Bilingual Cognitive Faculty and Pragmatic Markedness in Code-switching

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Abstract

One of the prevailing views about the relation between linguistic choices and society has been that linguistic choices depend on the social context, the social identities of speakers and their addressees, as well as other factors such as topic, setting, and genre. While most social context-based approaches can explain normative choices, they do not explain departures from the norm. Based on the studies of the naturally occurring Chinese/English code-switching instances, this paper argues that speakers' rationality is the crucial mechanism in linguistic choices, and although the social context is important and indispensable, the social context alone cannot be the crucial determinant in linguistic choices. Departing from the models putting primacy on the social context in accounting for code choices, this study applies a rationality-based model to the explanation for code-switching as a general cognitive faculty. It explains why speakers engage in code-switching, and what motivates their choice of codes.

Key Words: linguistic choice, rationality, rational choice, code-switching, cognitive, norms.

Rational choice theory, also known as rational action theory, is a framework for understanding and often formally modeling social and economic behavior. It is the dominant theoretical paradigm in microeconomics (Arrow, 1987; Becker, 1978). Although models of rational choice are diverse, all assume individuals choose the best action according to stable preference functions and constraints facing them (e.g., Elster, 1989, 1991, 1994; Turner, 1991; Coleman & Fararo, 1992). Proponents of rational choice models do not claim that a model's assumptions are a full description of reality, only that good models can aid reasoning and provide help in formulating falsifiable hypotheses, whether intuitive or not. Although rationality cannot be directly empirically tested, empirical tests can be conducted on some of the results derived from the models. Over the last decades rational choice theory has also become increasingly employed in social sciences other than economics (e.g., Sen, 1987), such as sociology (e.g., Coleman, 1990), political science (e.g., Dunleavy, 1991; Green & Shapiro, 1994), and linguistics (e.g., Myers-Scotton, 1983, 1993a, 1997).

Although rational choice theorists define the notion of rationality from various perspectives, they would all agree that much of our behavior is intentional, directed at achieving an individual goal. Elster (1989), the sociologist, one of the most influential proponents of the theory, uses the minimalist notion of rationality to define rationality "as consistent, future-oriented and instrumentally efficient behavior" (p. 35). This is one of the main features captured by rational choice theory: rational behavior is intentional and outcome-oriented. According to Elster (1989), "It is logically consistent to imagine that everyone always acts rationally, but not that everyone always acts irrationally. Similarly, it is possible to imagine a world in which everyone always acts exclusively for his own selfish benefits, whereas a world in which everyone always acts exclusively for the sake of others is an incoherent notion" (p. 36).

Rational choice theory does not claim that individuals are always rational, but it does claim that a rational choice model covers the phenomenon. Such a theory would add that individual choices are intentional in the sense that they are made to achieve certain ends. As Elster (1991) explicates, "The theory of rational action ... tells people what they should do to achieve their ends as well as possible. An agent faces a feasible set of *actions* that he can take. To each action he can attach a certain set of possible *consequences*. To each consequence he can attach a certain *probability* as well as a certain *utility*, based on his *preferences* over the set of consequences. The theory of rational action, narrowly conceived, tells the actor to choose the action with the greatest expected utility" (pp. 109-110).

Coleman and Fararo (1992), equally prominent proponents of rational choice theory, explain the fundamental notion of rational choice in terms of optimization: "Rational choice theory contains one element that differentiates it from nearly all other theoretical approaches to sociology. This element can be summed up in a single word: optimization. The theory specifies that in acting rationally, an actor is engaging in some kind of optimization. This is sometimes expressed as maximizing utility, sometimes as minimizing cost, sometimes in other ways. But however expressed, it is this that gives rational choice theory its power: it compares actions according to their expected outcomes for the actor and postulates that the actor will choose the action with the best outcome" (p. xi). In economics, sociology, and political science, a decision or situation is often called 'rational' if it is in some sense optimal, and individuals or organizations are often called 'rational' if they tend to act somehow optimally in pursuit of their goals.

In this concept of rationality, the individual's goals or motives are taken for granted and not made subject to criticism, ethical or otherwise. Thus, rationality simply refers to the success of goal attainment, whatever those goals may be. Sometimes, in this context, rationality is equated with behavior that is self-interested to the point of being selfish. Sometimes rationality implies having complete knowledge about all the details of a given situation. Whatever the definition of rationality may be in different contexts, rationality is recognized as a central principle of human behavior, where a rational actor is specifically defined as an actor who always chooses the action which maximizes its expected performance, given all of the knowledge he currently possesses. In sum, the basic idea of rational choice theory is that patterns of behavior in societies reflect the choices made by individuals as they try to maximize their benefits and minimize their costs. In other words, people make decisions about how they should act by comparing the costs and benefits of different courses of action. As a result, patterns of behavior will develop within the society those results from those choices.

