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How to make sense of codes in plurilingual settings multiple choices or rational decision making

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Abstract: *This work tries to give an overview of one of the most influential studies which has developed the most controversial debates in the fields of language contact and plurilingualism, namely the makdeness model and its extended form the rational choice model. These approaches discussed in this work, we believe, offer a comprehensive treatment of CS from a socio-psychological point of view. Our prime objective is to explain the different manifestations of two typologically different codes; Algerian Arabic and French and their implications in shaping the syntactic/pragmatic structures in mixed codes. The analysis of our AA/Fr CS and MSA/AA code-switched data is based on some observations elicited from the speech of Algerian bilingual speakers at university.*

Keywords: *Code-Switching, indexicality, Myers-Scotton, rights and obligations set, markedness.*

Résumé : *Ce travail tente de donner un aperçu de l'une des études les plus influentes qui a développé les débats les plus controversés dans les domaines du contact linguistique et du plurilinguisme, à savoir le modèle de la makdeness et sa forme étendue le modèle du choix rationnel. Ces approches discutées dans ce travail, nous croyons, offrent un traitement complet de CS d'un point de vue socio-psychologique. Notre premier objectif est d'expliquer les différentes manifestations de deux codes typologiquement différents ; L'arabe et le français algériens et leurs implications dans la formation des structures syntaxiques/pragmatiques dans les codes mixtes. L'analyse de nos données codées AA/Fr CS et MSA/AA est basée sur certaines observations obtenues à partir du discours de locuteurs bilingues algériens à l'université.*

Mots clés : *Code-Switching, indexicalité, Myers-Scotton, ensemble de droits et obligations, marquage.*

1. Introduction

Among language contact phenomena widely discussed in the literature is code alternation (hereinafter, named CS), that is; the alternative use of two or more languages within the same conversation. CS has triggered much more interest among linguists, anthropologists, and even psychologists and hence been approached from different perspectives. Many approaches have attempted to demonstrate that Code-Switching is not an accidental behaviour and therefore a set of structural constraints has been elaborated to explain the formal restrictions that rule out such a use within the same discourse.

We endeavour in this paper to explain how the language hierarchy manifested in the asymmetry of syntactic constructions is translated into psychological information connecting units of language with units of thought. Our aim is to test the theoretical findings of two models *the (makdeness model and its extended form the rational choice model)* on our data and to explore their implications for

understanding the socio-psychological mechanisms underlying bilingual language processing.

2. Socio-psychological approaches

2.1. Myers-Scotton's markedness model

Myers-Scotton suggests a socio-psychological model to account for linguistic choices in multilingual communities. She has worked primarily in Kenya, Zimbabwe, Tanzania, Uganda, Nigeria and Malawi, describing first the structural aspects of language use to arrive at a new proposal which aims at explaining the socio-psychological motivations behind CS use. She argues that any code choice is indexical of the social norms prevalent in society at large, yet these norms determine only the markedness of such linguistic choices and not the codes themselves.

According to Myers-Scotton, any language is associated with what she calls a *'rights and obligations set'* where bilingual speakers signal their understanding of the relevant context and negotiate their social roles within the current situation. The markedness model seems to be based on the indexicality of each code; speakers alternate the codes at their disposal to index the set of rights and obligations holding between the participants to the current exchange. Myers-Scotton points out that *"CS in general is a type of skilled performance with communicative intent. From the socio-psychological point of view, CS can be characterized as symptomatic either of unwillingness or an uncertainty on the speaker's part regarding the commitment to indexing any single rights-and-obligations set between participants in a conversation, or of a negotiation to change the rights-and-obligations set. This is because each linguistic variety used in CS has socio-psychological associations, making it indexical of a 'rights-and-obligations set'* (1993b:6-7).

Myers-Scotton assumes then that bilingual speakers must share a common knowledge of the social meanings attributed to each code within society. On the basis of their understanding of the indexical value of each code, they choose the expected variety to negotiate social relations.

