader Abou Anas
fb.me/90PiCCZJX
11:57 PM - 18 Jan 2018

But what does it mean to pray according to the Prophet peace be upon him?

Example 19 is a case where there is an Arabic leak, the first-person pronoun “ana.” In the data set there were many cases of Arabic pronouns either replacing French pronouns or being used for emphasis by preceding the same pronoun in French as seen in Example 20.

(19)
Example 21 appears to exhibit both the alternation and the leak mechanisms. There are two main clauses with different matrix languages, the first an Arabic matrix clause and the second a French matrix clause. I believe much of the leaking in this case can be explained. The first leak is ‘bon’ which in this case is simply a filler word. The second leak, “madelaine,” could be a loan word in Arabic, however in this case it appears to be a leak; we can confirm this based on the spelling, the ‘-aine’ does not suggest the speaker intended to write an Arabic word which in this case would be more likely to end in ‘-lin.’ The third instance of leaking “le dej,” is likely French because it is referring back to a meal that was likely composed of French food; thus, much like the Korean participants in Kim (2006 as cited in Rihane, n.d.), the connection to something French causes the speaker to refer to the meal in French. The “et” in this
utterance is connecting the two matrix clauses. The fourth and final leak “ndewezha” was potentially chosen for practical reasons; the speaker chose to use one verb in Arabic to communicate the idea of ‘wash down,’ in French the speaker would have needed to use two verbs.

(21)

Example 22 displays insertion as well as leaking. The inserted French phrase “c’est gentil,” is clearly inserted where the same phrase in Arabic would go in a single language sentence. The French leak, “aussi,” completes the sentence and rests in one of the places where the Arabic equivalent would be grammatical.

(22)
Okay, if that is what is wished for me, I will take it.

The data I examined was consistent with Bentahila & Davies (1983) who concluded that “Code-switching is not possible across word-internal morpheme boundaries” and that all other possibilities were only constrained by “the (language-particular) subcategorization restrictions imposed on them” (Bentahila & Davies, 1983, 329). This is generally consistent with Poplack’s Free Morpheme Constraint although Bentahila & Davies (1983) did note that that restriction is not absolute as “there are instances of switching between a root morpheme and an inflection” (Example 23) and I found a similar example which is unfortunately no longer citeable (Bentahila & Davies, 1983, 317).
Within the data, there seemed to be more instances of code switching with clear asymmetry. It seems that untranslatable Arabic phrases are often embedded into French matrix sentences and that they always fit syntactically in the French sentences but are never altered. This particular type of code switching will likely be the most stable in the future as these phrases cannot be accurately translated in a way that transmits the holistic meaning associated with them in different contexts.

Unfortunately, the data set used was limited; with more time for data filtering, perhaps more key words could have been found than used to show different types of examples. The most difficult type of code switching to search for is switching that violates the Free Morpheme Constraint such as the code switching shown in example 23. There is no way to filter for this type of switching so it would take hours to manually look through tweets to find these examples. Due to these obstacles, it is impossible at this time to say not only how frequently different mechanisms are used on Twitter, but also how commonly switches that violate the Free Morpheme Constraint are used.

8 Conclusion

The data I examined was consistent with Bentahila & Davies (1983) in that there was code switching in a variety of syntactic locations. Unfortunately, I did not find any instances of within-morpheme switching but this is likely a result of the data filtration method rather than an indication that this phenomenon is no longer a regularly occurring aspect of Maghrebi code switching. Similarly to Bentahila & Davies (1983), I found that the distribution of switches indicated that some switches occur more than others, however, due to the limited nature of my data set, I could not concretely say which switches those were. Bentahila & Davies (1983) noted that “the actual distribution of switches is influenced by other factors besides these constraints,” these constraints being that “Code-switching is not possible across
word-internal morpheme boundaries” and that “All items must be used in such a way as to satisfy the (language-particular) subcategorization restrictions imposed on them” (Bentahila & Davies, 1983, 329).

By examining motivations for code switching and accommodation, it became clear that the negative perceptions of code switching prevalent in the past were not enough of a deterrent to stop individuals from code switching and it seems that, code switching is still the “‘default mode’ of conversation” (Caubet, 2003, 234).

In the future, I would like to further explore current perceptions of Arabic-French code switching in the Maghreb. This would be best accomplished through interviews with people in all three countries across different age groups. It would also be interesting to compare the frequency of code switching in different locations within each country and throughout the Maghreb. French is more prevalent in cities and in Tunisia, in the north, however, French is also spoken with different degrees of regularities in the different countries. My consultant, Youssef Kharrat, believes that, in Tunisia, there is a push to reject French, and now Western, influence and traditions as opposed to the language itself. He also noted that French is less commonly spoken in Tunisia than in Morocco and Algeria and that in general among the middle class it typically appears via code switching as opposed to in exclusively French interactions. This observation leads me to wonder whether or not there is a difference between the frequency and type of code switching present in middle and upper class communities in the Maghreb.
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