This paper regards rational choice as a typology of individual motivations by drawing heavily on rational choice theory of Elster (1989, 1991, 1994) and linguistic choice theory of Myers-Scotton (1993a, 1997). According to Elster (1986), any given human action is the end product of two successive filtering devices. The first filtering device includes the set of structural constraints, which are defined as "... all the physical, economic, legal and psychological constraints that an individual faces" (p. 14), and such constraints produce an "opportunity set": courses of action that are possible, given the constraints. In linguistic choice theory, Myers-Scotton (1997) views such structural constraints as those factors generally subsumed under the term 'social context', which include the speakers' social identity features, such as age, sex, socio-economic status, ethnic group, etc. as well as the speech context (Gumperz, 1982). Thus, in linguistic choice, an actor's opportunity set is his or her linguistic repertoire. Myers-Scotton particularizes the first filtering device for linguistic choices by saying this filter includes the constraints on code choices by the social setting or structure of the discourse.

The second filtering device includes the mechanisms responsible for which alternative from the opportunity set is chosen. Rational choice and social norms are such mechanisms, among others. The two filtering devices can be explicated in simpler terms as Elster (1986) says, "In this perspective, actions are explained by opportunities and desires - what people can do and by what they want to do" (p. 14). In other words, the first filtering device produces objective opportunities, and the second filtering device includes mechanisms to realize subjective desires. What becomes directly relevant to the current topic is the second filtering device: rational choice and social norms. The so-called social norms are the norms that "... must be shared by other people and partly sustained by their approval or disapproval" (Elster, 1994, p. 24). People follow these norms because they are shared by others and breaking them would engender individual feelings of guilt. Thus, the defining feature of social norms is that they are not outcome-oriented but "other-regarding" or "norm-obeying" (Margolis, 2007, p. 1). In contrast, rational choice is outcome-oriented or self-interested. Rational choice entails choosing an action given one's preferences, the actions one could take, and expectations about the outcomes of those actions. Actions are often expressed as a set, for example a set of *j* exhaustive and exclusive actions:

$A = \{a_1, ..., a_i, ..., a_i\}$

For example, if a person is to vote for either Obama or McCain or to abstain, his or her feasible set of possible voting actions is:

$A = \{Obama, McCain, abstain\}$

Individuals can also have similar sets of possible outcomes.

Elster (1986) says "To act rationally, then, simply means to choose the highest-ranked element in the feasible set" (p. 4), and "... the desires and beliefs are *reasons* for the behavior" (p. 12). All that is required for an action to be rational is that if one believes action X (which can be done) implies Y, and that Y is desirable, he or she does X. The action would otherwise be avoided were Y undesirable. In terms of rationality directing choices made under the second filtering device and its relevance to linguistic choices, Myers-Scotton (1997) proposes three distinct sets of elements. First, in linguistic terms, the feasible set of courses of action means the code choices which are rationally believed to satisfy the various constraints of the current situation. Second, in reference to code choices, a set of rational beliefs about what courses of action will lead to what outcomes means the speaker's beliefs about how speaking language X will negotiate on his or her behalf a desired persona or rights and obligations set. Third, in consideration of a ranking of the outcomes, the speaker chooses the one best satisfies his or her desires.

What is the connection between rationality and social norms? Among rational choice social scientists, the prevailing view is that rational choice is by definition self-interested choice. Margolis (2007) proposes "But the NSNX ("neither selfish nor exploited") approach, which is a step behind the trend of extending the notion of rational choice to allow for social ("other-regarding" or "norm-obeying") as well as self-interested motivation" (p. 1). This approach captures the self-interested motivation and the person's social preferences. The idea that a person has distinctive social and self-interested preferences can be easily traced back to Smith's *Theory of Moral Sentiments* (1976) and all the way to the Greeks. Margolis (2007) believes that the simple equilibrium "does not permit the two utility functions (self-interested and social) to be merged into some total utility function," and "The NSNX project seeks to define how individuals achieve a balance between their propensity to act in self-interest of a salient group" (pp. 2-3). As Elster (1991) argues, in each individual action both rationality and social norms come into play.

There is no doubt that rational choice models emphasize the individual over the group in decision making. Turner (1991) points out such a model "treats the individual as a fairly autonomous decision maker, reacting to the situation rather than directly reflecting it" (p. 92). Where do social norms fit in, as a mechanism of behavior? In fact, social norms obviously exist, since they are shared and sustained by other people. What should be emphasized is that actors can act as individuals and choose to follow norms. Rational choice theory just insists on rationality as a mechanism driving choices. Rational choice theory is not a predictive theory, but essentially a hermeneutic one. As part of the enterprise of self-understanding, the construction of rationality is partly discovery and partly decision. This paper presents a rational choice model of linguistic choice which is driven by the speaker's communicative intentions and which is implemented by the speaker's rationality. Rationality as a term is related to the idea of reason and is associated with explanation, understanding or justification, particularly if it provides a ground or a motive.