Inspired by Grice's (1975) *'co-operative principle'*[1], Myers-Scotton suggests a *'negotiation principle'* as underlying social relations in bilingual speech, formulated as follow: *"Choose the form of conversation contribution such that it indexes the set of rights and obligations which you wish to be in force between speaker and addressee for the current exchange"* (1993c:113). She proposes three related maxims operative in bilingual speech:

- The unmarked choice maxim requires that speakers switch from one unmarked code (expected) to another in accordance to situational changes. This maxim directs *"make your choice the unmarked index of the unmarked*

[1] Grice's principle states: *'Make your conversational contribution such as is required at the stage at which it occurs, by the accepted purpose or direction of the talk exchange in which you are engaged'* (1989:26).

RO set in talk exchanges when you wish to establish or affirm RO set".

- The marked choice maxim requires the speakers to negotiate rights and obligations balance for various motives such as increasing social distance or creating an esthetic effect. It directs *"make a marked choice when you wish to establish a new RO set as unmarked for the current exchange".*
- The exploratory choice maxim takes place when the unmarked choice is ambiguous and community norms do not provide the appropriate choice. It states that *"when an unmarked choice is not clear, use CS [code-switching] to make alternate exploratory choices as candidates for unmarked choice and thereby as an index of an RO set which you favor".*

Myers-Scotton gives the following example, elicited from a conversation between a farmer and a worker in rural Western Kenya; to illustrate the marked vs. unmarked choices. Lwidakho, as the local variety, is considered to be the unmarked choice for this particular occasion whereas Swahili and English are considered to be the marked choices.

1 Farmer: khu inzi khuli menyi hanu inzala	As I live here, I have hunger.
2 Worker: *Njaa gani*?	*What type of hunger?*
3 F: Yenya khunzirila hanu-	It wants to kill me here.
4 W: *Njaa gani*?	*What kind of hunger?*
5 F: vana veru-	Our children.
6 W: *Nakuuliza, njaa gani?*	*I ask you, what kind of hunger?*
7 F: In zala ya mapesa, kambuli.	Hunger for money; I don't have any.
8 W: **You have got a land**. *Una shamba*. Uli nu mulimi.	**You have got a land**. *You have a land*. You have land.
9 F: Mwan mweru-	My brother,
10 W: Mbula tsisendi. **Can't you see how I am heavily loaded?**	I don't have money**. Can't you see How I am heavily loaded?**

Myers-Scotton asserts that the use of both Swahili and English in this example is the marked choice. Since both speakers share the same in-group language (Lwidakho), their decision to use the languages of out-group (Swahili and English) is a real evidence for a negotiation process at work. By choosing the marked codes, the worker gives a new indexical value for RO set relative to his interlocutor. He looks for any strategy to gain money and thereby denies his in-group obligations to the farmer *(the use of Lwidakho in this case).*

The markedness model as a cognitive model states that bilingual speakers' choices are accomplished on the basis of their assessment of the markedness of the varieties used. The speakers are endowed with an ability that allows them to distinguish between marked from non-marked choices. This innate ability or *markedness metric* (called *markedness evaluator* in the late versions of this model)

is a mental construct. But, the distinction between marked or unmarked relies principally on the social relations existing between interlocutors. This point has been sharply criticized by conversational analysts who reproached to this model its heavy reliance on external knowledge, speakers' beliefs and mainly their understanding of the situation. They criticize it also for its adoption of Fishman's domain-oriented approach (1965, 1972)[2].

Auer points out that speech activities do not necessarily correlate with code choices. He states that *"Many speech activities are not tied to one particular language, and even among those who have a tendency to be realized more often in one language than in another, the correlation is never strong enough to predict language choice in more than a probability way"* (1995:118). Auer claims also that it is possible to account for the motivations behind CS use without appeal to *"conversational-external knowledge about language use"* (1998:10). He reanalyzes the above-mentioned example from conversational perspectives; he explicates the worker's use of Swahili as a clarification request as opposed to his choice of Lwidakho which underlies an indirect request.

Mueeuwis&Blommaert reject Myers-Scotton's claim which indicates that the markedness model allows for *'dynamic variability'*. They consider the mapping between the chosen code and the indexical value of the RO set it reflects fairly static. They accuse her model for giving a mistaken conception of the indexicality assigned to social norms.