2. The markedness evaluator as a general cognitive faculty

To explain linguistic choices in social discourse, Myers-Scotton's Markedness Model (MM for short) (1983, 1993a) draws on rational choice theory with a focus on the interaction between social norms and rationality. Like Grice's *Cooperative Principle* and related maxims (1975) and Sperber and Wilson's *Relevance Theory* (1986, 1996), the MM assumes that human conversation is guaranteed with the speaker's rational behavior. That is, linguistic choices are recognized by both the speaker and addressee as more or less efficient means to a further end. Myers-Scotton's *Negotiation Principle* (1993a; Scotton, 1983) encapsulates such notions: "Choose the *form* of your conversational 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" (p. 113).

This principle contains a series of maxims (Myers-Scotton, 1993a), and, as rational choice directives, they are conditional: their form is 'if you want Y, then do X', they are outcome-oriented, and they refer to future rewards. One of the most important premises of the MM is that all speakers have an innate 'markedness evaluator' (Myers-Scotton, 1993a, 1997), as part of their linguistic capacity or their general cognitive capacity, which predisposes speakers to assign readings of markedness to the linguistic codes which they interpret or choose in any specific interactions. It is this linguistic faculty that predisposes speakers to develop the cognitive-pragmatic competence to interpret linguistic codes in terms of their relative markedness: more or less unmarked or marked for indexing their perceptions of the expected Rights and Obligations set (RO set for short) (i.e., an expected interpersonal relationship). The RO set is derived from situational factors, social and personal, which are salient for a given exchange between participants in a conversation.

Speakers choose codes at a certain point in any interaction type based on the persona and/or relationship with others which they wish to have in place. An unmarked choice is the normal use of the language (i.e., the expected way of speaking) within the speech community and indexes an expected RO set. A marked choice is not what is normally expected (i.e., departure from the expected way of speaking) and indicates the speaker's intention to negotiate for a change of the RO set. However, the evaluator itself needs experience as input to make assessments and, of course, the actual assessments are not innate. It is the evaluator which provides speakers with a reading of the relative markedness of choices within a person's linguistic repertoire for a given interaction type. For the evaluator to operate, social norms must come in as an essential part of the 'cement of society' (Elster, 1989). What unites individual choices is that they are made against the same backdrop: shared norms.

Thus, shared norms about what choices are unmarked or marked for a given interaction type become essential. In other words, "social norms coordinate expectations" (Elster, 1989, p. 97). That is, when speakers make choices, they follow shared norms because they know those norms are perceived by most group members as legitimate and compelling. This is the reason for speakers to use norms for their personal advantages as implemented through their rational choices to bind the other participants in a given interaction type. However, markedness is a dynamic concept: Speakers may have different readings of markedness in different interaction types, and their readings are open to change over time. Markedness is also a gradient concept: Speakers know that one code is more marked than others for a given RO set in most interaction types. In addition, markedness always has a normative basis within a particular speech community, and speakers are "rational actors" (Myers-Scotton, 1993a, p. 75) because they assess the potential costs and rewards of all alternative choices in any interaction types and make choices by using their markedness evaluator in order to optimize their interactional goals.

The choices speakers make at a certain point in a discourse are grounded in their beliefs, values, and desires which are internally consistent and based on available evidence (Elster, 1989). Regarding the first filtering device in rational choice theory, Myers-Scotton takes as a 'given' that a set of social and linguistic behaviors can be derived from the salient social factors and identified as an opportunity set. With the opportunity set as input, the second filtering device takes over, and rational choice comes into play. What Myers-Scotton emphasizes is that social norms designate unmarked and marked choices, but it is the speaker who makes choices. Several ways in which social norms are more than a backdrop for rational choices are identified: First, since social norms have to be shared by others and partly sustained by their approval or disapproval, a major reason for following norms by making unmarked choices and avoiding making marked ones is to avoid group disapproval. Second, the reason for not making marked choices which would optimize the outcome, which would negotiate a desired RO set, is that the speaker knows that if his or her subjective evaluation of the probability of success show low chances of success, it is safer to follow norms as a mechanism, rather than taking risks. Third, another reason for not making marked choices is that making marked choices requires more effort. This is because the speaker must recognize the 'strategic' nature of the environment that may change, and also the interrelation of constraints in a given interaction type. Forth, speakers may make marked choices with the aim of negotiating for a new RO set. The general effect of marked choices is to negotiate a change in the social distance which would hold among participants. In sum, the MM considers both social norms and rationality as mechanisms of linguistic choice: with social norms 'looking backwards' in that social norms are conditional in the sense that if others have done X before, then do X now; with rationality 'looking forwards' in that rationality looks forwards to the prospect of future rewards when choices are anticipated.