In response, Myers-Scotton and other researchers have revisited the markedness model in other works (Myers-Scotton& Bolonyais: 2001). They endeavor to combine cognitively-oriented assumptions with social structures to deal with socio-pragmatic dimensions of code-choices. They claim further that this extended version of the markedness model is able to explain a wide range of issues in contact linguistics and social behavior. To what extent does this modified approach offer clear insights unto the understanding of the phenomena of language variation and multiple code-choices?

2.2. The Rational Choice model

The markedness model, known as a rational choice model, is used to explore the individuals' motivations to CS. The premise of this newly-modified model is the assumption that speakers in bilingual communities make rational choices depending on the costs/rewards associated with the marked and unmarked codes for the exchange at hand and they act later to optimize their returns. Myers-Scotton refers to many theories as sources of inspiration to argue that her model has been misinterpreted by the proponents of conversational analysis approach.

[2] The *'allocation of languages to social domains'* plays an important role in the shaping of Myers-Scotton's (1993) *'allocation paradigm'*. According to this principle, languages are allocated to specific domains and the linguistic choices by speakers engaged in CS depend on the social situation.

With the framework of *Rational Actor* models, Elster (1979,1989) and Lessig's explication of the *Regulation and Construction of Social Meaning*, Myers-Scotton attempts to explain that rationality is the mechanism by which speakers make their best or the most feasible choices. Myers-Scotton questions the potency of social norms and their roles in determining code choices in alternative usages. She furthermore tries to find out how marked choices reflect the negotiation process and how the social meaning correlated to the new set of rights and obligations is constructed. For this purpose, she proposes a rationally-based model with three filters.

Unlike Elster, Myers-Scotton assumes that the structural constraints *(the first filter)* which cover the societal factors (participants' features: age, sex, socio-economic statuses, ethnic group memberships etc.) and surface discourse structural features limit the speakers' linguistic choices but do not determine in any way which choice is appropriate for the current exchange. In opposing other criticisms, she posits that the first filter is external to the speakers' knowledge and thereby a second internal filter is needed but she does not explain the crucial issue as to how the external constraints operate on the bilingual speakers' repertoire. Myers-Scotton places rationality at the center of her model asserting that the innately available architectures *(marked evaluator, somatic markers)* are the mechanisms programmed by experience and that rationality *(the third filter)* seems to act as the prime operation responsible for the selection of the most feasible choice within the opportunity set[3].

Lessig's model (1995) of regulations and constructions of social meaning offers many basic elements for Myers-Scotton to elaborate essentially her concept of "rights and obligations set". Myers-Scotton explains bilinguals' linguistic choices on the basis of their expectations and acceptability. She has been inspired by Lessig when he defines context as *"the collection of understanding or expectations shared by some groups at a particular time and place"* (1995:958). Then, she coins the notion of social meaning that Lessig presents in his works defined as *"the semantic content attached to various actions or interactions or statuses within a particular context"* (1995: 951).

Thus, in rational actor models everything lies on speakers' understanding of the situation and their capacity to synthesize the information they acquired from the social context through which they are engaged in CS. This point has been reformulated in the markedness model in terms of speaker's degrees of understanding markedness as follows: *"Based on information supplied by their markedness*

[3] Elster (1979) points out that structural constraints operating on the speakers' opportunity set or simply on linguistic repertoire in Myers-Scotton view determine their linguistic choices, making by this point other constraints rather constant and focusing mainly on the macro-societal factors. Myers-Scotton, however; stresses on rationality as the primary mechanism that directs speakers (perceived as potential actors) to choose the best code regarding their understanding of the costs and benefits information gathered via their calculations in order to optimize their rewards.

evaluator, participants in any exchange 'know' what reading on a continuum of markedness any linguistic choice has for the current exchange" (1999:1267).

The Markedness model in its extended form like all rational approaches, places the locus of code-choices by individual speakers regarding not only their desires but also social norms which are screened by the filter of rationality. Myers-Scotton &Jake (2001) make it clear that the drawbacks of the early markedness model can be allocated to its incapability of explaining how negotiation leads speakers to translate their linguistic choices into various social meanings. The framing of the new model is apparently reinforced by ideas that match with Myers-Scotton & Jake's views from other approaches; the relevance theory Sperber&Wilson (1989), the politesses theory Brown& Levinson (1975) and communication accommodation theory Giles (1982).