Thus, speakers' markedness evaluator offers motivations for their code choices in a given interaction type. Speakers naturally tend to accept the prevailing norms of language use in their speech community and most frequently make unmarked choices. This is because speakers' assessments of potential social consequences for their choices preserve the normative system and ensure the relative stability of their markedness readings. However, speakers may make marked choices at a certain point in a discourse. This is because speakers' intention to negotiate for a different position needs different codes from the normative. Otherwise, speakers' indexicality of their negotiation would be impossible. In other words, speakers, whether they make unmarked or marked choices in a particular interaction type, use their markedness evaluator to make the right choices to serve their communicative intentions.

3. Code-switching as an Unmarked Choice in a Conventionalized Interaction Type

As mentioned earlier, markedness is understood in its gradient sense. That is, code choices fall along a continuum as more or less unmarked according to interaction types and speakers' communicative intentions. Although there need not be a clear-cut dividing line between an unmarked choice and a marked choice, there is often a dominant unmarked choice in a relatively conventionalized interaction type. A conventionalized interaction type is the type of discourse where the normal speech pattern is practiced by the speakers in the same speech community (cf. Li & Milroy, 1995). In some communities a pattern of switching between two (or more) languages has become an unmarked choice. The speech pattern of the Chinese bilingual community under observation is one of such. Like many bilinguals in other speech communities, most Chinese bilinguals maintain a daily speech pattern of switching between Chinese and English.

For these speakers who have duel socio-cultural identities associated with two languages, code-switching itself becomes their unmarked choice. That is, speakers wish to identify with the attributes associated with both codes in use in their speech community. Thus, codes indexing the unmarked rights and obligations for participants have become an inseparable part of their linguistic repertoire. It has been observed that there are basically three types of switching (Poplack, 1980; Joshi, 1985; Appel & Muysken, 1987; Romain, 1995; Myers-Scotton, 1993b; Wei, 2001, 2002): tag-switching, intrasentential switching, and intersentential switching. All three types of switching have been observed in naturally occurring Chinese/English code-switching instances (Wei, 1995, 2006).

Tag-switching serves as an emblem of the bilingual character of an otherwise monolingual utterance. Poplack (1980) has named this type of switching "emblematic" switching. Tag-switching involve an exclamation, a tag, or a parenthetical. Tags such as great, good, Ok, you know, I mean, etc. frequently occur. One of the structural reasons for tags to occur frequently is that they are subject minimal syntactic restrictions and thus may be easily inserted at a number of points in a monolingual utterance without violating syntactic rules.

[1] Setting: Chang and Ma are good friends. Chang invites Ma's daughter to come to her house for her daughter's birthday party. (C = Chang; M = Ma)

1 C: wo **daughter** mingtian guo **birthday**. jao ni xiaohai lai tade **birthday party** ba."My daughter has her birthday tomorrow. Ask your child to come to her birthday party."

2 M: Ok. wo gaoshu ta."Ok. I will let her know."

3 C: ni yiding yao jao ta lai de. xiao pengyou xihuan xiao pengyou de, *you know*. "You surely ask her to come. Little friends like little friends, you know."

4 M: Sure, sure. I will. wo yiding jao ta lai de. "Sure, sure. I will. I will surely ask her to come."

5 C: Good. bie dai renhe dongxi. lai jiu shi le. "Good. Don't bring anything. Just come."

Example [1] contains quite a few tags (bold and italicized). Other tags such as *fine, really, wonderful, terrible, well, right, yes, I see, thank you*, etc. occur frequently in the Chinese/English code-switching data corpus. One of the obvious semantic/pragmatic reasons for speakers to frequently switch to English tags is that they can occur independently to express the speaker's idea, opinion, feeling or emotion. It has been observed that in unmarked code-switching speakers use tags as a more acceptable, natural and easier way of responding to their addressees in a bilingual/bicultural community.

Intrasentential code-switching involves different types of constituents inserted into the syntactic slots within a clause or sentence boundary. Most switched elements are 'content morphemes', such as verbs, nouns, and adjectives, rather than 'system morphemes' (similar to functional elements). The distinction between these two types of morphemes and their asymmetric distribution in mixed constituents were proposed by Myers-Scotton (1993b) in discussing the structural constraints on intrasentential code-switching (also cf. Joshi, 1985, for the discussion of the asymmetry of morphemes). It is in intrasentential code-switching where unmarked choice most frequently occurs. This is because at the lexical-conceptual level, content morphemes are more easily accessible than system morphemes for speakers' communicative intentions.

Speakers switch to singly-occurring English lexical items or certain fixed phrasal expressions at a certain point in an otherwise Chinese sentence. One of the obvious reasons lies in the fact that certain concepts expressed by content morphemes are more easily expressed in another language if they are first learned in that language.