The ideas presented in Sperber&Wilson consider that utterances are loaded with intentional and referential messages and that speakers produce such utterances in a way which guarantees their relevance to the context of speech production. According to the relevance principle, *'every ostensive stimulus conveys a presumption of its own optimal relevance'* (1995:158). This means that the interlocutor or the co-participant to the talk exchange is justified to look for an interpretation optimally relevant to the situation. Within this stream of thinking, the search for optimal solution depends essentially on a given particular stimulus relevant to a particular context as Wilson& Sperber put it '*An ostensive stimulus is optimally relevant to audiences' abilities and preferences'* (2002:167).

The relevance theoretic comprehension procedure claims therefore that in an ostensive-referential type of communication, the speaker is licensed to presuppose that an utterance is at least relevant enough to be used in a particular context and the most important point is that it must be the most compatible with the speakers 'abilities and preferences. To do so, the speaker is allowed to follow a particular processing in that he can get into the explicit and implications of an utterance and cease following the same envisaged path when he arrives at a satisfaction by realizing his expectations of relevance.

On the basis of this ostensive-inferential cognitive framework, Myers-Scotton explores the idea of speakers' intentional inferences as part of their communicative competence and thereby suggests that these intentions are not reached through the referential meaning of an utterance but through the code-selection accomplished by those speakers. She recognizes that CS is a conscious act as she puts it in *'they always are aware of their listeners, and so they communicate with the assumption that their conversational contribution will be available to others for interpretation'* (2001:22).

Myers-Scotton draws a tie between intention and code choices which permits the creation of the desired social meaning regarding certain degrees of deviations from the established unmarked rules which govern a particular setting of interaction. For her, it is the markedness evaluator which attributes to each utterance a value which ranges from the expected code to the marked code and consequently plays an

influential role in the reconstruction of speakers' intentions or merely the negotiation of a new rights and obligations set. Therefore, the principle of negotiation postulated by Myers-Scotton is simply the reconstruction of new social norms regarding the speakers' persona and the types of interaction in which they are engaged. In this particular vein, Myers-Scotton assigns to her markedness model the value of *'a speaker-oriented model'* in which she predicts different types of persona as a pre-requisite for describing speakers engaged in CS opposing the views prevalent in previous studies which qualify these individuals as:

- Members of linguistic innovative groups.
- Members of upwardly social groups.
- High status individuals

The idea that *"speakers are purposeful agents who act to minimize costs and maximize benefits"* has been deeply analyzed within other traditions including mainly Politeness theory and Accommodation Theory. Within a politeness-theoretic framework, a *model person* deliberately makes use of positive and negative politeness strategies regarding the costs and rewards of a face-threatening act (FTA)[4].

FACE refers to persons' desire to be unimpeded (negative face) and to be approved (positive face). When individual speakers fulfill face-threatening act, they estimate the risk of face loss and consequently select the strategies available among other options that sustain the efficiency of communication and necessarily offer various interpretable intentions. But, sometimes speakers are not really motivated to maintain their interlocutor's face; they instead use FTA intentionally in order to create interactional power within the exchange at hand.

In a slightly different but certainly related vein, Myers-Scotton (1988) states that the performance of FTA challenges the established conventions for role relations. If the speaker conforms to these norms, this means he has to provide the unmarked choice. If he challenges the established social rules to reconstruct new interpersonal relationships, he has to introduce otherwise a marked choice. Yet, within a communication accommodation theory, speakers change their social behavior in their interlocutors' respect. Their motivations behind CS use are reached via *'moves of speech convergence and divergence that is; linguistic norms to decrease or increase communicative distance'* (Galois *et al.*1995:116).