Some concepts are hard to translate across languages in order for speakers to keep their original meanings or implications, either semantically or pragmatically speaking (cf. Li, 1996; Nishimura, 1997; Wei, 2001). Another reason for intrasentential switching to occur frequently is that it may not require high proficiency in that language which speakers switch into since all needed is to insert switched items into the otherwise monolingual sentence. In other words, speakers can easily control the grammar of their own language.

[2] Setting: Two graduate students talk about taking exams and taking courses in summer. Fang is a Ph.D. candidate and just took his comprehensive exam. Guo has almost completed all the courses for a Ph.D. program. They also talk about buying a computer. (F = Fang; G = Guo)

zuijin gang took comp. wo hai dei zhunbei oral. jiushi yiqie shunli, zhuo dissertation zhishao hai dei 1 F: one year ba. ni xianzai zenmeyang? Is everything Ok? "Recently I just took comp. I still have to prepare for the oral. Even if all goes smoothly, it will take one year at least to write my dissertation, How are you doing now? Is everything Ok?"

I think so. wo xianzai course xiu de chabuduo le, dan hai dei xiu ling-men foreign language, jiashang 2 G: qualifying he comp. ... a very long way to go." I think so. I've now taken almost all the courses, but I still must study two foreign languages in addition to the qualifying and comp. ... a very long way to go."

Summer Two wo xuan yi-men German, danshi Summer One meiyou wo yao zuan de ke. Fall semester 3 F: wo keyi take Japanese. tingshuo bixu du liang-ge semester. "I'll take German in Summer Two, but there is no course I want to take in Summer One. I can take Japanese in the fall semester. I've heard that we must study for two semesters."

you xie jiaoshou very crazy, very hard, you know. "Some professors are very crazy, very hard, you 4 G: know."

wo kuai zhuo dissertation le. wo xiang mai tai pianyide computer. wo xiawu qu Circuit City. tingshuo 5 F: you bu sao computer on sale. ni qu-bu-qu kankan? "I'll soon write my dissertation. I want to buy a cheap computer. I'm going to Circuit City this afternoon. I heard there are many computers on sale. Do you want to take a look?"

qu kankan be. "Let's go and take a look." 6 G:

Example [2] contains quite a few single nouns, noun phrases and adjective phrases such as course, qualifying, comp (simplified for 'comprehensive exam'), foreign language, Summer Two, Summer One, fall semester, semester, dissertation, computer, very crazy, very hard, verb phrases such as took comp and take Japanese, and fixed/idiomatic expressions such as a long way to go, and on sale. As mentioned earlier, besides fixed/idiomatic expressions, certain English concepts can only be better expressed in English, such as 'qualifying' and 'comprehensive' exams, 'summer sessions', and 'take' a particular course. In addition, it has been observed that in many other Chinese/English code-switching instances certain singly-occurring English lexemes are very often not translated into Chinese in daily in-group conversations. It seems that social situations or topics are not always the directly relevant factors in code-switching or the only possible way of explaining code-switching.

Intersentential code-switching involves a switch at a clause or sentence boundary, where each clause or sentence is well formed according to one of the languages involved within the stretch of speech in a discourse. Intersentential switching may also occur between speaker turns. However, this type of switching may require greater proficiency in both languages than tag-switching or intrasentential switching since switching at the clause or sentence level must conform to the grammatical rules of both languages.

[3] Setting: Lin and Jiang are graduate students and will graduate soon. They talk about their graduate financial support and the job market. (L = Lin; J = Jiang)

1 L: Hi, Xiao Jiang, I haven't seen you for a long time. How are you doing?

I'm fine. ni zenme yang? "I'm fine. How are you?" 2 J:

mamafufu ba. Very busy, you know. I have to work twenty hours a week for my advisor. na dian 3 L: support not easy. "Just so-so. Very busy, you know. I have to work twenty hours a week for my advisor. It's not easy to get some support."

4 J: But your financial support is enough to save your body. Right?

5 L: hen lei a. wo zhiwang biye hou I can find a job. "Very tired. I hope I can find a job after my graduation."

6

6 J: gongzuo bu hao zhao a. ni xue jisuanji de hai keyi. tingshuo **it's easy to find a job**, erqie **pay** hen gao a. wo xue **Political Science** bu hao zhao gongzuo a. "It's not easy to find a job. You study Computer, so it's not too difficult. I heard It's easy to find a job, and the pay is very high. I study Political Science, and it's difficult to get a job."

7 L: xianzai xue jisuanji de ren yuelaiyue duo le. **The competition is very keen, you know**. "Now more and more people study Computer. The competition is very keen, you know."

8 J: You don't need to worry. ni you graduate degree, jiashang zhuanye hao, you will get a good job. I'm sure. "You don't need to worry. You have a graduate degree, plus a good major, so you will get a good job. I'm sure."