Myers-Scotton equates speakers' desires to associate or dissociate themselves from their interlocutors (Giles) to a direct opposition between unmarked *(smooth switching)* and marked choices. She is rather concerned with the ways

[4] Brown&Levinson (1987) attempt to explain the salience of interactional power measures in social interactions. To do so, they assert that all model persons possess positive and negative FACE wants that they exploit to maintain other model persons' face when engaged in a social interaction: *'Since further, since all model persons are rational actors, it is the mutual interest of the model persons engaged in an interaction to maintain others' face'* (1987:60).

marked/unmarked choices are used in order to decrease or increase social distance and thereby proposes an identity-related explanation for code-selection *'…and as a result social distance is created between community and the individuals who made the marked choice, speakers use language choice to portray their perception of who they are,' their self'* (1993:478).

Sociolinguistic frameworks are generally characterized by two tendencies: macro- and micro-sociolinguistic approaches. The premise of macro-sociolinguistic approaches is that code-choices are at large determined by societal norms. In contrast, micro-sociolinguistic approaches examine closely switches as strategic cues which carry social meanings and fulfill certain conversational functions locally-identified. From a micro-sociolinguistic perspective, Bloom&Gumperz (1972) distinguish situational CS from conversational CS. While situational CS falls into switches commonly determined by shifts in speech events' constituents such as topic and participant, conversational CS defines the alternate use of multiple codes within the same conversation, without any change in social situation.

An illustrative example of **situational CS** will be drawn from a conversation between students discussing various topics at I.L.E. Here, the switch into French is triggered by a change of interlocutors with AA and Fr/AA being the varieties used between male speakers as opposed to Fr and Fr/AA codes when addressing to female speakers.

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1 A : **Les défenseurs** *(The defenders)*
2 B**:** ʂɑħħa **les défenseurs** **(***OK, the defenders)*
3 C: ʔajja wʊl **Magister** *(And the Magister)*
4 D**:** kaːjan trois **options** **(***There are three specialties)*
5 B: **ET toi** *(And you?)*
6 D : **Je passerai en littérature** *(I pass literature)*
7 C : **C'est un petit peu délicat** *(It's a little bit delicate)*
8 B: ʃaɤaːdi triviːzi *(What are you going to revise?)*
9 C : bɑʂʂɑħ le **programme des trois années ou les quatre années qu'on a**
(But the program of three years or that of four years that we….?)
10 B : **Ça dépend les modules que ..tu veux faire** kima nguːlu **la la l'option que tu veux faire** *(It depends on the modules that. You want to pass like we say the special field that wants to pass).*

Conversational CS is illustrated by a switch between Algerian Arabic and French: ʔana nabɤi**Sciences du langage** dʒaːja ħæːdʒa **linguistique** ħæːdʒa dʒaːja **scientifique** *(I like language sciences it is something linguistic*

something it is scientific). On the other hand, **metaphorical CS** concerns the communicative effect the speaker intends to convey with such a use; associating it with social meaning (quotations, sentence-fillers, reiteration of sequences for clarity or emphasis, etc.). The use of MSA in the following string illustrates this type of CS since this particular switch signals an ironical use and indexes an attitudinal behaviour vis-à-vis MSA: hæ:di *deux jours* wana nadrublak w majwa:dʒubʃ *le téléphone* trudd ʁi:r *la cassette* tgu:lli

muwwaqqaf ʔæni lʔæmal(...)**lajumkin**manæʔrafʃ ngu:lha *tu sais (It's two days I phoned you without answer, just the cassette saying 'it does not work there can't be...I don't know how to say it, you know).*

Myers-Scotton (1993) differs in her perspectives from the taxonomies of social meaning and discourse functions associated to CS developed in interactional models to explain linguistic dualism inherent in bilingual interactions. She posits the notion of markedness as an organizing device which may explain code-choices and describe the social motivations behind code-alternations. She proposes four types of code-switching: **sequential unmarked CS** in which speaker's alternate codes when the speech situation determines such a change, as in this conversational sequence:

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1 A : **C'était bien passé** *(Was it good?)*
2 B : **Oui c'était très bien passé** *(Yes, very good*)
3 A**: Des Tlemceniens** **(***Tlemcenians?)*
4 B: lla **des Mascariens** tæ:ʔ (*No, Mascarians of Oran)*
5 A: wi:n daru:ha fə **la salle** *(Where did it take place? In a marriage hall)*
6 B: **La salle Et Bahia** *(The Bhia's hall)*
7 A**:** tæ:ʔ **Saint Eugène** dərt fi:ha ʔærsi mli:ħa
(That of Saint-Eugène, I've made my marriage ceremony there; it's good)
8 B: wa:h ʃa:bba **aérée** wgæ:ʔ **c'était très bien passé** bɑʂʂɑħ mʔæ manqadʃ lħæss *tu me connais (Yes, it's nice and airy, it was very well but I don't support noise. You know me)*

The speaker B uses an unmarked choice through an AA/Fr switch in line (4). This choice does not affect the **RO set** established for this particular situation. The nature of the subject discussed determines such a shift without necessarily establishing new norms for participants' rights and obligations. Being the unmarked-codes in this particular social context, alternation to AA indexes the sequentially of this switch. In linguistic choice, CS is the norm for the whole conversation, without any change in prosodic features nor hesitation. In this part of conversation between two students at the library of I.L.E, the use of French is the unmarked choice since it conforms the RO set in this speech situation.

1 A : Dommage j'ai aimé que tu t'en profite mais bon ((…))
(It's a pity, I 'd preferred that you make use of it, but)
2 B : Non il traite de l'intonation uniquement des marques linguistiques mais pas l'analyse de l'oral proprement dit *(No, it deals with intonation only linguistic markers but not neatly conversational analysis).*

When CS is **the marked choice**, speakers renegotiate the RO set common for the current situation and thereby this change in footing may index social distance or proximity. The example drawn from a conversation that takes place in a town hall illustrates this type of CS. The switch into French by speaker B can be interpreted as a signalling device to decrease the social distance with the administrative agent.

1B : **Le dossier pour refaire la carte d'identité** *(The file to renew the identity card)*
2 E : (Silence) ahuwwa:la do:si tæħħa *(wha:::t her file)*
3 F : tæ:ʔ tʂʂɑwi:r (*That of photos)*
4 B : χɑʂʂ ʁi tæ:ʔ tta∫ʈe:b tæ:ʔ lvo:ʈ
(It only that radiation from the election list)

Finally, **exploratory CS** in which speakers are uncertain of the most feasible code for the current exchange. This ambiguity concerning the unmarked choice can be related to uncertainty about settings' conditions or unfamiliarity with interlocutors' preferences and competencies. In the following sequence, the choice of AA is exploratory since the participants do not share previous experiences with each other. The interlocutors' switch into French which becomes later the medium of interaction shows that AA has been used just to explore the participants preferred codes since they ignore whether all of them master French or not.

1 A: səmħi:li mæʔli∫ tməddilha les papiers
(Excuse me, can you give her the papers)
2 B **:** D'accord (*OK)*
3 B : Des nouveaux bacheliers ? (New holders of Baccalauréat)
4 A : Oui série lettre (*Yes, Letters series).*

Myers-Scotton (1990) proposes also two other maxims regulating code-choices, the deference and virtuosity maxims. The **deference maxim** states that

speakers defer languages to mitigate FTA, they converge to the preferred code of more powerful interlocutors. This is the case of students whose preferred code is AA but they switch to Fr when addressing their teachers. The **virtuosity maxim**, on the other hand, states that speakers make use of marked choices since the unmarked choice is inappropriate for a situation regarding the linguistic ability of ones' interlocutors. The example of a girl who converges to the taxi driver's preferred code illustrates this maxim. She uses first French in *déjà çà fait pas longtemps* waħda mə ʂħɑbɑ:ti məski:na **grisa:wha** ħdada:rhum *on lui a volé ses boucles d'oreilles,* then she converges to AA after her interlocutor's response [hæ:di lħamdula:h kidda:wulha ʏi] by her accommodation to AA; as in: /ʏi lməngu:ʃ/. Thus, the markedness model can answer many social questions related to bilingual speech despite of its drawbacks.

Auer (2000), one of the proponents of CA analysis, proposes a sequential approach to CS adopting interactional perspectives. He comes to the conclusion that CS serves many functions in the negotiation of footing in bilingual interactions. In other words, the speakers engaged in bilingual situations either have certain expectations about their exchanges and therefore opt for an unmarked choice if acquainted with each other or carry a negotiation process to establish a medium of interaction in distant cases. In this vein, Auer points out that the significance of CS does not lie in the social meaning associated to the participating languages (as we, solidarity and informal codes in opposition to they, formal and deference codes) '*Although the languages involved in code-switching may index some kind of extra-conversational knowledge, code-switching can never be analyzed as a mere consequence of such indexing, without taking into account the sequential position in which it occurs and from which it receives its meaning'* (1998:2).

Auer considers that the contrast between the codes involved in CS is meaningful in that the speakers interpret it as a contextualization cue which signals either some aspects of the situation *(discourse-related switching)* or some relevant characteristics of their switches *(participant-related switching).* In **discourse-related switching**, CS signals '*otherness'* and indexes a change of footing as in the following example: On a changé de thème **wulla lqɑɗɑ:ʔ** c'est plutôt la justice pendant la période coloniale *(We have changed the theme, it becomes justice; it's rather justice during the colonial period).*

In this exchange, the speaker inserts the Arabic constituent /wulla lqɑɗɑ:ʔ/ to report the theme of her research work in Arabic since the thesis is conducted in Arabic. Hence, the juxtaposition of the two co-occurrent structural elements within a single interactional episode indexes an emphatic effect which aims at providing more clarity for the co-participant who has a preference for French. The interpretation of this new footing is linked to the local organization of this conversational sequence where three discourse strategies are used to fulfil the desired

effect: self repair, the discursive marker *(c'est plutôt)* and the translation of the embedded element into French. Thus, the switch is related to the internal organization of the string and there is no need for extra-knowledge to interpret the inferential meaning allocated to this switch.

In contrast, in **participant-related switching**, the speakers negotiate a *base code* in relation to interlocutors' preferences and competences. In the following part of a conversation between two students at the Islamic Institute, a negotiation process takes place to establish a common medium between two speakers who share at least two codes.

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1 D**: Tu changes carrément le sujet mais tu gardes le même intitulé.**
(You change completely the subject matter; you keep only the same title).

2 B: lla ʔana ʏa:di ngardi lli dartahlhum lχɑʈra lluwla
(No, I will keep (the title) that I've given them the first time)

3 D: lla mafhæmtini:ʃ ma:m tbadli (s) syʒe maʔændakʃ lħæqq ba:ʃ tbadli marra wuħduχra *(No, you didn't understand me, you have not to change it, you don't have the right to change for second time)*

4 B : Ah ! ʂɑħħa *(Ah ! OK)*

5 D : **Donc tu gardes le même intitulé et tu changes uniquement le contenu**
(*So you keep only the title, you change solely the same content)*

6 B**:** wa:h nχallɪ lqɑɖɑ:ʔ *(Yes, I keep 'justice ')*

7 D : **C'est beaucoup plus mieux comme ça tu n'auras pas de problèmes au CS** (*It's better, this time you'll have no problems in CS)*

In line (3), the speaker converges to her interlocutor's preferred code (Algerian Arabic). She uses it temporarily in order to explain to her co-participant what she did not grasp from the previous turn-taking when addressing her in French. Although the content of the French sequence is clear since speaker B is competent in French, she responds in AA which marks her preference for such a linguistic choice. After this brief language negotiation sequence in which both speakers find a common language of interaction, speaker D diverges again from this medium and carries out the current conversation in French. This extract demonstrates participants' orientations to their preference for multiple codes within the same discourse.

3. Conclusion

On the basis of the theoretical approaches that we have discussed and the empirical findings from our data, we can say that a multidisciplinary approach is needed to understand the underlying mechanisms of code-alternations. CS is used as a communicative device by our informants. Most of them share at least three

varieties in common, namely Modern Standard Arabic, Algerian Arabic and French. In future research works, we will call for the model of bilingual access (the MLF model and its supportive models, namely the 4-M and the Abstract-level models) to explain the structural dimensions of the co-occurrent elements in mixed-codes.

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