9 L: **I wish I could**. shizai bu xing de hua, zai xue yi-men zhuanye. "I wish I could. If nothing really works, I will take another major."

10 J: You always worry too much.

In example [3], both speakers switch to English inter sentential as well as intrasententially. It seems that both speakers follow up each other in expressing certain concepts or ideas in complete English sentences at a certain point in their conversation. In unmarked code-switching, participants are aware that certain codes are more natural and more preferred to both parties. From the point of view of social motivations, unmarked code-switching have several characteristics. First, unmarked code-switching frequently occurs among bilingual peers in casual, in-group conversations. Second, speakers engage in unmarked code-switching because they value both codes which call up their duel socio-cultural identities. Third, unmarked code-switching become an often unconscious speech pattern which maintains the unmarked RO balance for participants in the bilingual community.

What should be emphasized here is that the notion of unmarked code-switching derives from the normative and expected practices in the speech community. In other words, unmarked code-switching have been regularized in a conventionalized interaction type. In bilingual communities where both sets of socio-cultural identities are valued, unmarked code-switching is predicted. It is the overall discourse pattern of switching which has the social import in unmarked code-switching, rather than a single switch itself. This is because unmarked code-switching are a move for speakers to identify with the unmarked RO balance in a particular interaction.

4. Code-switching as a Marked Choice in a Strategic Interaction Type

Unlike an unmarked choice, a marked choice is a move against the normative and expected practices in the speech community. Speakers make marked choices to negotiate a change in the expected RO set or social distance holding among participants, either increasing or decreasing it in various guises. In terms of a specific set of the speaker's intentions, each marked choice is a rational choice which carries the speaker's identity of the addressee and the social messages associated with the language of the marked choice (cf. Myers-Scotton, 1995).

Consider example [4]. The interaction takes place between a mother and her daughter after a dinner party in a friend's house. Both the mother and the daughter are bilingual, but English is the daughter's dominant language (i.e., her unmarked language) and Chinese is the mother's dominant language for their daily communication. Even though both the mother and the daughter are fluent enough in both languages, they usually speak their respective dominant language occasionally containing switched elements for their mutual communication.

[4] Setting: After a dinner party in a friend's house, all the guests are ready to leave, and the daughter is looking for her coat. (J = Jessica (daughter); M = Mother)

1 J: Mom, where is my coat? Mom, wode dayi zai na "Mom, where is my coat? Mom, where is my coat?"

2 M: ni ziji zhao. wo zenme zhidao. ziji zhao. "You look for it yourself. How can I know? Look for it yourself."

3 J: Anyone see my coat? Mom, I can't find it. **ni bang wo zhao zhao a**. "Anyone see my coat? Mom, I can't find it. You help me look for it."

4 M: dao **bedroom** kankan. ni ziji dao **bedroom** kankan. wo zenme zhidao. "Go to take a look in the bedroom. You go to take a look in the bedroom yourself. How can I know?"

5 J: Ok, ok. Let me go.

6 M: **Did you find it**?

7 J: Yes.

8 M: **Put on your coat**. waimian hen leng de. **Put on your coat**. yao ganmao de."Put on your coat. It's very cold outside. Put on your coat. You would catch a cold."

In getting her mother's attention, in Turn 1 Jessica switches to Chinese in asking a question and in Turn 3 in making a request. However, in Turn 6 the mother switches to English in asking Jessica whether she found her coat or not and in Turn 8 in commanding Jessica to put it on. Jessica's use of Chinese can be seen as evoking solidarity with her mother and showing deference to her mother's preferences. Remember that Chinese from the mother and English from Jessica is the normal speech pattern; therefore, in this interaction type, Chinese is a marked choice for Jessica. This is because Jessica' use of Chinese is a negotiation for a change in the usual RO set between her and her mother. In the same manner, the mother's switch to English can be seen as regaining her authority over Jessica at a particular point of the interaction. In this case, the mother's use of English is a marked choice because she attempts to get her request and order attended by her daughter.

Example [5] illustrates how the speaker uses English as a marked choice to increase social distance. Two very close friends talk about looking for a job. Fang, a Ph.D. candidate in Education, is afraid that it will be too hard for him to get a job after his graduation; Zhang, a recent graduate with an M.A. in Business Management, recently got a full time job at the State House of South Carolina. Zhang keeps judging things and giving advice. Chinese is the unmarked language for both speakers in their usual interactions.

[5] Setting: Two close Chinese friends talk about looking for a job. (F = Fang; Z = Zhang)

- 1 F: ni xianzai zenmeyang? ni zianzai rizi haoguo duo le, shi ma? "How are things with you? Your life is now much easier, isn't it?"
- 2 Z: mamahuhu ba. **My job is fine, well paid and not too busy**. zong bi dang xuesheng hao duo le. **It's not easy to get a job, you know**. "Just so-so. My job is fine, well paid and not too busy. Much better than being a student. It's not easy to get a job, you know."

3 F: wo kuai biye le. xue **Education** zhao gongzuo hen nan a. "I'll graduate soon. It's hard to get a job if you study Education."

4 Z: Just keep trying.

5 F: zao zhidao wo jiu gai xue **Computer** zhuanye le. yi biye jiu ke zhaodao gongzuo."If I had known (this situation) earlier, I would have switched to Computer (Science) as a major. Once you graduate, you can find a job."

6 Z: nide zhuanye hai keyi a. You worry too much. You should start looking for a job now. Don't wait.

"Your major is fine. You worry too much. You should start looking for a job now. Don't wait."

7 F: wo danran yao shishi. shizai buxing jiu zai xue yimen xin zhuanye. "Of course, I will try. The last thing for me to do is to take a new major."

8 Z: Not a bad idea. ni huai zhaodao gongzuo de. Keep trying. "Not a bad idea. You will find a job. Keep trying."

Throughout the interaction, Fang's consistent use of Chinese, except only two singly-occurring English words, can be regarded as evoking solidarity with Zhang as close friends, their normal interaction pattern. Fang simply wants to let Zhang know his personal situation. However, Zhang's frequent use of English in every turn of her speaking is a marked choice. By switching to English, she attempts to let Fang know that because of her well paid satisfying job, her status is now different from her friend's. Zhang keeps offering her advice and opinion in English in order to negotiate a change in the usual RO set with Fang as close friends.

Example [6] illustrates how speakers make marked choices to achieve a different social status. The interaction takes place between the husband and the wife, and between the husband and his neighbor, a young man. Several Chinese families are going to the South Carolina State Fair together in a van. They have been waiting for one more family for a long time at the parking lot in front of their apartment building. One of the neighbors goes to ask the husband of that family why they are so slow. The husband blames his wife, who is still not ready to leave. Chinese is the dominant language in the community, and the couple usually only speak Chinese to each other, with occasional switches to English lexical items as unmarked choices. [6] Setting: In front of the door of the slow family, a young man, who is their next door neighbor, asks why they are so slow. The husband of this family blames his wife. (Y = Young man; H = Husband; W = Wife)

1 Y: zenme le? hai mei hao a? tamen dou deng ji le. "What's wrong? You're still not ready? They are all waiting impatiently."

2 H: (To Young man) duibuqi, duibuqi. mashang hao. "Sorry, sorry. We'll be ready in a minute." (To Wife) Xiao Ming, **what's the matter with you**? **You're wasting** renjia de **time**. **Hurry**. **Hurry**. "Xiao Ming, what's the matter with you? You're wasting other people's time. Hurry. Hurry."

3 W: zhaoji shenme? mashang hao le."What's the hurry? I'll be ready in a minute."

4 H: ni zongshi moceng. You always piss me off. "You're always dawdling like this. You always piss me off."

5 W: shenme 'piss off'? hao le. zou ba. zou ba. "What 'piss off'? Ready. Let's go. Let's go."

6 H: (To wife) **You always make me angry**. zou ba. zou ba. **Hurry**."You always make me angry. Let's go. Let's go. Hurry."(To Young man) duibuqi. women zou ba."Sorry. Let's go."

7 Y: tamen dou zai tingchechang deng. zou ba.

"They're all waiting at the parking lot. Let's go."

In this interaction, the husband's use of Chinese to the young man is an unmarked choice, his usual way of speaking to his Chinese neighbor. However, his use of English in blaming his wife, letting her knows he is getting angry and giving orders is a marked choice. By breaking their usual interaction pattern, the husband is telling his wife that he is the head of the family, he should not be made angry, and he is the person who has the right to give an order. It is his marked choice which signifies his intention for a different RO set during the interaction. It has been observed that marked choices usually often occur intersententially. However, it has also been noticed that speakers may employ anything possible intrasententially to make marked choices. In example [7], Li switches to English single nouns, verbs and adjectives, noun and verb phrases, as well as sentences to impress Wang that he knows enough about automobile mechanics and he is the authority to give advice and suggestions.

[7] Setting: Wang's car has trouble again. He asks Li for help. Li, who used to be a mechanic in China, does not offer real mechanic help but keeps giving advice and suggestions. (W = Wang; L = Li)

1 W: wode po che you cu maobing le. zenme ye fadong bu qilai. yidian shengyin dou meiyou a. ni bang wo kankan ba."That poor car of mine has trouble again, No matter whatever I do, it simply doesn't start. There is no sound at all. You please help me take a look."

2 L: chayicha **battery**. keneng **battery connection** you **problem**. "Check the battery. There may be a problem with the battery connection."

3 W: dianchi shi xinde. qian jige xingqi gang huan de."The battery is new. It was just changed a few weeks ago."

4 L: Anything can go wrong with old used cars. ni ye keyi check yixia transmission. Ruguo transmission you trouble, jiu zaogao le."Anything can go wrong with old used cars. You can also check its transmission. If something goes wrong with the transmission, it will be too bad."

5 W: yanjing kan shi kan buchu shenme maobing de. "You can't see anything wrong with your eyes."

6 L: nide che kending you **mechanical problem**. ni dei jiao dian li de **mechanic** kankan."Your car must have mechanical problems. You need to ask the mechanic in the shop to inspect."

7 W: kanlai you die hua qian le."It seems that I have to spend money again."

8 L: wo bang ni jump start shishi kan ba."Let me try to jump start it."

9 W: shishi kan ba."Let's try."

10 L: (After he tried jump start several times) haishi mei fanying a. yidian dongjing dou meiyou a . **It doesn't work**. **Sorry**. **Your car is really dead**. "There's still no response there's no sound at all. It doesn't work. Sorry. Your car is really dead."

11 W: wo dei xiang banfa ba che tuo dao dian li qu a."I have to think of a way of towing the car to the shop."

12 L: zhezhong **used** Meiguo che bu **reliable**. You know, anything can go wrong. hua dian qian xiuxiu, sell it huo trade in huan liang che ba. "Such used American cars are not reliable. You know, anything can go wrong. Spend some money to get it fixed and then sell it or trade it in for another car."

13 W: xian xiuxiu zai shuo ba."Let me first get it fixed and see."

Li could simply use Chinese throughout the interaction, but he does not. He keeps using the English terms for talking about cars and mechanics. Li ignores Wang's Chinese because he knows that Wang understands very well what he is talking about. By making a marked choice, Li attempts to change the RO set with Wang in terms of his experience with used cars and his knowledge of automobile mechanics. It is clear that the code choices in examples [4] through [7] cannot be explained by a social context-based model. Such a model would predict that the speech and interaction pattern in example [4] should be that Jessica, whose usual language is English, would not speak Chinese to her mother in that particular interaction, and the mother, whose dominant language is Chinese, would not switch to English at a particular point of the interaction.

Similarly, in example [5], Zhang, whose level of education and proficiency of English is not as high as Fang's, would not switch to English when she comments on her job and gives advice to Fang. Her use of English cannot be explained without considering her intention. Also, in example [6], the husband's use of English would sound out of place to his wife in the family situation. Furthermore, in example [7], Li's use of English lexical items in talking about cars and mechanics and in giving advice and suggestions would be unpredictable in that interaction context. Yet, a rational choice-based model can explain how speakers' choices of codes are motivated. That is, it can explain why speakers may break the normal interaction patterns to achieve their particular communicative intentions.

5. Conclusion: Bilinguals as Rational Actors in Code-switching

The MM has been used in this paper as an exemplar of rational choice models. Like any rational choice model, the MM claims that rationality provides the mechanisms necessary to explain choices from the available opportunity set, and such mechanisms are rationally-based desires and beliefs. Speakers assess their choices against the knowledge they share with others about relative markedness of potential choices. Speakers make choices, not because social norms cause them to do so, but because they are rational actors who consider consequences. They make rational choices to achieve some desired outcome which they see as optimal. This paper discusses and illustrates two types of code choices, unmarked and marked choices, in terms of the markedness evaluator as a general cognitive faculty possessed by all speakers.

The majority of speakers in the same speech community are conscious of unmarked choices which conform to speakers' normative views for the interactions in which they are participants. That is, speakers naturally accept the norms of language use in their speech community in a conventionalized interaction type. In the Chinese/English bilingual community, speakers tend to switch between the two codes to serve their duel socio-cultural identities and keep the given RO balance with other speakers. However, at times speakers may make the second type of choice, marked choice, to negotiate for a different position or RO set. That is, speakers may break the normative interaction pattern in order to realize their communicative intentions in a strategic interaction type. Bilinguals, like any other speakers, are rational actors in making code choices.

It is speakers' rationality which provides the mechanisms necessary to explain code choices, either unmarked or marked choices. Elster (1986) points out "Communication and discussion rest on the tacit premise that each interlocutor believes in the rationality of the others, since otherwise there would be no point to the exchange" (p.27). Bilinguals are fully aware of the rewards or the potential consequences of their code choices. As the examples have shown, while some speakers make unmarked choices which maintain the unmarked RO balance for the participants involved in the interaction, other speakers attempt marked choices which evoke the marked RO set. This is because such speakers believe that although there is much risk in making marked choices, by doing so they may have a better opportunity to realize their communicative desires. In conclusion, linguistic choices can be better explained by positing that rationality is the main mechanism working on speakers' code choices. What all speakers have in common is the intentionality of achieving some desired outcome which they see as optimal. Bilinguals, as rational actors, are no exception.

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